The Negative Existential Cycle

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Chapter 1

Introducing the Negative Existential Cycle

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1 Preliminaries

Negation is one of the few demonstrably universal features of human languages. As such, it has attracted the attention of philosophers, logicians, grammarians and linguists from very different schools of the field. The evolution of negation is frequently seen as a cyclical process or processes that create new expressions to encode an already existing function. An example of such a cycle is the *Jespersen Cycle*, dubbed so by Dahl (1979). In essence, this cycle involves a grammaticalization process which typically includes several phases, the most important ones being the addition of an emphatic element to the negation construction, the gradual loss of its sense of emphasis and, finally, the ousting of the negators it once reinforced. A textbook example of this is the evolution and current form of negation in French where the element *pas* as in (i) *Je ne dors pas* 'I do not sleep', started as a reinforcer, its sense of emphasis faded away in the course of time, and *pas* became part of the regular way to negate predications. That is, the negation construction became bi-partite as it currently is in modern standard and written French. However, in informal and non-standard varieties of French *pas* can be used as a sole negator as in (ii) *Je dors pas* 'I do not sleep'. Thus we observe a cycle whereby a grammatical function once encoded by a preverbal particle *non/ ne* has received a new expression by a postverbal particle *pas*.

The Jespersen Cycle has been studied and refined based on data from numerous languages; it has been widely discussed in theoretical and comparative historical linguistics (van der Auwera 2009, van der Auwera & Vossen 2016, van der Auwera 2010, van Gelderen 2011, 2016, Vossen 2016, Devos et al. 2010, Mosegaard Hansen 2009, Vossen & van der Auwera 2014, Devos & van der Auwera 2013, Ngangoum 2015).[1]

While the Jespersen Cycle is based on historical-comparative data, Croft (1991), on the other hand, uses typological data dynamically to suggest another cyclical process, which he labels Negative Existential Cycle (NEC) as a possible pathway that leads to the development of new negation markers. The NEC posits the evolution of standard negation (SN) markers from negative existentials as these gradually expand their use into negating verbs (see §2 for a detailed presentation of this model). As illustrated in (1), in Moksha Mordvin, SN in the non-past is expressed by the particle *af* which precedes the affirmative finite form of the verb (1b); negation of existential sentences is expressed by the negative existential *aš* 'not exist, (not have)', (1d), which replaces the positive *ul'*- 'be' in the existential construction (1c). The past tense auxiliary *aš-* shown in (1e) developed from the negative existential in Moksha.

(1)   Moksha [mdf][2] (Hamari 2022 [this volume])

    a. *mor-an*
        sing-PRS.1SG
        'I sing /I am singing /I will sing'

    b. *af   mor-an*
        NEG sing-PRS.1SG
        'I do not sing /I am not singing /I will not sing'

    c. *pakśa-sa ul'-i   traktər*
        field-INE be-PRS.3SG tractor
        'there is a tractor in the field'

    d. *pakśa-sa aš traktər*
        field-INE   NEG.EX tractor
        'there is no tractor in the field'

    e. *aš-ə́ń   mora*
        NEG.PST-PST-1SG sing.CNG
        'I did not sing'

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[1]There is no claim that the list presented here is in any way exhaustive as regards the vast literature dedicated to the Jespersen Cycle.

[2]All languages are identified by their ISO-639 code.

Unlike the Jespersen Cycle, the Negative Existential Cycle[3] had received very little attention and until Veselinova's (2014, 2016, 2015) work, it had never been tested on historical-comparative data. In these works, she tests the NEC by applying it to comparative data from six families: Slavic, Uralic, Turkic, Dravidian, Berber and Polynesian. These tests show among other things that the mere use of a negative existential for verbal negation is not in itself an indication that the NEC is in operation; furthermore, the NEC tends to go full circle under very specific conditions and is rarely fulfilled within the time span for reasonable reconstruction. Issues related to the NEC which still need better anchoring from a cross-linguistic perspective include the following:

1. Negative existentials and their interaction with standard negation.

2. Processes whereby negative existentials or other lexicalizations of negation break into the domain of standard negation.

3. The duration of the stages in a negative existential cycle.

4. Are there any language specific characteristics which trigger or halt the cycle?

5. The constant renewal of negative existentials.

Veselinova's work represents a good start in the testing of the NEC and highlighting the issues related to it. However, her dataset is biased towards Eurasia while many other parts of the world are not represented at all. In order to further examine the realizations of the NEC from a broader cross-linguistic perspective, we started a collaborative effort whereby we invited other scholars to join in. To this end, we organized a two-day workshop hosted by the Department of Linguistics, University of Stockholm on May 4–5, 2017. The greater part of the articles included in this volume were selected from the presentations at the workshop.

This volume is divided into four parts. The first three are organized roughly according to macro-areas following Dryer (1992) and include studies that cover historical-comparative data from different phyla and language clusters, see Figure 2 on page 50 for a geographical distribution of the languages and families analyzed in detail; the fourth part contains more theoretically oriented work.

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[3]There is no conventionalized way to refer to the Negative Existential Cycle yet. We prefer the version presented here, with all words capitlized; however, not all authors have adhered to this so there is variation in the way the NEC is referred throughout the book.

The first part is dedicated to Africa and the Middle East. The Bantu family is covered by Rasmus Bernander, Hannah Gibson and Maud Devos. The Afro-Asiatic phylum is represented by several families in different chapters. The Chadic family is discussed by Marielle Butters. The Semitic family is covered by Arabic, discussed by David Wilmsen and by Ancient Hebrew analyzed in a joint work by Jacobus Naudé, Cynthia Miller-Naudé and Daniel Wilson. Elsa Oréal's study of manifestations of the NEC in Ancient Egyptian is the final one for the Afro-Asiatic phylum and the section.

The second part offers a coverage of the languages of Eurasia by chapters dedicated to large phyla such as Indo-European as is done by Annemarie Verkerk and Shahar Shirtz, and language genera such as Nanaic discussed by Sofia Oskolskaya and Natalia Stoynova. Individual languages and their varieties such as Chinese and Cantonese (Sino-Tibetan) are examined by Cherry Chit-Yu Lam, Moksha (Uralic) is discussed by Arja Hamari, and Bashkir (Turkic) and Kalmyk (Mongolic) are covered by Vlada Baranova and Daria Mishchenko.

The third part presents work on languages from Australia as well as from the American continents. Joshua Phillips offers a discussion of three sub-families of the Pama-Nyungan phylum, Yolŋu, Arrandic and Thura-Yura. Antoine Guillaume presents a description and hypotheses for the evolution of negative markers in Tacana, one of the five surviving languages of the Takanan family still spoken in the Amazonian lowlands of Bolivia and Peru. Data from Southern Uto-Aztecan with a special focus on O'dam (Southern Tepehuan) are presented and analyzed in light of the NEC by Michael Everdell and Gabriela García Salido.

There are two chapters in the fourth part, one by Elly van Gelderen and another one by Johan van der Auwera, Olga Krasnoukhova and Frens Vossen. Van Gelderen considers the Negative Existential Cycle from a formal-theoretical perspective by contrasting it with other cycles that give rise to negative constructions and by comparing it to the evolution of copula verbs which can also be modeled as a cycle. Van der Auwera, Krasnoukhova and Vossen present a unified approach to several cyclical processes in the evolution of negation constructions while also offering an insightful discussion of the notion of cyclicity in language change.

The introduction to the volume is organized as follows. An outline of the original NEC is offered in §2. In §3 we present an overview of the main topics covered in the book. In §4 we discuss notions central to the work presented here such as *standard negation* (SN), *existential clause*, *negative existential* as well as other negation strategies that fall outside the domain of SN such as *ascriptive negators* (§4.4), and *stative negators* in §4.5. The introduction is closed by a concluding discussion in §5.

2 The NEC according to Croft

The NEC was formulated by Croft (1991) as a way of modeling the evolution of SN markers from negative existentials. Specifically, the NEC puts forth a hypothesis about the expansion of negative existentials into the domain of standard negation and the ultimate replacement of an erstwhile SN marker by a negative existential. Unlike the Jespersen Cycle, which is based on historical-comparative data, the NEC draws on a dynamic interpretation of data from modern languages. In other words, *synchronic language types* are seen as *hypothetical stages* in a diachronic development. The NEC consists of six language types. Three of them show no variation in their expression of SN and existential negation, while in the remaining three variation is observed in either of these domains. Croft (1991) dubs the types without variation *stable* while those with variation *transitional*. It should be noted that these terms are used in Croft's work as well as here in a variationist sense. They do not refer to diachronic stability or instability. The stable types, e.g those without variation, are labeled A, B and C; they alternate with the transitional ones, A~B, B~C, C~A. Each one of these types is further explained and illustrated below.

In Type A, a language has only one marker for the negation of verbal clauses and for existential clauses. In verbal negation[4], this negative marker is accompanied by the predicate verb and in the negation of existential clauses the same negative marker appears with the affirmative existential predicate, cf. (Croft 1991: 6–7). This type is illustrated by O'dam, a Southern Uto-Aztecan language of Mexico. In this language, both verbal and existential predications are negated by the preverbal particle *cham* as in (2) below.

(2) O'dam [stp] (Everdell & Salido 2022 [this volume])

    a. *Karabiñ-kɨ'n tɨi   pu=p   jiñ-ma'yasa na=ñich   cham <u>oi</u>.*
        carabine-with NRINT SENS=IT 1SG.PO-shoot SUB=1SG.SBJ NEG   go.PFV
        'With a rifle he wanted to shoot me because I did not go.'

    b. *Cham jai'ch-am-a'   ba' gu u'~ub.*
        NEG   EX-3PL.SBJ-IRR SEQ DET PL~woman
        'Then there are no women (and there will be no women).'

In Type A~B, a special negative existential is found in addition to the regular negative pattern in which the existential is negated with the marker of verbal

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[4]In this volume the terms *standard negation* and *verbal negation* are used interchangeably, see §4.1 for further discussion.

negation. The two strategies used for the negation of existential predications may be in complementary distribution (i.e. one of them is observed in specific contexts from which the other one is banned), (Croft 1991: 7–8). For instance, in New Persian/Tajik, negative existential *nest* is restricted to the present tense whereas the SN marker *na-* is used for the negation of existential predications with non-present time reference or when the verb *daʃtan* 'have' is used in negative existential predications as illustrated in (3).

(3) New Persian/Tajik [tgk] (Verkerk & Shirtz 2022 [this volume])

a. *Dar in   χona tireza   nest.*
    in   DEM house window NEG.COP.PRS.3SG
    'There are no windows in this house.' (Perry 2005: 202)

b. *gurba-ye vaʃi na-dar-ad*
    cat-LNK   wild NEG-have-3SG
    'There are no wild cats.' (Cormac Anderson, p.c.)

However, there are also languages where SN and a special negative existential appear to be in free variation (i.e. interchangeable) for the negation of existential predication. This appears to be the case for Lele, an East Chadic language from Chad, shown in (4).

(4) Lele [lln] (Butters 2022 [this volume] citing Frajzyngier 2001: 196)

a. *kùmnó màní*
    God   there
    'God exists'

b. *díglè káŋ kàsà màní*
    year DEM corn there
    'there is corn this year'

c. *kùmnó màní ɗé*
    God   EX   NEG
    'God does not exist'

d. *kùmnó wíléŋ*
    God   NEG.EX
    'God does not exist'

In Type B, the negative marker of existential clauses and that of verbal clauses are clearly different expressions. This is illustrated by data from Ritharrŋu, a Pama-Nyungan language from the Yolŋu group, spoken in Australia's Northern

Territory. In this language, SN is expressed by a suffix *-ʔmayʔ*, (5a) while negative existence is encoded by a free standing form *yakaŋu* which take the predicate position in the sentence, as in (5b).

(5)   Ritharrŋu [rit] (Phillips 2022 [this volume] citing Heath (1981: 101–102))

  a.   *wäni-na-'may' napu*
       go-PST-NEG   1PL.EXCL
       'We didn't go.'

  b.   *yakaŋu ŋay dhäŋgu*
       NEG.EX 3SG meat
       'There's no meat.'

Croft (1991: 18–19) remarks that Type B is cross-linguistically extremely common. This is hardly surprising given that negative existentials are widely spread in the languages of the world (see §4.3 for further discussion). However, it should also be noted that both in the languages discussed in this book as well as in other comparative datasets, e.g. Veselinova (2016), Type B is seldom the only option in a specific language; the transitional types A~B and B~C are also frequent, see Section §3 for a continued discussion on this issue.

The transitional Type B~C covers cases where the negative existential is used for the negation of verbal predications in specific contexts, typically a particular tense-aspect or mood category. For instance in Mandarin, the negative existential *mei(you)* is used for the negation of verbal predications in the iamitive. The negator *bu* used with all other verbal predications is ruled out there.

(6)   Mandarin [cmn] (Lam 2022 [this volume])

  a.   教室裏**有**鉛筆
       *jiaoshi   li   **you** qianbi*
       classroom inside **have** pencil
       'There are pencils in the classroom.'

  b.   教室裏**沒(有)**鉛筆
       *jiaoshi   li   **mei(you)** qianbi*
       classroom inside **not-have** pencil
       'There are no pencils in the classroom.'

  c.   我買了書
       *wo mai-**le**   shu*
       I   buy-PFV book
       'I bought books.'

d. 我**沒有**買書
   *wo **mei-you** mai shu*
   I **not-have** buy book
   'I did not buy books.'

e. 我**沒有**買了書
   wo **mei-you mai-**le** shu*
   I **not-have** buy-PFV book
   Intended: 'I did not buy books.'

f. 我**不**買了書
   wo **bu mai-**le** shu*
   I **no**t buy-PFV book
   Intended: 'I did not buy books.'

The transitional Type B~C can be seen as a synchronic reflection of a historical change B > C in which the negative existential predicate gradually enters the domain of verbal negation. It is, at first, only used in restricted contexts of verbal negation but the use can expand and, finally, the negative existential predicate may completely substitute the original verbal negator. In Croft's view, the functional expansion of the negative existential can take place at least in three different ways: (i) through a competition between the original verbal negator and the negative existential, (ii) through reinforcement of the verbal negator by the negative existential and (iii) through a gradual substitution of the verbal negator by the negative existential, at first only in some special part of the verbal grammatical system. Croft (1991) appears to associate the expansion of negative existentials into the verbal domain with emphasis; the negative existentials are first used in emphatic contexts but gradually lose their force and become pragmatically unmarked. Moreover, there is a close connection between negative interjections, negative existentials and verbal negation, see (Croft 1991: 8–11; 13–14).

In Type C, the negative existential is identical with the verbal negator but they appear in different constructions. This type is especially frequent in Polynesian languages where negation of verbal predications is expressed by means of a complex clause as shown in (7a); the negator *'ikai* is in the main clause and the negated proposition comes in the subordinate clause. The negative existential *'ikai* is used in a simple sentence, see (7b); it is obviously identical with the standard negator.

(7)   Tongan [ton] (Broschart 1999: 97, 104)

 a. *Na'e 'ikai ke kata 'a Pita.*
   PST NEG SUB laugh ABS Pita
   'Pita did not laugh.' ([It] was not that Pita laugh[ed])

 b. *'oku 'ikai ha me'a*
   PRS NEG NSP thing
   'there is not anything'

In this volume, Type C is best illustrated by several Pama-Nyungan languages. Here we show data from Wirangu, a moribund language traditionally spoken by the Wirangu people who used to live on the west coast of South Australia across a region that encompasses Ceduna and Streaky Bay. In this language standard negation is encoded by a sentence initial particle *nyawa*, see (8a). Negative existence is expressed again by *nyawa* but in a postnominal position as in (8b).

(8)   Wirangu [wgu] (Phillips 2022 [this volume] citing Tsunoda (2011: 363, 661))

 a. ***nyawa** ngaya balga-lgo banjo-lgo.*
   NEG   1SG.ERG hit-PURP ask-PURP
   'I will not hit [him]. [I] will ask [him].'

 b. *nyawa, yarro walwa yamba. yori **nyawa**, gajarra **nyawa***
   NEG this bad country kangaroo **NEG** possum **NEG**
   *worriba **nyawa**, barrbira **nyawa**, jagay   **nyawa***
   sugarbag.bee **NEG** echinda **NEG** sand.goanna **NEG**
   'No, this country is no good. There are no kangaroos, no possums, no bees, no echidnas, no sand goannas [in my country].'

Croft (1991: 11–12) views Type C as a stage in which the negative existential has replaced the original verbal negator and become the only negative marker of both verbal and existential clauses. However, Type C is cross-linguistically less common than types A and B. According to Croft (1991), this is because existence is a state rather than an action or a process and, therefore, the negation of existence is more often expressed with a negative marker different from the verbal negator than with an identical marker. Moreover, since in stage C the negative existential predicate is identical with the verbal negator, the state of affairs appears to the speaker as an anomalous situation in which a (separate) [negative] existential predicate is absent. Such a predicate is therefore introduced in the construction, making stage C rather unstable and prone to proceed towards stage A.

As the negative existential marker has become the only negative marker it may be reanalyzed simply as a negator and begin to be used together with the affirmative existential. In a stage where the presence of the affirmative existential is not obligatory, the language with its varying constructions represents Type C~A. (Croft 1991) notes that this type is rare which is also confirmed by our datasets. This is exemplified in (9) by data from Gaozhou Cantonese, an understudied variety of Cantonese spoken in Maoming, a southwestern county in the Guangdong Province of China. With some simplification of facts, (see detailed discussion in Lam (2022 [this volume])), we can say that in this variety there is a single negator *mau5* which is used in both verbal and existential predications. However, in existential predications the form *mau5* can be used on its own or together with the positive existential *jau*. Lam notes that the use of *jau5* in negated predications is optional. In her view, this indicates that *mau5* can express negative existence on its own, which is highly plausible since it is cognate with negative existentials in other Chinese varieties. Thus it is justifiable to consider the use of the positive existential *jau5* in negated predications of existence as a newer development.

(9) Gaozhou Cantonese (gaoz1234),[5] (Lam 2022 [this volume])

    a. 我茅買書
       *ngo **mau** mai syu*
       I   **not** buy book
       'I did not buy books.'

    b. 有鉛筆
       fosat   *gui*   ***jau** jinbat*
       classroom that.place **have** pencil
       'There are pencils in the classroom.'

    c. 課室具**茅有**鉛筆
       fosat   *gui*   ***mau** (**jau**) jinbat*
       classroom that.place **not** **have** pencil
       'There aren't pencils in the classroom.'

Croft (1991: 13) considers the transitional stage C~A to reflect a change C > A which subsequently leads to stage A of the cycle. The change can be seen as an analogical development where the negative marker starts to be applied to the positive existential in the same way as it is applied to verbal predicates Croft (1991: 17). Moreover, Croft (1991: 22) also sees emphasis play a role once again,

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[5]There is no ISO-639 code for this variety which is why the Glottocode is used here.

this time in the insertion of the positive existential in the negative construction in addition to the simple negative existential.

When the cycle reaches stage A, a single negative marker is again used to negate both existential predicates and verbal predicates. Only this time, a new negative marker has evolved. It has resulted from the univerbation of the earlier negative marker and the earlier affirmative existential and is, therefore, different from the original negative marker (Croft 1991: 6–13).

A graphic representation of the model is shown in Figure 1. It should be noted that in the original version, only the stable types are represented. We include both the stable and the transitional types here since the latter turn out to be cross-linguistically very frequent and also very important when modeling the expansion of negative existentials into the verbal domain.
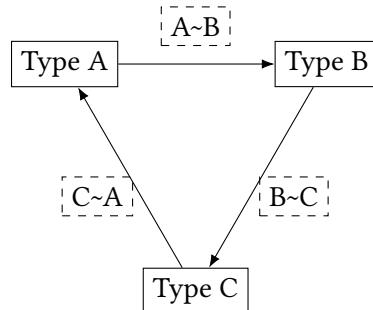
Figure 1: Graphic representation of the NEC, adapted from Croft (1991).

The graphic representation of the cycle may lead to the impression that the stages outlined in it are necessarily sequential. Croft (1991: 22) states very clearly that this is not the case; in fact, overlaps of different stages are expected. The comparative data compiled in the last ten years provide ample support for this generalization, see Veselinova (2016) as well as several chapters in this book for instance Wilmsen (2022), Oréal (2022), Lam (2022), to name a few.

Croft views the evolution of general negation markers from negative existentials as a grammaticalization process that involves instantiations of several commonly observed processes such as fusion, emphasis and its subsequent loss, competition/co-existence of different different encodings for one and the same function, as well as analogy. Fusion between a negator and a positive existential results in a special negative existential. Once created, negative existentials can expand their domain of use in different ways. One is by being added as emphatic elements to negated verb constructions. This kind of development is extensively discussed in this volume as well (Bernander et al. 2022, Guillaume 2022, van der

Auwera et al. 2022), see also the discussion of negative existentials commonly used as negative answer words *No* in §4.3. Another pathway of expansion, outlined by Croft (1991), is that a negative existential can take over the negation of a specific tense-aspect-mood category in the domain of verbal negation. This creates variation in the domain of standard/verbal negation. Gradually, a negative existential, which is already used in a particular sub-domain of standard negation, can expand to negate all verbal predications. The cycle is considered to have gone full circle when the erstwhile special negative existential has started to be used together with the affirmative one for the negation of existential predications. In other words, there is a new, single negation strategy used both in verbal and in existential predications.

Croft (1991: 23–24) notes that the NEC is productive in languages where predicate concatenation is possible and that the morpho-syntactic characteristics of specific languages may inhibit or halt the cycle. These generalizations are further confirmed and expanded in this volume (cf. discussion in §3). Croft closes his article by stating that the dynamicization of typological data is highly significant for performing historical language studies since in many cases contemporary language data is all we have access to. At the same time, he does emphasize that models based on dynamic typology should be tested by the historical-comparative method whenever possible. This is what many of the authors of this book have done. The detailed datasets from specific families or language clusters allow for testing of the model in a fine-grained manner; in addition some authors, e.g. Verkerk & Shirtz (2022 [this volume]) have also used statistical procedures for simulating a possible historical evolution.

3 Outline of the topics covered in this book

The topics discussed in the book follow several general directions. These include (i) the interaction of negative existentials with SN, which in terms of the NEC implies an analysis of comparative data in terms of its different stages; (ii) the duration of different stages together with hypotheses about the time required for a completion of the NEC; (iii) the constructions or processes that commonly contribute to negative existentials entering the verbal domain; (iv) a topic raised by several authors is situating the NEC among other cycles and the general theory of cyclical developments in language change; (v) finally, other special negators, not just negative existentials have been noted to undergo similar processes.

The interaction of the negative existentials with standard negation is manifested in the cross-linguistic frequency of specific stages of the NEC and the co-occurrence of the stages with one another.

The following can be said about the frequency of occurrence of the types outlined in the original model (Croft 1991). The studies in this volume confirm the results of earlier findings (e.g. Croft 1991, Veselinova 2014, 2016): Type B, see (5), (Ritharrngu) is cross-linguistically very common and Type A, illustrated in (2), O'dam, is also widely attested, while Type C, see (7), Tonga, is the rarest. Since the attestations or reconstructions of changes from one type to another are essential for the detection of a cyclic development, the inspection of transitional types forms a central part of the volume. Moreover, the transitional types seem to be more common than the stable types A, B and C. Especially attestations of A~B, (3), Tajik, and B~C, (6), Mandarin, are found in many languages and families, whereas C~A, (9), Gaozhou, is encountered more seldom. This can be seen as further evidence for the observation that the transitional stages A~B and B~C tend to arise relatively easily and to be relatively stable, whereas C~A (and the Type C itself) seem to pass more rapidly. In other words, contextually restricted negative existentials appear to develop easily; likewise, it is cross-linguistically common for negative existentials to be involved in partial take-overs of verbal negation. Thus the stages with variation appear to be both cross-linguistically common and diachronically stable as they can be demonstrated to last for extended periods of time, see data from Old Egyptian (Oréal 2022 [this volume]) as well from Arabic varieties (Wilmsen 2022 [this volume]).

As pointed out by Croft (1991) and also Veselinova (2016), types or stages of the cycle need not be sequential. In fact, it is cross-linguistically common for different stages to be present in a language simultaneously. The data in this book provide ample illustrations for this statement. For instance, Lam (2022 [this volume]) demonstrates that the negative existential function of the predicate *méi* (Type B in the NEC) and its uses as a general verbal negator (Type B~C in the NEC) emerged in Mandarin roughly at the same time, see data in (10) below.

(10)   Mandarin [cmn] (Lam 2022 [this volume])

    a. *méi* as a negative existential
       一向都**沒**分別
       *yixiang dou **mei** fenbie*
       along   all   MEI   difference
       'There's no difference all along.' (《朱子語類》 *Zhuzi Yulei* AD 1270)

    b. *méi* as verbal negator
       都**沒**理會了
       *dou **mei** lihui   le*
       all   MEI take.notice le
       '[they] all didn't take notice.' (《朱子語類》 *Zhuzi Yulei* AD 1270)

An interesting example of synchronic co-occurrence can be seen in Tacana (Guillaume 2022 [this volume]) where the Types A and B~C co-occur, something that is cross-linguistically rare. This co-existence of two types is due to the fact that the language has three different SN constructions whose use partly depends on the finiteness versus non-finiteness of the predicate verb. The three SN constructions are as follows (i) bi-partite *aimue...*VERB=*mawe*/*mue*; (ii) *aimawe*/ *aimue*; (iii) a proclitic *mué=*. The bi-partite construction *aimue...*VERB=*mawe*/ *mue* can be used for the negation of both finite and non-finite predicate verbs as well as in existential clauses; this motivates postulating Type A for Tacana. The form *aimawe* can not only be used as a single predicator to encode negative existence but also for the negation of non-finite verbs. Hence the postulation of Type B~C in the language. The proclitic *mué=* is used for the negation of non-finite predicate verbs (*mué=...*v[be/do-INFL]) but not for existential predications.

(11)   Tacana [tna] (Guillaume 2022 [this volume])

a.   ***Aimue** =da   ema **e**-siapati-yu=**mue**.*
     NEG   =PRT 1SG FUT-come_back-ITER=NEG
     'Ya no voy a regresar.' na191
     'I'm not going to come back again anymore.'

b.   [*Da tiempo*] ***aimue** sapato ani-ina=**mawe**.*
     that time   NEG   shoe sit-HAB.PST=NEG
     'En ese tiempo no había zapato.' ci024
     'At that time, there were no shoes.'

c.   *Kwati   =mu   **aimue**   =tsu'u.*
     firewood =CNTR nonexistent =STILL
     'La leña todavía no hay.' ci104
     'There is no firewood yet.' (lit. firewood was nonexistent)

d.   *Biame **aimue** =da **dia a-ta-ina**.*
     on_the_contrary NEG =PRT eat do-3A-HAB.PST
     'Pero no lo comió.' qu004
     'But (the jaguar) would not eat it.'

e.   ***Mué**=pa **teje-ti-yu   a-ta-idha**   [*jida mesa   e-wane*] *beu.**
     NEG=RPRT find-GO-ITER do-3A-REM.PST that 3SG.GEN NPF-wife PRT
     'Dice que no lo ha ido hallar ese su mujer.' os043
     'He didn't find his wife.'

The data from Tacana show that stages which are distant from each other in the NEC model may persist simultaneously in a language. This can be seen in Arabic,

too, where the so-called *šī*-cycle has skipped stage B but exhibits the transitional stage B>C (Wilmsen 2022 [this volume]).

It should be noted that the realization of the NEC is far from universal. There are languages and language groups that seem to have adhered to a single negation strategy, that is Type A, for long periods of time, with no detectable or very rare interaction between negative existence and SN. For the languages of this volume this is noted, for instance for a large part of the Bantu family(Bernander et al. 2022 [this volume]) and also for Romance languages (Verkerk & Shirtz 2022 [this volume]) that mostly adhere to Type A. In the case of Bantu, there are non-verbal constructions for the expression of negative existence, but these are only used in a regionally restricted set of languages. Moreover, negative existentials seem to have become standard negative markers mostly in language varieties that are heavily influenced by contact. In the Chadic languages, as well, Type A prevails (Butters 2022 [this volume]). Another rather clear example where standard and existential negation do not seem to have interacted with each other is O'dam and likely South Uto-Aztecan (Everdell & Salido 2022 [this volume]).

Several of the articles shed light on the duration of the cycle of the NEC since they examine the extended time-depth of languages that have a very long written tradition. Such languages include Arabic, Ancient Hebrew, Ancient Egyptian and Chinese. As shown by Lam (2022 [this volume]), for example, several rounds of completion of the NEC can be detected in the evolution of negation from Old Chinese to modern Mandarin and Cantonese.

The examinations of the languages with a long written tradition confirm the earlier views that especially the transitional stages of the NEC tend to endure over long periods of time. Moreover, synchronic variation, tolerance of multiple constructions and overlap of different stages seems to be more common than a strictly consecutive succession of clearly definable stages of the cycle. This is often due to a condition where a new cycle was (re)started before the previous one was completed. For example, in Old Chinese more than ten different negative markers have been attested, at least three of which could be used in the negation of existence (see Lam 2022 [this volume]). Likewise, tolerance of multiple constructions, synchronic variation of older and emergent forms and overlap of stages are detected in Ancient Egyptian (Oréal 2022 [this volume]) and Ancient Hebrew (Naudé et al. 2022 [this volume]).

It has to be pointed out, however, that written languages are often conservative and possibly do not represent actual language use. This is suspected, for example, by Oréal (2022 [this volume]) in the case of Ancient Egyptian and Wilmsen (2022 [this volume]) in the case of Arabic. In Arabic, the longest surviving existential negator *laysa* has reached the stage C>A but the negator has mainly persisted

in the conservative written language, whereas in speech it is only maintained in some dialects.

As stated in the conclusion of §2, Croft brings up analogy as one the driving factors that contribute to the spreading of the negative existential construction to another domain, such as the domain of verbal negation. This is also confirmed by studies in this volume, e.g. Naudé et al. (2022 [this volume]) who discuss data from Ancient Hebrew. In this language participial constructions, some of which included the negative existential, spread to the main predicate position. This in turn led to the reanalysis of the negative existential as the more general negator.

A major pathway whereby negative existentials enter the domain of verbal negation is their use with non-finite forms of the lexical verb. In the Nanaic languages discussed by Oskolskaya & Stoynova (2022 [this volume]), negative existentials are commonly used with a converb that also encodes simultaneous action, as illustrated in (12) below.

(12) Naikin Nanai [gld] (Oskolskaya & Stoynova 2022 [this volume] citing Avrorin (1986: 209, text))
Əǯi-ni   sənə-m=də̄   aba.
husband-3SG wake.up-CVB.SIM.SG=EMPH NEG.EX
'Her husband hasn't woken up (lit. her husband is absent while waking up).'

In literal terms, the action encoded by the lexical verb in (12) is seen as simultaneous with the state of absence predicated by the negative existential. The latter is subsequently reanalyzed as a negator for the action expressed by the lexical verb. The material presented by Oskolskaya & Stoynova (2022 [this volume]) outlines different degrees of the conventionalization of such constructions in the Nanaic languages. The more conventionalized they become, the closer the negative existential comes to a general verbal negator.

Negative existentials are used with non-finite, nominalized forms of the lexical verb in many different languages around the world, see (13) below for an example.

(13) Ancient Egyptian [egy] (Oréal 2022 [this volume])
ni   mꜣ=j   mjtj n zrw   pn
NEG see\NMLZ=1SG like of goose this
'I haven't seen the like of this goose ever.' (lit. 'There is not my seeing the like of this goose') (Meir III)

As illustrated in (13), the action of seeing is negated by being conceptualized as a non-existent entity. Such uses of negative existentials present a clear pathway

for them to expand into the domain of verbal negation. Several authors in this book highlight the functional and pragmatic motivation for this phenomenon.

For instance, Oréal (2022 [this volume]) based on data from Ancient Egyptian, considers negative existentials as predicators of absence rather than operators of negation. When they combine with an action, the action itself is perceived as a wholesome object, hence the motivation for a nominalized verb form.

Lam (2022 [this volume]) contributes to the understanding of the NEC in several different ways. The one relevant here concerns the use of SN markers and the negative existential with different verb classes in Hong Kong Cantonese. Lam points out that in this variety, activity predicates can be negated by either the SN marker *mau4* and the negative existential *mau5*. However, the SN marker *mau4* and the negative existential *mau5* are in complementary distribution with all other verb classes. Specifically, the SN marker *mau4* is preferred with states, while the negative existential *mau5* is preferred with accomplishments, achievements and semelfactives. All of these can be easily conceived of as entities. Thus Lam concludes that negative existentials in Chinese varieties are not negators for a specific tense-aspect category such as the perfect, as is often stated in grammars. Rather, negative existentials assert the non-existence of entities with varying degrees of abstraction, from very specific to very abstract objects. This in turn leads to them being re-interpreted as more general verbal negators.

Phillips (2022 [this volume]) presents data from several Australian families and demonstrates convincingly that privative markers, in many of them also the negative existentials, predicate the absence of things/entities. When used with words that encode actions, the privatives/negative existential predicate the non-actualization of events.

Negative existentials are frequently used as negative answer words *No*, see (14) from Swahili below (see also §4.3).

(14) Swahili (G42) [swh] (Bernander et al. 2022 [this volume] citing King'ei & Ndalu (1989: 25))

a. *Ha-pa-na   m-tu   a-si-ye-fanya   ma-kosa*
    NEG-SM16-COM 1-person 1-NEG-REL1-make 6-mistake
    'There is no person who does not make mistakes.'

b. *U-na-kwenda   Bagamoyo? Hapana.*
    SM.2SG-PRS-go Bagamoyo no
    'Are you going to Bagamoyo? No.'

Such uses emerge as another cross-linguistically common pathway whereby negative existentials expand into the domain of verbal negation, see for instance

Bernander et al. (2022 [this volume]), Hamari (2022 [this volume])Hamari on Moksha, Guillaume (2022 [this volume]) on Tacana and van der Auwera et al. (2022 [this volume]) for a cross-linguistic perspective.

There are several possible pathways whereby negative answer words *No* can be re-analyzed as more general markers of verbal negation. As discussed by Bernander et al. (2022 [this volume]), such words are frequent and salient and in situations of contact between speakers of different varieties, they can be easily re-analyzed as a general negator. This is the case of Standard Swahili in contact with other pidgin varieties of Swahili and also with other Bantu languages. Specifically, the Standard Swahili negative existential *hapana* has been borrowed and integrated into their negation systems. For instance, in Pogolo, shown in (15) below, the word *hapana* has become a bound prefix, much like many other expressions of SN in Bantu languages.

(15) Pogolo (G51) [poy] (Bernander et al. 2022 [this volume])
      hapa-tu-hemer-a
      NEG-SM1PL-buy-FV
      'we are not buying'

Another pathway whereby negative existentials/negative answer words *No* become general negators is via their uses as sentence-external, pleonastic negators. Such a case is discussed, for instance by Guillaume (2022 [this volume]) based on data from Tacana. In this language the word *aimawe* is observed as a pleonastic negator as in (16) below and also as a first element in one of the SN constructions, cf. (32a).

(16) Tacana [tna] (Guillaume 2022 [this volume])

      Mother: *Manuame-pe-ta-kwa tse   ekwana.*
              kill-COMPL-3A-POT   MAYBE 1PL
              '¡(Tu padre) nos puede matar a toditos!' au064
              '(Your father) can kill us all!'

      Son: **Aimawe!** *Ema ebiasu tuche-da.*
              no   1SG a_lot strong-ASF
              'No, yo tengo más fuerza que él.'
              'No (he can't kill us)! (Because) I'm stronger (than him).'

Guillaume (2022 [this volume]) reasons that *aimawe*, which with all likelihood originates from a negative existential, is also commonly used as a negative answer word *No*. This use leads to the one as a pleonastic negator, external to the

proposition. In many situations, the sense of emphasis is lost and *aimawe* is re-interpreted as the initial part of a bi-partite SN construction with a reduced form *aimue*. In essence, Guillaume (2022 [this volume]) outlines a development highly reminiscent of a Jespersen Cycle.

This brings us to another important topic of the book, namely situating the NEC among other well known cycles. Authors such as van der Auwera, Krasnoukhova and Vossen as well as van Gelderen cast the NEC in a theoretical perspective together with providing a discussion about differences and similarities between different cyclical processes with a special focus on those that produce some kind of negative marker. These authors make significant contributions to the volume and to the theory of cycles. For the purposes of this summary, we focus on one, namely the interaction between NEC and Jespersen Cycle.

Van der Auwera, Krasnoukhova and Vossen provide a generalized definition of the notion of Jespersen Cycle. Specifically, they define it as a process where the SN marker co-occurs with another element α which can be either non-negative like French *pas* or negative like Swedish *inte*. This collocation may result in an univerbation or the non-negative element may become negative by contamination and may eventually oust the original SN marker. After an analysis and a refined definition of the NEC, these authors consider possible parallels and also any possible interaction between the Jespersen Cycle and the NEC. To highlight this aspect, they bring up Mara, a Pama-Nyungan language from Northern Australia and Wintu, an extinct language, formerly spoken in northern California. Both of these languages are discussed by Croft (1991: 10, 14) but van der Auwera, Krasnoukhova and Vossen provide a new interpretation to these data. Specifically, these authors highlight the fact that negative existentials, when used as pleonastic negators, can produce emphatic negative constructions where the negative elements are in fact doubled as in Tacana, (16). The occurrence of such constructions and the subsequent loss of the sense of emphasis is strongly reminiscent of a Jespersen Cycle development. The authors point out that this has been implicitly stated by Croft (1991: 14). In their contribution they make it more explicit and also provide a cross-linguistic perspective suggesting that this pathway for negative existentials to enter the domain of verbal negation is much more common than shown by previous research.

The interaction of the NEC and Jespersen Cycle is also mentioned by some other authors of the volume. Bernander et al. (2022 [this volume]) make a cautious observation of a possible beginning of the Jespersen Cycle in which a negative existential is involved in certain Bantu languages: in these languages, there are discontinuous constructions for standard negation where the inherited preverbal standard negator is accompanied by a postverbal negative particle which

is identical with the existential negator. Such a construction is attested in Iyaa, illustrated in (17).

(17) Iyaa (B73c) [iyx] (Bernander et al. 2022 [this volume] citing Mouandza (2001: 439, 436))

    a. standard negation
       ndé   a   á-yĕne   pé ku mu-síti
       PERS1 NEG SM1-go.PFV NEG 17 3-forest
       'He has not gone to the forest.'

    b. negative existential
       bààtà   pé
       2.person NEG
       'There are no people.'

Furthermore, a possible involvement of a negative existential in a Jespersen Cycle type of an evolution of negation is also discussed in the case of Arabic (Wilmsen 2022 [this volume]), Ancient Egyptian (Oréal 2022 [this volume]), Nanai (Oskolskaya & Stoynova 2022 [this volume]) and Tacana (Guillaume 2022 [this volume]), see also van Gelderen (2022 [this volume]) for a formal perspective on this topic.

Van Gelderen considers the NEC in the context of several other cyclical processes such as the Jespersen Cycle, the Givón Cycle, whereby verbs with referential content are shown to evolve into negation markers and, finally, the Copula Cycle. In her view, negative existentials and, subsequently, the NEC are restricted to verbs that represent univerbations between a negator and another item. Lexical sources for negative existentials or negators are considered a separate development, which she includes in the Givón Cycle. Van Gelderen grounds her discussion in formal syntax with an abundance of cross-linguistic data. The issues she highlights include the source verbs for the NEC, its verbal nature, as opposed to the nominal nature of the Jespersen Cycle, and finally, similarly to other authors in this volume, the possibility of doubling the negative maker in constructions produced by the NEC. Ultimately, she also brings up factors that can facilitate the operations of cycles such as the NEC and the Givón Cycle. Namely, she points out that the realization of these cycle is most likely when the source verbs are not specified for too many features.

Finally, as discussed in §4.4 and §4.5, several scholars, notably, Baranova and Mishchenko as well as Wilmsen and van Gelderen stress the fact that other special (non-standard) negators may expand into the domain of standard negation

via processes similar to the NEC, e.g. via creation of emphatic constructions, co-existence of stages with variation, restriction to a specific verbal category for periods of time of varying length. Thus the cycle dubbed Negative Existential Cycle need not be restricted to negative existentials only.

4 Notions central to this book

4.1 Standard negation

The term STANDARD NEGATION covers negation strategies used in main declarative clauses with an overt lexical verb, see Miestamo (2005: 1) who follows Payne (1985) in keeping this term for the negation of verbal predications. As noted by Dahl (2010: 10–11), the term is not entirely felicitous as it implies that all other negation strategies are somehow "non-standard", and it is not at all clear that it should be so. In defense of the term *standard negation*, it should be pointed out that frequently, though not always, the negation strategy used to negate verbal predications is also pragmatically the most neutral one in many languages. Since the essence of SN is the negation of verbal predications, many authors in this book use the terms *standard negation* and *verbal negation* interchangeably.

There is a strong tradition in the scholarship of negation to contrast affirmative and negative constructions. Miestamo (2005: 6–7) introduces an important distinction between symmetric and asymmetric negation. Symmetric negation refers to cases when the negative construction differs from the affirmative by one added element[6]. Asymmetric negation involves changes in the affirmative construction that are more complex than the mere addition of an element. One of Miestamo's major contributions to the typology of negation is the outline of several different types of asymmetries between affirmative and negative constructions. One of them, asymmetry according to finiteness, is especially relevant for the NEC.

SN in Moksha in (1a-1b), is considered symmetric as *af moran* in (1b) differs from *moran* in (1a) only by the negative particle *af*. However, negation in categories other than the indicative non-past can be asymmetric in that a special negative auxiliary is used and the lexical verb has to appear in a special form dubbed connegative in Uralic linguistics, cf. (18a-18c). There are two kinds of asymmetry we observe in these data: (i) constructional asymmetry, as different kinds of constructions are used in the affirmative and the negative domains and (ii) asymmetry according to finiteness, since the lexical verb from the affirmative appears in a non-finite form in the negated proposition.

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[6]The negative element itself may comprise several parts, like French *ne* VERB *pas*.

(18) Moksha [mdf] (Hamari 2022 [this volume])

    a. *mora-ń*
       sing-PST1.1SG
       'I sang'

    b. *iź-ə́ń*   *mora*
       NEG.PST-PST1.1SG sing.CNG
       'I did not sing'

    c. *aš-ə́ń*   *mora*
       NEG.PST-PST1.1SG sing.CNG
       'I did not sing'

As indicated in (1d–1e), the auxiliary *aš-* used in (18c) actually developed from the negative existential in Moksha. This brings us to introducing definitions of existential predications, §4.2, and negative existentials, §4.3.

4.2 Existential sentences

The term EXISTENTIAL SENTENCE was introduced in modern linguistics by Otto Jespersen (1924: 154–156). He begins by contrasting sentences such as (19) and (20) as possible openings of a story and notes that (20) is a much more natural way to begin a story than (19).

(19) A tailor was once living in a small house. (Jespersen 1924: 154)

(20) Once upon a time there was a tailor. (Jespersen 1924: 154)

By highlighting the story opening function of (20), Jespersen pinpoints what would later be identified as one of the most important discourse functions of these constructions, namely, introducing a new referent into the discourse. Jespersen goes on to discuss a number of well-known structural features of existential clauses: use of an expletive locative pronoun such as *there* in English, a lexical item with odd characteristics in a predicate position, indefinite subject in a non-prototypical position, inverse word order. Jespersen's explicit definition of existential sentences as [sentences] "in which the existence of something is asserted or denied" has been criticized as too general and weak, (McNally 2016: 212). However, he has to be credited with delimiting these sentences as a separate construction type with specific functions and identifiable formal properties.

    Since Jespersen (1924), an enormous amount of scholarly work has been devoted to existential constructions, though many of them simply take the notion

for granted, (see also Creissels (2019: 43-44) and Haspelmath (2022) for detailed discussions of this issue). In what follows we summarize selected lines of research that have helped shape the understanding of existential constructions as it appears in this book. They include the close link between location, existence and possession, the terminology used for the analysis of existential constructions, their semantics and functions and, finally, their structural encoding.

4.2.1 Location, existence and possession

A number of studies have been devoted to highlighting the conceptual link between location, existence and possession, see (Lyons 1967, Clark 1978, Bickerton 1981, Heine 1997, Kuteva et al. 2019, Koch 2012); the list provided here is not exhaustive). Such a link is illustrated by Finnish in (21). In this language, the located argument appears in the nominative case, the verb *olla* 'be' agrees with it in person and number and the locative phrase is marked by one of the locative cases, typically though not always, the adessive or the inessive, see (21a). In existential predications, see (21b), the same arguments are observed but the word order is different in that the locative phrase occurs in the theme. Finally, possessive predications, (21c), use the same template as existentials in that the possessor is marked by a locative case, the adessive. It has to be pointed out that the case marking of arguments in this construction is complicated. The case marking is the same (nominative) in locative and existential sentences only if the subject is singular and the sentence is affirmative. With a plural or mass noun subject or under negation, the subject of existential and possessive sentences is in the partitive (see 21c).

(21) Finnish [fin] Vilkuna (2020: 113) modified by Arja Hamari

  a. LOCATIVE
  Koira on   sohva-lla /Anna-n   syli-ssä.
  dog   be.PRS.3SG sofa-ADE /Anna-GEN lap-INE
  'The dog is on the sofa / Anna's lap.'

  b. EXISTENTIAL
  Sohva-lla /Anna-n   syli-ssä on   koira   /koir-i-a.
  sofa-ADE /Anna-GEN lap-INE be.PRS.3SG dog/dog-PL-PAR
  'There is a dog /are dogs on the sofa /Anna's lap.'

  c. POSSESSIVE
  Anna-lla   on   koira /koir-i-a   /raha-a.
  Anna-ADE be.PRS.3SG dog   /dog-PL-PAR /money-PAR
  'Anna has a dog / dogs / money.'

Thus in Finnish, the introduction of a new participant in the discourse is expressed by placing it in a particular location or context. As has been noted by many authors, and likewise in the articles of this book, the locational scheme is pervasive for the encoding of existential predications, (see also pertinent data in §4.2.4). In fact, there are authors such as Creissels (2019: 1) who focus exclusively on what he calls *inverse-locative predications*, that is, predications such as *There is a book on the table*. For him a defining feature of existential predications is "the perspectivisation of the relationship [...] from ground to figure"; as this author points out, figure-ground relationships are also encoded by plain locational sentences such as English *The book is on the table* (Creissels 2019: 41) but the perspective of novelty is missing. Dryer (2007) offers a more general perspective on these constructions, which we also adopt here, see §4.2.3. In particular, Dryer highlights the fact that existential constructions, regardless of whether they specify a location or not, introduce a new referent into the discourse.

4.2.2 Terminology used in the analysis of existential predication

Several important notions used for the analysis of existential predications follow studies set in generative semantics and syntax. In a number of works, for example in Bentley et al. (2013: 1) who follow McNally (2011a,b) and Francez (2007), it is pointed out that the noun phrase in existential constructions[7] is a non-prototypical subject and it is identified as a *pivot*. Furthermore, many authors argue that noun phrases in existential constructions are indefinite and either generic or non-specific, see McNally (2016: 219) and also Koch (2012: 538) for examples. Bentley et al. (2013: 1–2) note that the pivot is the only obligatory component in an existential construction while any other components are optional. The optional components include the locative phrase, the expletive pronoun and the verb form, these authors label *existential copula*. In many languages it can be a form of the verb 'be' as it is in English or in Finnish, as shown in (21) above. In other languages it can be a form dedicated to the existential constructions as the form *hay* in Spanish, see (22).

(22)   Spanish [spa] (constructed example)
       Hay queso   en la   nevera.
       EX   cheese in DEF fridge
       'There is cheese in the fridge.'

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[7]The terms *predication* and *construction* are used synonymously here.

It has to be said that there is still no consensus on the terminology used for the verb-like element that may be present in existential constructions. In addition to existential copula, it can be referred to as *existential verb*, or *existential particle* to name a few alternatives. The terminology used for this component can be very idiosyncratic but while not all authors make it explicit, the choice of denomination may be contingent on the degree of specialization of this element. For instance, forms such as those used in the English and Finnish existential constructions are referred to as copulas as they still belong to the paradigm of the verb 'be' in these languages. Conversely, the form *hay* in Spanish is frozen in the existential construction and has only a diachronic connection to *habere* 'have' from which it stems; *hay* is often referred to as the existential verb or as existential particle. As the authors contributing to this book work in different schools and traditions, readers will find variation in the labeling of the verb-like element in existential constructions[8]. For the purposes of consistency in the glossing of the data, it is glossed as EX for 'existential'.

4.2.3 Semantics and functions of existential constructions

Dryer (2007: 240–243) discusses existential constructions as a separate clause type and illustrates it with examples from Ma'anyan, an Austronesian language spoken in Kalimantan, Borneo, Indonesia, see (23).

(23)   Ma'anyan [mhy] (Dryer 2007: 240–241 citing Gudai 1998)

    a. *inehni   naqan hang sungking*
        mother be.at   at   kitchen
        'his mother is in the kitchen'

    b. *naqan   erang kaulun wawey mawiney hang tumpuk yeruq*
        be.at/exist one   CLSFR   woman beautiful at   village   the
        'there was a beautiful woman in the village'

    c. *sadiq   naqan tumpuk eteqen*
        olden.time exist   village   Eteen
        'once upon a time there was a village called Eteen'

All three examples in (23) above include a locative verb *naqan* 'be at, exist' and a noun phrase whose location or existence are predicated. As discussed by Dryer (2007), the sentences in (23) have similar components but differ in perspective

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[8]Haspelmath (2022) suggests to dub this element existive. This term is yet to be established in future research.

and information structure. While (23a) makes a statement about the location about an individual known to the participants, *inehni* 'his mother', (23b) presents an individual unknown to the hearer, *erang kaulun wawey mawiney* 'a beautiful woman' at a specific location (*hang tumpuk yeruq* 'at the village'). The sentence in (23c) introduces something new to the hearer, the existence of a village called Eteen. Dryer (2007: 241) points out that the sentence in (23a) can be characterized as a locative clause, while the sentence in (23b) can be interpreted either as a locative or as an existential predication. Finally, (23c) is characterized as existential only. At the same time, Dryer offers a very important analytical insight. Specifically, he points out that using the label *existential* for clauses such as (23b-23c) is, in fact, misleading since their discourse function is to introduce participant(s)/facts new to the hearer[9]. This accounts for the restriction to indefinite NPs as pivots and the fact that NPs in existential constructions are often generic.

It is also our understanding that clauses dubbed *existential* are not merely about stating the existence of an entity in a philosophical sense as is sometimes suggested. Since the term *existential sentence* is well established, we will keep it here too. But it has to be clear what it covers. The constructions we focus on here have a general communicative function in that they bring a novel entity into (a specific) context. This is commonly construed in terms of location or possession, (consult §4.2.4 for more data on this issue).

Existential constructions are generally a feature of spoken registers. As has been pointed out already, in languages where existential constructions can be identified, they show a number of features which set them apart from other constructions as a separate construction type. It is important to bear in mind that a sentence such as (24) is an intransitive sentence and not an existential construction, in the specialized sense used here[10].

(24) Ghosts exist.

(25) There are ghosts in the forbidden forest.

The existence of ghosts is stated in (24) but without the perspective of novelty and a figure-ground reversal present in (25). Östen Dahl (p.c.) points out that it is most probably the case that intransitive verbs of existence such as English *exist*, French *exister*, Bulgarian *съществувам/səshtestvuvam* 'exist' are typically

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[9]This is very close to Jespersen's original understanding, which has been completely neglected when definitions of existential constructions have been offered.

[10]Haspelmath (2022) suggests the term *hyparctic* < Greek *hýparxis* 'existence' to include such sentences as well. As his work has not been available to the authors of this book but to the editors only, we mention it for the sake of completeness.

present in languages with a long written tradition and largely restricted to formal registers. This statement is currently an informed hypothesis which should be empirically tested by future research (see Olsson (2022) for a small-scale study of this issue).

Several other points need to be mentioned about the semantics of constructions dubbed existential. They concern the functions commonly identified for the existential construction, the temporal stability of the predicated novelty/entity, the role of the locative phrase for the interpretation of the construction, the restriction to indefinite NPs/pivots and the productivity of the construction.

Haspelmath (2022), in his quest to define a comparative concept for existential sentences, identifies the following functions: the indication of permanent presence, episodic presence and availability, see (26) for some examples.

(26)   Functions commonly identified for existential constructions (Haspelmath 2022)

    a.   PERMANENT PRESENCE
       There are lions in Africa.

    b.   EPISODIC PRESENCE
       There is a knife on the table.

    c.   AVAILABILITY
       There are oranges at the market.

Koch (2012: 540) makes a distinction between temporary location, dubbed by him RHEMATIC LOCATION (R-LOCATION), (27a), bounded existence, (27b), and finally generic existence, (27c). The distinction between bounded and generic existence is defined by the presence or absence of a locative phrase in the construction.

(27)   Somali [som] Koch (2012: 540)

    a.   *Miis-ka   buug baa dul   yaalla.*
       table-DEF book FOC upon be.3SG.M.PRS
       'There is a book on the table.'

    b.   *Libaax-yo badan baa jira'   Afrika.*
       lion-PL   many FOC exist.PRS africa
       'There are many lions in Africa.'

    c.   *Dad   badan oo   madluumiin-a baa jira'.*
       people many REL unhappy-be   FOC exist.PRS
       'There are many unhappy people.'

Koch (2012: 238–240) argues that in a sentence such as the one in (27a) the location of a specific entity is predicated, while in sentences such as those in (27b-27c) the existence of a generic entity is predicated. In his discussion, Koch points out that in Somali different verbs are used: *yalli-* in R-LOCATIONALS and *jiir* in constructions predicating existence. Expressions such as those in (27a) correspond to what Hengeveld (1992) calls LOCATIVE-PRESENTATIVE constructions. However, as noted by Dryer (2007), sentences such as those in (23b) and (27a) can be interpreted as either locative or as existential. What makes them functionally distinct from plain predications of location such as those in (23a) is the fact that they introduce a participant new to the hearer. For detailed studies of existential predications, the distinction noted by Koch (2012) is important and should be studied further, see examples from German in (35). However, for the purposes of identifying specialized constructions that bring something new to the discourse, as (27a) should be counted as existential together with (27b–27c). The presence or absence of a locative phrase, that is, binding the novelty to a specific location or making it a general fact, has a minimal role for the information structure of these constructions.

The final point to consider relates to the properties of the pivot and the productivity of these constructions. As discussed in §4.2.2 above, many authors point out that in an existential construction the pivot has to be indefinite and either non-specific or generic. This would exclude pivots in constructions such as those in (23b) and (27a) as the pivots in these examples are clearly specific. In addition, the presence of a quantifier may contribute further to the individuation and the degree of specification of the pivot. However, as argued above, from a communicative point of view, these constructions do exactly the same job as the constructions with non-specific or generic pivots. There are authors such as Dryer (2007: 242) who argue that constructions with a definite pivot such the one shown in (28) are not to be considered existential and are, in fact, a different construction altogether.

(28)   There is the dog in the garden

The construction in (28) points to a dog in the garden that is surely known to both speaker and hearer. In this sense, (28) is clearly different from constructions with an indefinite pivot. However, sentences like (28) are typically used to introduce a new turn/topic to the conversation. In that sense, we see them as an extension of the existential constructions. In other words, existential constructions can be productive; they show varying degrees of productivity in different languages.

4.2.4 Structural encoding of existential constructions

This section builds on McNally (2016), who in turn draws most of her material from Creissels (2014). As discussed in §4.2.1, Creissels restricts his focus to inverse-locative constructions, and studies their encoding in a non-stratified sample of 256 languages[11]. Although this is a large amount of material, it is safe to say that a well-designed quantitative study of the encoding of existential constructions is still in demand. Nonetheless, these authors outline several broad strategies for the encoding of existential constructions and to date these are the only cross-linguistic overviews available. McNally (2016) presents four types of existential constructions which we list in Table 1 and also add a fifth type, not mentioned by any of these authors.

Table 1: Structural types of existential constructions

Type 1	Those with a special existential predicate
Type 2	Those based on copula constructions
Type 3	Those based on possessive constructions
Type 4	Those based on expletive impersonal constructions
Type 5	Verbless predications with a predicate nominal only

These different encodings are further discussed and illustrated below.

Type 1: Existential constructions with a special predicate, see Spanish in (22), Hausa in (29) and Turkish in (30) below. In these constructions, the linking element is an item dedicated to the existential construction. In most cases it is not used in locative predications with a definite subject.

(29) Hausa [hau] (Butters 2022 [this volume], citing Newman 2000: 178–179, 357)

a. ***àkwai*** *wani bàk̄ō*   *à*   *kōfà*
     EX   INDF stranger PREP door
     'There is a stranger at the door.'

b. ***dà*** *kuɗ̄ī*
     EX money
     'There is money.'

---

[11]The amount of languages studied in Creissels (2019) is much larger, up to 700 languages. However, as Creissels (2019: 39) states, it is not a sample in a "technical sense" as there is no stratification.

    c. *Inà   gidā.*
        1SG.CONT home
        'I am at home.'

(30)   Turkish [tur] (van Schaaik 1994: 44, 41)

    a. *Su   **var-dı.***
        water exist-PST
        'There was water.'

    b. *Ev-de-ydi-k.*
        home-LOC-PST-1PL
        'We were at home.'

The examples from Hausa require some clarification. While *àkwai* (29a) can be said to be a specialized existential predicate, *dà* in (29b), is in fact a comitative marker, also used in predicative possessive constructions. Thus existential constructions in Hausa can be classified as both Type 1 and Type 3 since the comitative construction can be used to encode possession. While the existential elements in Hausa and in Spanish do not have any verbal characteristics, *var* in Turkish does show verbal features in that it takes some tense marking and occurs in clause-final position, the normal position for a predicate in a neutral sentence in Turkish. McNally (2016: 215) concludes that special existential predicates can be either "verbal or non-verbal and are often […] historically related to locative or possessive predicates". Statements of this kind should be taken as informed hypotheses that are yet to be verified by more detailed data on the diachronic origin of special existential predicates, and in samples with a better stratification.

TYPE 2: Existential constructions based on copula constructions. McNally (2016: 215) states that constructions of this kind very often have a locative expression as the other element of the relation. Still she argues that many of the constructions classified in this group also show characteristics of non-verbal predications that do not necessarily have to do with location.

It appears to us that this type is too broadly defined and should be re-considered in future classifications of existential predications, see also (Creissels 2019). In future revisions, there has to be a definition of the notion *copula*. In addition, this type may have to be split into several sub-groups. The suggestions listed below are based on the data from the articles in this book. One sub-group covers languages where the existential predication is encoded by a locative predication where a general copula verb such as 'be' is involved as in Finnish in (21b) above.

Another sub-group covers languages where the existential construction is encoded by a locative predication where the locative phrase is a locative demonstrative and there is no copula of any kind involved as shown with Lele in (31). Finally, a third sub-group includes languages such as Tacana, a Pano-Tacanan language from Bolivia, and O'dam, a Southern Uto-Aztecan language from Mexico. In these languages, the existential construction is encoded either by a locative predication or by a predication which involves a verb of position such as 'lie', 'stand', 'stay', 'sit' and so on.

(31) Lele [lln] (Butters 2022 [this volume], citing Frajzyngier 2001: 196)

    a. *kùmnó **màní***
       God   there
       'God exists'

    b. *díglè káŋ kàsà **màní***
       year DEM corn there
       'there is corn this year'

(32) Tacana [tna] Guillaume (2022 [this volume])

    a. [*Piada deja*] ***ani-(i)na*** [*mesa   e-wane=sa   kwara=neje*].
       one   man sit-HAB.PST 3SG.GEN NPF-wife=GEN mother=ASSOC
       'Había un hombre que vivía junto a su suegra.'
       'There was a man who was living with his mother-in-law.'

    b. *Ebakwa=chidi mesa   **y-ani**.*
       child=DIM   3SG.DAT EX/LOC-sit
       'Tenía dice su hijito.' ye020
       'He had a small child.' [lit. a small child was sitting to him]

    c. *Ɉuishu   beju **pu-iti-a**.*
       judgment PRT be-TDM-PST
       'Había juicio.'
       'There was a judgment.'

Type 2 is the largest among all types of existential constructions in this volume. It is also the group with the most geographically and genealogically diverse languages. Thus it can be inferred that it is cross-linguistically most common for locative constructions to provide the template for existential/ discourse turner constructions. As already mentioned, despite rich datasets as in Creissels (2019), proper quantification of this as well as other cross-linguistic generalizations as regards the encoding of existential constructions remain in demand.

We now turn to Type 3 where existential constructions are based on predicative possessive constructions. This is illustrated in (33).

(33) Bulgarian [bul] (constructed example)
      *V Afrika **ima**   div-i   kotk-i.*
      in Africa have.3SG.PRS wild-PL cat-PL
      'There are wild cats in Africa.'

As shown in (33), in Bulgarian, the third person singular form of the verb *imam* 'have' is used in a construction whereby the existence of wild cats in Africa is expressed. The pivot of the construction *divi kotki* 'wild cats' is the syntactic object and, semantically, the possessed noun in a predicative possessive construction. The possessor is omitted. These characteristics become formally more evident in the negative existential construction where the pivot, if definite, has to be marked by an object clitic as in (34a).

(34) Bulgarian [bul] (constructed example)
      a. *Tetradk-i-te   gi   **njama**.*
          notebook-PL-DEF.PL OBJ.PL NEGEX.3SG.PRS
          'The notebooks are gone/not here.'
      b. *Njama   tetradk-i.*
          NEGEX.3SG.PRS notebook-PL
          'There are no notebooks.'

TYPE 4 includes existential constructions based on expletive impersonal constructions, illustrated by German in (35) below.

(35) German [deu] (Haspelmath 2022)
      a. permanent presence of pivot
          In Thailand gibt   es Tiger.
          in Thailand gives it tigers
          'There are tigers in Thailand.'
      b. temporary location of pivot
          Auf dem Tisch stehen Blumen.
          on the table stand flowers
          'There are flowers on the table.'

As illustrated in (35), in German, there are different ways to express permanent and temporary presence of a new nominal in the discourse. Permanent presence

is encoded by an impersonal construction which involves the expletive pronoun *es* and the verb form *gibt*, third person singular form of the verb *geben* 'give'. On the other hand, temporary presence of a discourse-new nominal is encoded by a locative predication where the locative phrase is fronted and the predicate is typically a verb of position, see also Koch (2012: 534–535) on this issue. Constructions that involve an expletive pronoun are observed in varying forms in many Germanic languages, see McNally (2016: 222–223) for more examples. Likewise, the distinction between permanent and temporary presence is also valid to different degrees for many languages in this family. At this stage, the cross-linguistic distribution of expletive existential constructions is still unclear.

A couple of comments are in order before we close this survey of ways to encode existential constructions in the languages of the world. From a typological perspective, current classifications appear somewhat rigid in the sense that languages tend to be classified in one type only. However, it has to be made clear that some languages do not lend themselves to such classifications and are better classified in several of the types outlined above or intermediate types need to be postulated. For instance, the existential construction in French in (36) is typically listed as being modeled on the predicative possessive construction because of the use of a form of the verb *avoir* 'have'.

(36) French [fra] (constructed example)
      Il   y   a   des   chat-s sauvage-s en Afrique.
      3SG.PRS LOC have.3SG.PRS INDF.PL cat-PL wild-PL   in Africa
      'There are wild cats in Africa'

However, the pronoun *il* in (36) is functionally just as expletive as German *es* in (35a). In addition, the locative element *y* is obligatory in the construction. So the existential construction in French seems to be both an expletive/impersonal construction and a possessive-locative construction and should be described as such.

TYPE 5 includes verbless predications that consist of a predicate nominal only. As pointed out by Phillips (2022 [this volume]), such constructions present counter-evidence to Croft's statement (1991: 19) that there are no languages in which an existential sentence can consist solely of a noun phrase.

(37) Muruwari [zmu] ((Phillips 2022 [this volume]), citing Oates (1988: 73))
      thuu kuya-yita wartu
      much fish-COM   hole.ABS
      'The river has a lot of fish in it.' (=There's a lot of fish in the river)

As shown in (37), in Muruwari, the introduction of a new referent to the discourse can be encoded by a comitative phrase only.

Finally, it has to be said that clearly grammaticalized affirmative existential constructions are far from universal, see also Creissels (2019: 50-51) for a similar observation. In fact, when studying them together with negation, it becomes clear that languages with identifiable negative existential constructions outnumber languages with affirmative existentials, (Veselinova 2013: 117).

4.2.5 Concluding remarks

We devoted a lengthy section to existential predications since they are most often taken for granted. However, in a book where their negative counterparts are in focus, it is important to delimit the meaning of the affirmatives. We follow the line originally implied by Jespersen (1924: 154) and clearly articulated by Dryer (2007: 241) who points out that existential constructions introduce something new into the discourse. This is commonly, though not always, done by using a locational schema. The novelty introduced is typically encoded by a nominal, which depending on language-specific structural features can be unmarked or indefinite. Semantically, it is commonly generic or shows varying degrees of lack of specificity/individuation. It is also important to bear in mind that existential constructions are rarely about merely stating the existence of an entity. In this sense, the term *existential construction* is, in fact, a misnomer, as pointed out by Dryer (2007: 241). However, since it has been well established, we use it here too. Perhaps a more informative name can be suggested in the future. As noted above, existential constructions with well delimited characteristics such as those just discussed are far from universal; more accurate estimates of their cross-linguistic distribution remain in demand, see also Creissels (2019).

4.3 Negative existentials

Negative existentials are usually, though not always, lexical expressions used to negate existential predications. An example of a negative existential was cited from Moksha in (1d). Another example from Kurmanji is provided in (38). Verkerk & Shirtz (2022 [this volume]) report that in this language SN is expressed by pre-verbal particles *na* or *ne*. As demonstrated in (38b-38c), existential constructions have to be negated by the completely different word *tun-*. It replaces the affirmative existential *heye*, (38a), and displays verbal characteristics in that it uses pertinent verb morphology for third person singular and can inflect for tense, as shown in (38c).

(38) Kurmanji [kmr] (Verkerk & Shirtz 2022 [this volume], citing Thackston 2006: 31–32).

    a. *Got-in-eke*   *pêşiy-ên*   *me*   *heye.*
       say-NMZL-INDF ancestor-PL 1PL.OBL be.PRS.3SG
       'There is a saying of our ancestors.'

    b. *Di vî*   *warî*   *da otorîtey-eke*   *resmî tune.*
       in DEM regard in authority-INDF official COP.NEG.PRS.3SG
       'In this regard, there is no official authority.'

    c. *ger xwendevan-ên kurdî*   *tunebin*
       if   reader-PL   Kurdish COP.NEG.PST
       'if there are no readers of Kurdish'

Negative existentials are usually considered as part of the general domain of existence, as negators of positive existentials. They are used in sentences with a discourse shift function similar to their affirmative counterparts discussed in §4.2. However, as argued by Veselinova (2013: 139), and likewise by Everdell & Salido (2022: 564 [this volume]), they are more than merely negators. In fact, it is more adequate to consider them expressions of a separate functional domain, the domain of absence. The reasons for this are detailed in (39).

(39) Motivating the postulation of a separate functional domain for negative existentials:

   (i)   They show a very high cross-linguistic frequency.

  (ii)   Syntactically, they typically replace the affirmative item they are supposed to negate.

 (iii)   Semantically, they make statements about absolute unconditional absence. It is also fully possible to outline a semantic prototype for them.

  (iv)   Negative existentials develop from conceptually similar sources in many unrelated languages. In addition, negative existentials are constantly renewed.

   (v)   Negative existentials surface early in language acquisition.

These generalizations are further discussed and illustrated below.

    As stated above, negative existentials are cross-linguistically extremely common. Two points need to be made as regards their cross-linguistic distribution. First, they are so wide-spread in the languages of the world that it is easier to delimit areas where negative existentials are not used. Based on the currently

available data, negative existentials are not observed in the languages of Western Europe, the Caucasus, Southeast Asia, eastern parts of North America and central parts of South America. Some correlations with specific language genera are possible too. For instance, negative existentials are markedly absent from Germanic[12] and Iroquoian languages. This said, we can also state that negative existentials are present in all parts of the world beside the five areas listed above. Second, they clearly outnumber grammaticalized affirmative existentials (see discussion in (Veselinova 2013: 117) as well as the data provided on a map server). This speaks for their independence from the affirmative domain, (see also Creissels (2014: 15) for a discussion in a similar vein.

As for the syntax of negative existentials as markers of negation, there are plenty of data from very diverse languages where the negative existential replaces its affirmative counterpart, see Moksha in (1) and Kurmanji in (38) for some examples. This complete inter-changeability provides further evidence for considering negative existentials as lexically and syntactically equal to affirmative ones and not just as additional elements that turn an affirmative sentence into a negative one.

Veselinova (2013) identifies a number of functions of negative existentials in many unrelated languages. For the purposes of this introduction we focus on those with highest cross-linguistic frequency and the ones we consider most relevant for the NEC.

One of the most important semantic characteristics of negative existentials is that they typically indicate absolute unconditional absence. This can be demonstrated by their incompatibility with focus and contrastive negation. For instance, in Erzya, a Uralic language from the Mordvin branch, spoken in the Volga region of Russia, negation in locative constructions can be effected by all three available negators, the SN marker *a*, the ascriptive negator *avol'*, (see §4.4 for a discussion of these negators), and the negative existential *araś*, as shown in (40).

(40) Erzya [myv] (Hamari 2007: 91)

    a. *Ezéme-ś*   *a*   *tarka-so-nzo.*
        bench-SG.DEF.NOM NEG place-INE-POSS.3SG
        'The bench is not in its place.'

    b. *Ezéme-ś*   *avol'*   *tarka-so-nzo.*
        bench-SG.DEF.NOM NEG.ASCR place-INE-POSS.3SG
        'The bench is not in its place.'

---

[12]In a number of Germanic languages negative existence is expressed by negative indefinite pronouns as discussed by Verkerk & Shirtz (2022 [this volume]), see also Van Alsenoy (2014) as well as Haspelmath (1997) for the link between negative indefinites and negative existence.

c. *Ezéme-ś   araś   tarka-so-nzo.*
bench-'SG.DEF.NOM NEG.EX place-INE-POSS.3SG
'The bench is not in its place.'

Hamari (2007: 177) comments on the fact that speakers of Erzya interpret the statements in (40) differently, which is not reflected in the English translations. Specifically, the most common interpretation with (40a-40b) is that "bench is not at the place [known to interlocutors], it is somewhere else". Thus a contrast with another location of the bench is present even if that location is not mentioned explicitly. In (40c), the absence of the bench is absolute and cannot be contrasted with anything else. Similarly, the Hungarian negative existential *nincs* is completely banned from constructions of contrastive focus and the standard negator *nem* has to be used instead as in shown in (41).

(41)   Hungarian [hun] (de Groot 1994: 150)

a. *Nem Peter van   itt,   hanem János.*
NEG Peter be3SG.PRS here, but   John
'It is not Peter who is here, but John.'

b. **Peter nincs   itt,   hanem János.*
Peter NEGEX here, but   John
'Peter NEGEX here, but John.'

The characteristic of negative existentials to make statements about absence becomes especially clear in languages where privative markers function as negative existentials. In this volume, this is highlighted by data from Australian languages, where, as stated by Phillips (2022 [this volume]), negative existence is clearly predicated as the absence of an entity, as illustrated by Muruwari in (42), where the privative suffix *-kil* is used to encode the absence or non-existence of sticks). As pointed out by Phillips (2022 [this volume]), the privative and comitative markers can be considered in a paradigmatic relationship for the expressions of non-existence and existence.

(42)   Muruwari [zmu] (Phillips 2022 [this volume] citing Oates (1988: 77))
palanj   mathan-kil
nothing stick-PRIV
'(There are no) sticks [...nothing]'

Another common use of negative existentials which has turned out to be especially important for their transfer into the domain of SN is the fact that they are

frequently used as negative answer words *No*, pro-sentences and sentence tags. As discussed in §3, in Swahili, the form *hapana* is a fairly transparent fusion between a negator, a class marker and a comitative marker, see (43a). This form has evolved as a negative existential but also as a negative answer word *No* as in (43b).

(43)   Swahili (G42) [swh] (Bernander et al. 2022 [this volume] citing King'ei & Ndalu (1989: 25))

    a. *Ha-pa-na*   *m-tu*   *a-si-ye-fanya*   *ma-kosa*
        NEG-SM16-COM 1-person 1-NEG-REL1-make 6-mistake
        'There is no person who does not make mistakes.'

    b. *U-na-kwenda* *Bagamoyo? Hapana.*
        SM.2SG-PRS-go Bagamoyo no
        'Are you going to Bagamoyo? No.'

As detailed in §3,this use of negative existentials and its role for their transfer to the verbal domain is discussed by several authors in the book, see Bernander et al. (2022), Guillaume (2022), van der Auwera et al. (2022).

The following can be said about diachrony: (i) It is possible to outline diachronic paths of development that are cross-linguistically common. (ii) Negative existentials lexicalize easily; (iii) Negative existentials are constantly renewed. These generalization are further substantiated below.

In a number of unrelated languages, negative existentials originate either from lexical sources with meanings such as 'lack', 'absent', 'destroy', 'death', 'empty', see (44) for some examples, or from the univerbation of a negator with a positive item, see (45).

(44)   Negative existentials originating from lexical sources

    a. Turkish [tur] (Marcel Erdal (p.c.))
        yok < yo:k /yod- 'wipe out, obliterate'
        cf. Qarakhanid[13] *yod-ug* 'disaster'

    b. Tukana [tuv] (Dimmendaal 1983: 455)
        a-mamaka-ʊ̀ 'lack'

---

[13]Qarakhanid is a literary variety developed in the 10th-11th centuries during the Qarakhanid dynasty in Central Asia.

     c. Kwangali (K33) [kwn] (Bernander et al. 2022 [this volume] citing
        Dammann (1957: 108))
        mo-ru-pasa m(u)-tupu mema
        18-11-bowl 18-empty 6.water
        'In the bowl there is no water.'

Bernander et al. (2022 [this volume]) cite adjectival or adverbial forms meaning 'empty' among "the most frequent and widespread" sources for negative existentials in Bantu languages.

(45)   Negative existentials originating from univerbation between a negator and another item

    a. Bulgarian [bul] (own data)
       njama < *ne* 'NEG' + *ima* 'have.3SG.PRS'

    b. Arabic [arb] (Wilmsen 2022 [this volume])
       laysa < *la* 'NEG' + *ʔys* 'EX'

Veselinova (2013: 137) demonstrates that negative existentials that stem from a lexical source outnumber the negative existentials originating from fusions between a negator and a (positive) word. It has to be pointed out too that the separate morphemes in the univerbations fuse into single semantic units even when the erstwhile morpheme boundaries are still discernible. This is the case with Bulgarian *njama* in (45a) above. The form represents a single meaningful unit and the word has a full verb paradigm. According to Dimmendaal (1983: 455), the form *a-mamaka-ʊ̀* may contain an older negative marker *ma-*; however, from a synchronic point of view, the form *-mamaka-* is a single morpheme, which takes on verbal morphology and can be used both with the more referential sense 'lack', and also to indicate nonexistence and absence from a specific location. Thus it is safe to say that negative existentials lexicalize easily.

    Furthermore, if and when a negative existential has become the expression of SN, a new special negative existential tends to emerge. For instance, in Tamil, the older negative existential *ill(ai)* is not only used to encode nonexistence but it is also used in most SN constructions, as in (46a-46b). However, we observe a newer negative existential, *kiṭai·yaatu*, as well, illustrated in (46c).

(46)   Tamil [tam] Lehmann (1993: 230, 81)

    a.   *peey   ill-ai*
       ghost not.exist-3PL.N
       'ghosts do not exist'

    b.   *Kumaar koovil-ukku·p poo-kiṛ-atu   ill-ai*
       Kumaar temple-DAT   go-PRS-NMLZ not.exist-3PL.N
       'Kumaar never goes to the temple'

    c.   *peey   kiṭai·y-aa-tu*
       ghost exist-NEG-3SG.N
       'there are no ghosts'

    d.   *peey   un-ṭu*
       ghost exist-3SG.N
       'ghosts exist'

Most probably, the older negative existential *ill(ai)* and the newer *kiṭai·yaatu* have different distributional properties. It is important to note, however, that new expressions for nonexistence emerge independently of the positive domain. This aspect can be further illustrated by data from Sivandi, a Northwestern Iranian language. Here SN can be expressed by a pre-verbal prefix which appears to have several allomorphs (*na-*, *ne-* and *ney-*). Affirmative existence is encoded by a construction which consists of figure + (ground) and a copula verb. The latter has suppletive forms according to tense, as illustrated in (47).

(47)   Sivandi [siy] (Verkerk & Shirtz 2022 [this volume] citing Lecoq (1979))

    a.   *ye šāh-i   bi*
       one king-INDF be.PST.3SG
       'There was a king.' (Lecoq 1979: 107)

    b.   *ye čašme-y   en*
       one fountain-INDF be.PRS.3SG
       'There is a fountain.' (Lecoq 1979: 127)

The negative existential in Sivandi can be encoded either by the regularly negated locative verb *dār* 'be located, be at, have', by regularly negating the past tense form of the copula *bi*, or by the non-transparent form *nūnd* as in (48).

(48)   Sivandi [siy] (Verkerk & Shirtz 2022 [this volume] citing Lecoq (1979))

    a.   *ke   bār   na=dār-e*
         COMP grain NEG=be.at-3SG
         '(He closed his windmill down) because there was no grain.' (Lecoq 1979: 150)

    b.   *albatta   barqa=m   na=bi*
         evidently electricity=TOP NEG-be.PST.3SG
         '(Someone lit a candle), evidently there was no electricity.' (Lecoq 1979: 89)

    c.   *xolāse   hīč goftegūi   az   pīrežen-e nūnd*
         and.finally NEG questionfrom old.woman-DEF COP.NEG
         'And at the end, there were no questions from the old woman.' (Lecoq 1979: 108)

The Sivandi data show that negative existentials may be construed by negating a positive item from the affirmative construction but this is not the only possibility. They can also arise independently from the positive domain. Everdell & Salido (2022 [this volume]) provide similar data from a number of Southern Uto-Aztecan languages.

These generalizations are also confirmed by data from studies on language acquisition. As mentioned above, Dimroth (2010: 42–44) points out that expressions for negative existence, as English *allgone*, are among the first negative expressions acquired by children and generally tend to surface early in vocabulary acquisition.

To conclude, the cross-linguistic, diachronic and acquisitional data confirm the status of negative existentials as a separate functional domain. More often than not, they arise out of lexical sources which are conceptually similar in a number of unrelated languages. When resulting from univerbations between a negator and a positive word, the new fusions merge into single meaningful units, that is, they become morphemes on their own. Finally, negative existentials are acquired early and are also commonly renewed which indicates that there is a functional pressure for their creation.

4.4 Ascriptive negators

In many languages, negation in non-verbal predications which are different from negated existentials is encoded by special strategies, that is, not by SN. This can be illustrated by data from Bashkir, a Turkic variety discussed by Baranova &

Mishchenko (2022 [this volume]). In this language, SN is encoded by the suffix, *mV-*, as in (49b); the negative existential is the form *juq*, shown in (49c). The form *tügel* is used for the negation of non-verbal predications that encode identity, class inclusion, property assignment and sometimes also location, see data in (49d) and (49e).

(49)   Bashkir [bak] (Baranova & Mishchenko 2022 [this volume])

    a.   *Kärim kitap uqə-j.*
       Karim book read-IPFV
       'Karim is reading a book.'

    b.   *Kärim kitap uqə-ma-j.*
       Karim book read-NEG-IPFV
       'Karim is not reading a book.'

    c.   *Aš-həw-ða*   *öθtäl juq.*
       food-water-LOC table NEG.EX.COP
       'There is no table in the kitchen.'

    d.   *Min jað-əw-sə*   *tügel*   */ tügel-men.*
       I   write-NMLZ-AG NEG.COP NEG.COP-1SG
       'I am not a writer.'

    e.   *Juq,*   *min Räxmät-tä*   *tügel.*
       NEG.EX 1SG Rahmetovo-LOC NEG.COP
       (Talking on a cell phone:)
       (– Hello, where are you, are you in Rahmetovo?)
       '– No, I am not in Rahmetovo.'

Negators such as *tügel* are labeled *ascriptive negators* by Veselinova (2015) who follows Lyons (1967: 148)[14] in that these negators are used in predications where a property is being ascribed to a referent. This term is also adopted by van der Auwera & Krasnoukhova (2020) in their survey of negation strategies as well as by Baranova & Mishchenko (2022 [this volume]). But there are also authors who choose other ways to refer to this feature, see Miestamo's (2017) overview of negation strategies as well as Eriksen (2011).

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[14]Hengeveld (1992: 102–103) uses the term *ascriptive* in a broader sense. Specifically, this author considers existential predications a sub-type of ascriptive ones in that, while introducing a new referent into the discourse, "they ascribe existence to it" (ibid.) Since the functions of existential predications are markedly different from those of other non-verbal predications, we prefer to consider them as separate construction types for the purposes of this book.

To date, the main cross-linguistic work on negation in non-verbal predications other than negative existentials is by Eriksen (2011). This author presents data from a diverse, though not strictly stratified sample. He highlights the cross-linguistic frequency of ascriptive negators. They are observed in about one third of the languages in Veselinova's stratified language sample with world coverage. This confirms Eriksen's generalization that they are a stable cross-linguistic phenomenon. Based on the currently available data, they appear to be very common in the languages of Southeast Asia, Central Asia, East and Central Africa as well as northern parts of South America. However, a more extended sample may show a different distribution.

Eriksen (2011) also suggests a descriptive generalization for this frequency, which he labels Direct Negation Avoidance (DNA). Specifically, he adverts to the fact that in many languages non-verbal predications are negated by means of a complex clause where the scope of the negator is over the predicate of the main clause while the non-verbal predicate actually negated is in the subordinate clause where a negation marker is not present. This is illustrated by data from Vietnamese in (50).

(50)   Vietnamese [vie] (Eriksen 2011: 280 citing Husby 1991: 170, 112)

    a. *tôi không hát*
       1SG NEG   sing
       'I don't sing'

    b. *tôi là ngu'ời NaUy*
       1SG be person Norway
       'I'm a Norwegian'

    c. *tôi không phải là ngu'ời NaUy*
       1SG NEG   true be person Norway
       'I'm not a Norwegian' (lit. 'It is not true [that] I [am] Norwegian.)

As shown in (50a), in Vietnamese, SN is encoded by a pre-posed particle *không*. However, this particle cannot precede a nominal predicate; it has to be used with a verbal predicate in complex clauses in order to negate non-verbal predications as demonstrated in (50c).

Eriksen (2011) also points out that ascriptive negators are commonly used to encode contrastive negation or as negators of narrow scope, i.e. constituent negators. In fact, a diachronic connection between ascriptive negators and constituent negators does seem to exist. Veselinova (2015: 570–571) illustrates the evolution of a constituent negator from an ascriptive negator by data from Eastern Mari, an

Uralic language still spoken in several provinces of the Bashkortostan Republic, east the Volga in Russia[15]. The full paradigm of the ascriptive negator in Mari is provided in (51).

(51)   Eastern Mari [mhr] (Veselinova 2015: 570 citing Riese et al. 2010: 91)
       oməl' 'not.be.1SG.PRS' < om ul 'NEG.AUX.1SG.PRS be.CNG'
       otəl' 'not.be.2SG.PRS' < ot ul 'NEG.AUX.2SG.PRS be.CNG'
       ogəl' 'not.be.3SG.PRS' < og ul 'NEG.AUX.3SG.PRS be.CNG'

The third person singular of the ascriptive negator *ogəl'* is also used as a constituent negator, examples are given in (52).

(52)   Eastern Mari [mhr] (Veselinova 2015: 570 citing Riese et al. 2010: 91)
       a. *myj   ogəl'*
          1SG.ACC NEG
          'not me'
       b. *tače   ogəl'*
          today not
          'not today'
       c. *ludaš   ogəl', vozaš   küleš*
          writing NEG   reading need.2SG
          'you have to read, not write'

Generally, the use of ascriptive negators in constructions of contrastive negation puts them in stark contrast with negative existentials which are typically banned from constructions that express focused negation.

   Ascriptive negators are also used in the verbal domain. Specifically, Baranova & Mishchenko (2022 [this volume]) highlight the fact that while breaking into the domain of SN, ascriptive negators undergo processes similar to the NEC. In addition, these authors point out that ascriptive negators are especially prone to develop into markers of negation in verbal predications with a future time reference as in (53).

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[15]See also Hamari (2013: 474–475) and Hamari & Aasmäe (2015: 304, 313–3114) for a similar development of the ascriptive negator *avol'* into a constituent negator in Erzya Mordvin.

(53) Bashkir [bak] Baranova & Mishchenko (2022 [this volume])

    a. *Ul miŋä aqsa bir-mä-jäsäk.*
       that I.DAT money give-NEG-FUT
       'He will not give me the money.' (Baranova & Mishchenko (2022 [this volume]), questionnaire data)

    b. *Ul miŋä aqsa bir-äsäk tügel.*
       that I.DAT money give-FUT NEG.COP
       'He will not give me the money.' (Say 2017: 349)

As demonstrated in (53), in Bashkir, predications with future time reference can be negated either by the SN marker *-mV-* suffixed to the main verb or by the ascriptive negator *tügel* which occurs in a sentence-final position like any predicate in Bashkir. Baranova & Mishchenko (2022 [this volume]) note there is no noticeable pragmatic or semantic difference between the two negative constructions in (53). It should be noted that the phenomenon described for Bashkir appears to be part of a broader cross-linguistic tendency. The authors cite similar data from a number of Malayic languages as well as from Arabic, cf. Wilmsen (2022 [this volume]). Veselinova (2016: 172–173) brings up Kanuri, a language isolate from Nigeria where the ascriptive negator *gə´nyi* has developed into the negation marker for verbs with future time reference. Since this development can be shown to recur in a number of unrelated languages, it is safe to say that it is cross-linguistically common. Baranova and Mishchenko reason that it could be that the markedness of the future as a grammatical category and its relation to modality might in part explain why ascriptive negators so often develop as future negators. However, these authors also point out that more work is needed to unravel the relation between ascriptive negators, and possibly their uses as focus/contrastive negators and their subsequent development into verbal negators for the future.

While data from a variety of languages highlight the fact that ascriptive negators frequently evolve as verbal negators for the future, it is not the case that they are restricted to this function. For example, in Eastern Mari, the ascriptive negator appears in the negation of the so-called 2nd past tense, while in Erzya Mordvin, the origin of the particle *avol'* used in the ascriptive and constituent negation and the negative auxiliary *avol'-* of certain non-indicative moods is obviously the same (Hamari 2013, 2011: 470–475). Van der Auwera and Krasnoukhova (2020: 109–110) discuss data from Tucanoan and other Amazonian families that demonstrate that ascriptive negators evolve as general markers of SN without any restriction to tense. Krasnoukhova & van der Auwera (2019) also suggest the *Negative Ascriptive Cycle* to cover such developments.

We conclude the section on ascriptive negators with a short note on what is known about their origins. As indicated above, in a number of languages, cf. Vietnamese in (50), they are not single lexical items but rather phrases with a regularly negated predicate that often translates to 'it is not true/the case that X'. In other languages, as for instance in Eastern Mari, (51), ascriptive negators are clearly univerbations between a form of the copula 'be' and a negative element. Finally, there are languages such as Kalmyk as well as other Mongolic languages, where ascriptive negators originate from a determiner or adjective such as *biš-* 'other'. Baranova & Mishchenko (2022 [this volume]) cite scholars such as Janhunen (2012: 250–251) who outline a path where 'other' is reanalysed as 'other than' and further 'not the one' ('other' > 'other than' > 'not the one'). While a lot remains to be done for a proper outline of the diachronic sources for ascriptive negators as well on their development, the information available so far indicates that they evolve in different ways depending on family and region; however, the fact that various sources and mechanisms lead to a similar function indicates that ascriptive negators are a stable cross-linguistic phenomenon.

4.5 Stative negators

There are languages where one and the same construction is used for the negation of ascriptive and existential predications. This is illustrated by data from Standard Arabic in (54).

(54)   Arabic [arb] (Wilmsen 2022 [this volume])

    a. *laysa fī   l-maktab illā anā   w   anta*
       NEG.EX PREP DET-office CONJ PRO.1SG CONJ PRO.M.2SG
       'There [is] not in the office except you and I.' (Adwan 2000: 273)

    b. *laysa   ka-miθli-hi   šayʔ*
       NEG.EX PREP-likeness-PRO.M.3SG thing
       'There [is] not [a] thing like His likeness.' (Quran 42:11)

    c. *laysa ð-ðakaru ka-l-ʔunθā*
       NEG   DET-male PREP-DET-female
       'The male [is] not like the female.' (Quran 3: 36)

As shown in (54) above, in Standard Arabic, the form *laysa* is used both for the negation of existential predications (54a-54b) and for the negation of ascriptive ones as in (54c). Veselinova (2015: 572) uses the term *stative* to refer to such negators but this is not yet an established notion. Authors such as Eriksen (2011: 281)

and also Wilmsen (2022 [this volume]) prefer to see them as negative existentials that have expanded their domain of use. But of course, it could be a question of perspective and how different scholars treat synchronic and diachronic facts when postulating various notions. Veselinova (2015) looks strictly at synchronic facts on data in Uralic languages and also in a stratified sample with world coverage when defining stative negators. Wilmsen (2022 [this volume]) takes diachrony into account and considers the expansion of the negative existential *laysa* into the negation of properties as a stage of its more general spread into other domains.

For the purposes of this volume, we consider it necessary to include these negators as another variant of special/non-standard negators. Their creation also appears important for the NEC since as stated above, the use of negative existentials in other non-verbal predications is considered indicative of their general expansion into other domains. More work, however, is necessary to confirm the status of stative negators as a cross-linguistic phenomenon together with their distribution and frequency in the languages of the world.

5 Concluding discussion

The studies presented in this volume lend support to many of the generalizations suggested in Croft's visionary model. Analogy is a very important driving factor for the transfer of constructions from one domain to another, as for instance, in Ancient Hebrew, Arabic, Ancient Egyptian. New structures are typically created in pragmatically marked contexts and their sense of emphasis gradually fades away in the course of time. For the theory and modeling of language change, it is especially important to stress that the NEC is a variationist model. That is, its stages are not sequential but rather tend to co-exist. This is clearly stated by Croft (1991) but it is not how his model is always cited. The NEC can be also described as a grammaticalization process during which items with more specific content gain generality and expand their domain of use.

At the same time, some objections and refinements of the original NEC appear necessary. To start with, the model, in its initial form, puts too much emphasis on the fact that negative existentials may result from univerbation between a standard negator and a positive existential. This is definitely the less common source for negative existentials. Negative existentials originate from lexical sources much more often than from fusion. In addition, many of the works in this volume highlight the fact that negative existentials are not operators of negation. Rather, they make positive statements about absolute, unconditional

absence. When negative existentials are transferred to the domain of negating actions, the actions themselves are conceived as entities of different degrees of abstraction, and the non-existence or non-actualization of these entities is predicated; probably the most telling data for this in this book are from Chinese, Ancient Egyptian and the Pama-Nyungan languages. As is well known, negative existentials are cross-linguistically extremely frequent, which in turn should discard the tacit assumption that the use a single negation strategy for all kinds of declarative predications is somehow the normal state of affairs and a starting point for the NEC.

The authors in this book outline several different pathways whereby negative existentials are carried over into the domain of verbal negation. Some of them, such as the use of negative existentials with nominalized or non-finite forms of lexical verbs have also been amply discussed in previous research and the work presented here, on for instance, Nanaic, confirms a well-known cross-linguistic tendency. On the other hand, the data in this book bring up other pathways as much more common than previously known. For example, the use of negative existentials as pleonastic negators and their subsequent re-analysis as part of the regular standard negation construction have been shown to recur in a number of unrelated languages. This pathway of transfer is also probably one of the best examples that relate the NEC to the Jespersen Cycle. In fact, as argued by van der Auwera, Krasnoukhova and Vossen but also Guillaume and several other authors, the NEC can be considered a version of a generalized Jespersen Cycle.

In addition, a number of contributors, notably, Barananova and Mishchenko, Wilmsen and van Gelderen point out that other special negators undergo processes of domain expansion very similar to the NEC. So this process is not restricted to negative existentials only.

Several chapters in the book demonstrate that the operation of the NEC is far from universal. In fact, family-specific characteristics together with constructional inheritance appear to play a crucial role for the operation of the NEC. In several families, notably, Bantu, Chadic, Southern Uto-Aztecan, and several branches of Indo-European, the domains of verbal negation and negative existence have been kept apart, without much interaction for extended periods of time.

The studies presented here unearth a number of valuable insights about the interaction between various sub-domains of negation and the phases of evolution of more general negation markers from more restricted ones. At the same time, just like any other scientific work, they lead to new questions. For instance, what motivates the development of ascriptive negators into verbal negators restricted to future tense contexts? Can the operation of the NEC or lack of it be correlated

with specific areas (we have seen that it can definitely be correlated with specific families)? Are there are any characteristics in the expression of negation that trigger or halt the NEC?

This endeavor started as an effort to expand the comparative database that would allow for more empirically grounded tests of the NEC. The material presented here is indeed a vast improvement compared to what we had 5 years ago. At the same time we have to admit that the American continents as well as Australia remain poorly covered. Likewise, studies of languages/genera with extensive documentation such as Greek, Armenian and Celtic are yet to be performed. They would be a nice complement to work presented in this book.

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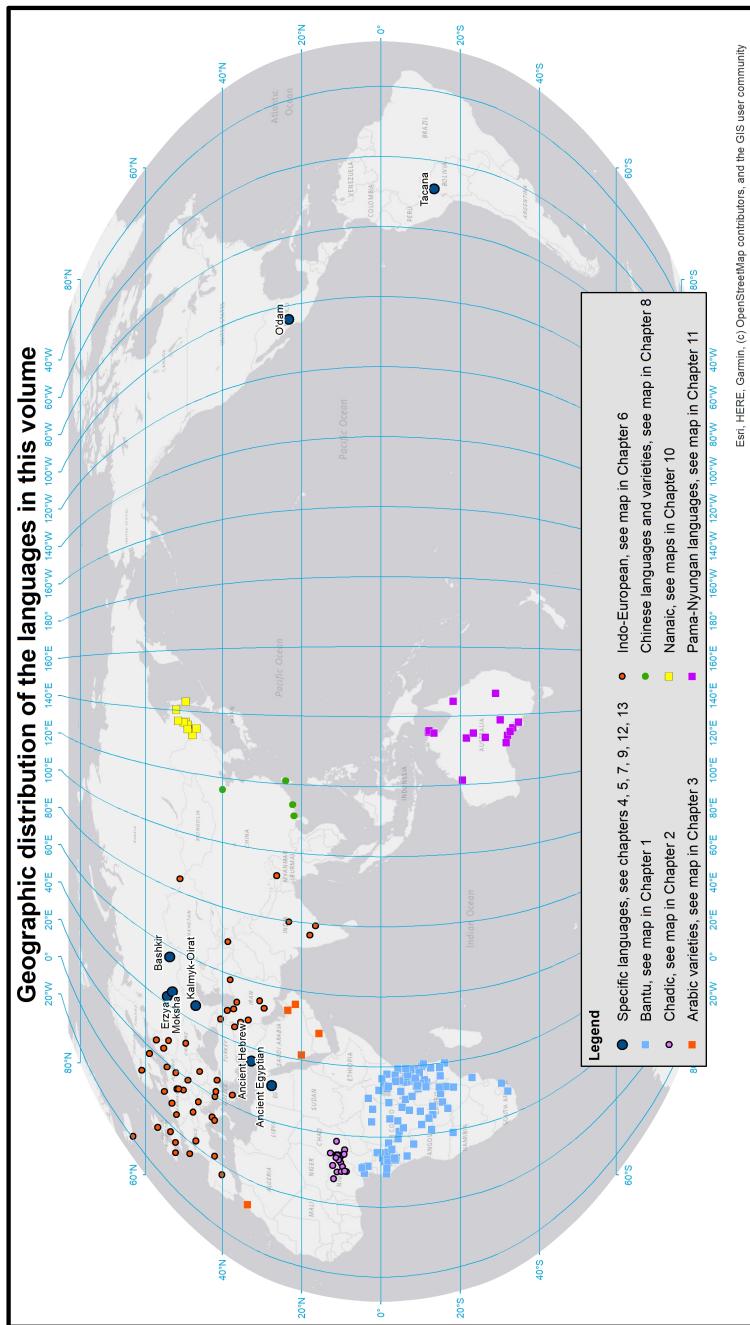
Figure 2: The languages and families analyzed in detail

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Part I

Africa and the Middle East

Chapter 2

The negative existential cycle in Bantu

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Renewal of negation has received ample study in Bantu languages. Still, the relevant literature does not mention a cross-linguistically recurrent source of standard negation, i.e., the existential negator. The present paper aims to find out whether this gap in the literature is indicative of the absence of the Negative Existential Cycle (NEC) in Bantu languages. It presents a first account of the expression of negative existence in a geographically diverse sample of 93 Bantu languages. Bantu negative existential constructions are shown to display a high degree of formal variation within both dedicated and non-dedicated constructions. Although such variation is indicative of change, existential negators do not tend to induce changes at the same level as standard negation. The only clear cases of the spread of an existential negator to the domain of standard negation in this study appear to be prompted by sustained language contact.

1 Introduction

The Bantu language family comprises some 350–500 languages spoken across much of Central, Eastern and Southern Africa. According to Grollemund et al. (2015), these languages originate from a Proto-Bantu variety, estimated to have been spoken roughly 5000 years ago in present-day northern central Cameroon. Many Bantu languages exhibit a dominant SVO word order. They are primarily head-marking and have highly agglutinative morphology and a rich verbal complex in which inflectional and derivational affixes join to a verb stem. The Bantu languages are also characterized by a system of noun classes, which are a form of grammatical gender. By convention, these classes are numbered, with odd and even pairings commonly representing singular and plural forms. Many

Bantu languages also have locative classes containing only locative nouns. The most widespread of up to twenty noun classes are locative classes referred to as 16, 17 and 18 and are marked by **pa-*, **kʊ-* and **mʊ-*, respectively. These prefixes have been reconstructed for Proto-Bantu and refer to specific, general and internal location.[1] The locative noun classes will be central to the discussion in this paper, as they are ubiquitous in the formation of both affirmative and negative existentials in Bantu.

The Bantu languages exhibit a high degree of variation in the encoding of negation within the clause. However, some recurrent patterns can be observed. Negation most commonly involves verbal affixes, typically either a pre-initial marker (appearing before the subject prefix) or a post-initial marker (following the subject prefix). The former tends to be reserved for negation in declarative main clauses (i.e., standard negation), whereas the latter is commonly used for negation in non-standard clause types such as infinitive, subjunctive, imperative, relative and dependent clauses. Examples of pre-initial and post-initial negative strategies are given in (1a) and (1b), respectively.[2] As can be seen in (1c), Standard Swahili uses the standard negative marker *ha-* in negative existential clauses.

(1) Swahili (G42)

    a. *ha-tu-ta-som-a*   *ki-tabu hiki*
       NEG-SM1PL-FUT-read-FV 7-book 7.DEM
       'We will not read this book.'

    b. *u-si-end-e*
       SM2SG-NEG-go-SBJV
       'Do not go!'

    c. *ha-ku-na*   *ma-tata*
       NEG-SM17-COM 6-problem
       'There are no problems.'

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[1] Other, less prevalent strategies for locative noun formation include the use of the class 23/25 locative prefix **ɪ-* (cf. Grégoire 1975, Maho 1999) and the locative suffix *-(i)ni* (Samson & Schadeberg 1994).

[2] The classification of the Bantu languages in this paper is based on Maho (2009), which is an updated version of Guthrie's (1971) classification, in which languages are divided into geographic zones that are assigned letters. These groupings are in turn divided into smaller groups indicated by decimal digits. The final digit represents a specific language within such a group. Letters and additional digits after this digit refer to varieties of the same language. The ISO codes of the languages of the sample are given in Table 1 of the Appendix. Languages that are discussed but are not part of the sample have their ISO code in the running text.

Other recurrent negation strategies involve pre-verbal and post-verbal enclitics/particles, and periphrastic constructions employing an inherently negative auxiliary and an infinitive. Negative stacking – the combination of different negation strategies for the expression of negation – is also attested. Such variation is indicative of change. Although renewal of negation in Bantu has received ample attention (e.g. Kamba Muzenga 1981, Güldemann 1996, 1999, Devos & van der Auwera 2013, Devos & Van Olmen 2013), there has been no systematic study of the form and variation of negative existential constructions, nor of changes indicative of a negative existential cycle.This paper seeks to address this gap in the literature through an examination of negative existentials across a sample of 93 Bantu languages, (listed in Table 1 of the Appendix). The aim is to provide the first exploration of negative existentials in Bantu languages, as well as to examine the extent to which the stages of the negative existential cycle, as set out by Croft (1991) and Veselinova (2016), can be identified in the language family.[3]

The paper is structured as follows: In §2, we examine the renewal of negative strategies across the Bantu languages. In §3, we present an overview of affirmative existential constructions in Bantu, looking at both dedicated and non-dedicated strategies for forming existentials. In §4, we look at the distribution of the stages of the negative existential cycle across the Bantu sample. In §5, we chart the development from non-dedicated negative existentials to dedicated negative existentials. In §6, we explore additional processes of change. We first look at usage extensions beyond verbal negation (§6.1) and moving towards non-standard negation types (§6.2). We then discuss the possible involvement of existential negators in instantiations of the Jespersen Cycle (§6.3) and a specific development attested in varieties of the East African Bantu language Swahili (§6.4). §7 consists of a summary and draws a number of conclusions.

2 The renewal of negation in Bantu

In this section we discuss three recurrent pathways of change in the expression of negation in Bantu languages. The first two concern the genesis and renewal of the two main Bantu negation strategies, namely, the pre-initial and the post-initial negation strategy. Güldemann (1996, 1999) identifies the origin of the former in the merger between an illocutionary particle (most commonly a negative copula) and a (dependent) finite verb form. He finds evidence for this pathway,

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[3]It should be noted that the depth of our analysis naturally depends on the descriptive status of the languages under examination.

inter alia, in the recurrent formal similarity between negative copulas and pre-initial negative markers, as is found in Nyanja, shown in (2).

(2) Nyanja (N31a, Stevick & Hollander 1965: 174, cited from Güldemann 1999: 568)

    a. *si-ti-dza-pit-a*
       NEG-SM1PL-FUT-go-FV
       'We won't go.'

    b. *lelo   si   laciwili*
       today NEG.COP Tuesday
       'Today is not Tuesday.'

Still following Güldemann (1996, 1999), the post-initial strategy is assumed to have its origin in a periphrastic construction consisting of an inherently negative auxiliary followed by an infinitive. Evidence for this second pathway comes from the functional overlap between these constructions in different present-day languages. Both post-initial negation and periphrastic negation involving a negative auxiliary are typically used for the negation of marked clauses, that is, to negate infinitives, subjunctives, imperatives, relatives and dependent clauses. Compare the use of the post-initial strategy in example (1b) from Swahili with the use of the periphrastic strategy for prohibition in Manda shown in (3).

(3) Manda (N11, Bernander 2018: 664)
    Ø-kótúk-áyi   ku-túmbúl-a ku-lóv-a   sómba
    Ø-NEG-IPFV.SBJV 15-begin-INF 15-fish-INF 10.fish
    'Don't begin to fish.'

Bernander (2017, 2018) offers a language-internal instantiation of this pathway. In Manda, the cessative auxiliary *-kotok-* 'leave (off), stop'[4] has spread from indicating prohibition to indicating the other marked negation types identified by Güldemann (1996, 1999), with the exception of negative relatives. The Manda data also support Nurse's (2008: 191) claim that prohibitives are "a major conduit through which innovation occurs". At first, the prohibitive marker spreads to other more marked negation types, as seen in Manda. However, if Nurse's (2008: 193, fn 25) suggestion that several post-initial negative markers in northwestern Bantu languages of zones A and C are derived from the cessative auxiliary **dèk* 'let, let go, cease, allow' (Bastin et al. 2002) holds true, then further spread to

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    [4]Note that *-kotok-* becomes *-kotuk-* before the imperfective suffix, cf. (3).

standard negation may also be attested. In Nugunu, for example, the post-initial negative marker *-de-* is used for all negation types, including for negation of both marked clauses and standard clauses (Nurse 2007). Examples (4a) and (4b) show the use of *-de-* for prohibition and standard negation.[5]

(4) Nugunu (A62, Nurse 2007)

   a. *ɔ-dɔ-gɔ́ba*
       SM2SG-NEG-beat
       'do not beat'

   b. *a-de-mbá-fâ*
       SM1-NEG-PFV-give
       's/he hasn't given'

The third pathway of change concerns recurrent instances of double negation in Bantu languages, namely, the combination of the (inherited) pre-initial or post-initial negative marker and a post-verbal negative marker in a single negative strategy, as illustrated in (5) from Ruwund.

(5) Ruwund (L53, Nash 1992: 696)
    kè-z-in-à-p
    NEG.SM1-come-PRS.CONT-FV-NEG
    'S/he is not coming.'

Double negative marking is suggestive of a Jespersen Cycle, a process whereby an additional negator is first used to reinforce negation, then becomes an obligatory part of negation and eventually ends up as the only exponent of negation. This final stage, with only a single negator, is illustrated with the Manda example in (6).

(6) Manda (N11, Bernander 2017: 308)
    ni-ng'-gán-a   lépa ófísa wa usaláma
    SM1SG-OM1-like-FV NEG security officer
    'I do not like the security officer.'

Devos & van der Auwera (2013) show that the Jespersen Cycles can indeed be observed in Bantu languages. This observation follows the lead of several Bantu grammarians, as well as Güldemann (1996: 256–258), Güldemann & Hagemeijer (2006: 7), Güldemann (2008: 165), Nurse (2008: 57), and Güldemann (2011: 117),

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[5]Note that *-de-* becomes *-dɔ-* after [ɔ] in Nugunu.

who compare double negation in Bantu to its most famous example in French
ne … pas. Devos & van der Auwera (2013) identify several sources of post-verbal
negative markers and show that the post-verbal negative marker may become the
only exponent of negation but that a Jespersen Cycle might also have occurred at
this doubling stage, resulting in triple or even quadruple negation (for an example
of the latter, see Devos et al. 2010). Triple negation in Salampasu [slx] is shown
in (7).

(7) Salampasu (L51, Ngalamulume 1977, cited from Devos & van der Auwera
   2013: 210)
   káá-dédéki-kú   *ny-tóndú ba*
   NEG.SP1-cut.PFV-NEG 3-tree   NEG
   'He has not cut a tree.'

3 Existential constructions in Bantu

As will become apparent in §4 and §5, a significant number of Bantu languages
express negative existence through (standard) negation of the affirmative exis-
tential construction. This fact merits a brief presentation of the versatile tac-
tics for forming affirmative existentials found across Bantu, before discussing
their negative counterparts. The results presented in this section are based on
Bernander et al. (in press), which is an investigation into the expression of affir-
mative existentials across Bantu. In line with Creissels (2014, 2015), existentials
are conceptualized as providing an alternative way of encoding the prototypi-
cal figure-ground relationship of a plain locational. That is, in existentials, the
ground rather than the figure is the perspectival center. Several different tactics
for expressing existence have been found across different languages, as well as
within given language varieties. Of these, an initial division can be made between
those expressions of existential predication that, except for word order changes,
are not different from locational clauses (§3.1) and those constructions that are
dedicated to the expression of existential predication (§3.2).

3.1 Non-dedicated existentials

In roughly 20% of the cross-Bantu sample, existential predication was found to be
formally identical to locational existential predication (Bernander et al. in press).
However, although there are no morphosyntactic differences between a plain
locational construction and existential predication in these cases, it should be
noted that the existentials are recurrently pragmatically marked. Typically, there

is a shift to presentational word order, whereby the (logical) subject ends up in post-verbal position. This tendency is also pervasive in both dedicated existential constructions and negative existentials, and it adheres to a wider cross-linguistic tendency (see e.g. Freeze 1992, Bentley et al. 2013).[6] Example (8a) is an instance of an existential marker in Makhuwa which is formally under-specified in relation to the plain locational in (8b).

(8) Makhuwa (P31, van der Wal 2009: 109)

    a. *aa-rí   nlopwana m-motsá*
       SM1.PST-be 1.man   1-one
       'There was a man.'

    b. *eliívúrú e-rí   wa-meétsa*
       9.book   SM9-be 16-table
       'The book is on the table.'

Both instances of predication contain the same copula indexed with the relevant regular subject agreement. The only difference between the two expressions is the word order permutation of the existential proposition in (8a), relative to the canonical SVO order of the language, as found in (8b). Another example comes from (Standard) Swahili, where it is once again only the word order that distinguishes the existential predication of (9a) from the plain locational predication in (9b).

(9) Swahili (G42, Marten 2013: 46)

    a. *zi-po   n-chi   amba-zo   hu-tegeme-a   ki-limo*
       SM10-LOC.COP16 10-country REL-REFCD10 HAB-depend-FV 7-farming
       'There are countries which depend on agriculture.'

    b. *ki-tabu ki-po   meza=ni*
       7-book SM7-LOC.COP16 6.table=LOC
       'The book is on the table.'

It should be noted that the existential predication exemplified in (9a) represents only one of two possible tactics for the formation of existentials in (Standard) Swahili, the other tactic being the comitative-existential type, which was

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[6]In fact, the only languages that do not exhibit such a permutation are spoken in the very northwestern part of the Bantu-speaking region. These languages are therefore in close contact with the "Macro-Sudan belt" (Güldemann 2008). The Macro-Sudan belt is a linguistic area characterized as being "devoid of dedicated existential predicative constructions, and with rigid constituent order in locational clauses" (Creissels 2014: 22).

exemplified in (1c) in §1 and which is further discussed in §3.2 below. This situation in Swahili reflects a wider tendency of non-dedicated existential predications to alternate with a dedicated existential construction in a single language.

3.2 Dedicated existentials

80% of the languages in our current dataset use dedicated existentials. Two of Creissels' (2014, 2015) seven types of existential predication are frequently and widely attested, namely the "locative-existential" type and the "comitative-existential" type (Bernander et al. in press).

The locative-existential type is characterized by the presence of a locative element which is absent from the plain locational clause. Locative-existential constructions exhibit differing degrees of specialization and semantic bleaching of this locative element, but its locative origin is commonly transparent. Typically, the locative element stems from what was originally a locative-referential enclitic that attached to a copula verb and in certain contexts became reinterpreted as marking existential predication. Another common locative-existential type comprises constructions where the subject marker of the predicator has shifted from referring to the (logical) subject to taking agreement from a locative noun class. Both of these subcategories of locative-existentials can be illustrated by Cuwabo, which makes equal use of the two categories. Thus, in example (10a), the existential is formed with the copula verb *-kala* and an enclitic from the locative class 17, the subject marker of the verb agreeing with the post-verbal (logical) subject. In example (10b), however, there is no enclitic (although the copula verb is the same). Instead, the existential construction is formed with the locative class 17 as a subject marker.

(10) Cuwabo (P34, Guérois 2015: 465, 466)

    a. *nsáká ni-modhá o-á-kála=wo*   *mwáná-mwíyaná*
       5.time 5-one   SM1-PST.IPFV.CJ-be-LOC17 1.child-1.woman
       'One day, there was a girl.'

    b. *o-ttóló=ni   ókúlé o-hi-ikálá   fúlóóri*
       17-well=LOC DEM SM17-PFV.DJ-be 9a.flower
       'There at the well there is a flower …'

In a small set of Bantu languages, the existential construction consists of the combination of these two subtypes, as in the example from Lusoga in (11), where the copula verb is inflected with both a subject marker and an enclitic from the locative noun class 18.

(11)　Lusoga (JE16, Nabirye, p.c. 2016)
　　　mu i-díilo　　　*mu-lí-mu*　　　*ebí-sampá*
　　　18　5-living.room sm18-be=loc18 8-mat
　　　'In the living room there are mats.'

In some languages, univerbation of a locative element and a copula or light verb has given rise to two types of locative-existential predicates. The first type involves univerbation of a copula or light verb and a locative enclitic. The Makhuwa predicate *-háavo* in (12) can reasonably be thought to derive from the light verb *-hala* 'stay, remain', to which the class 16 locative enclitic *=vo* is added. Locative post-finals are not (or no longer) productively used in Makhuwa and *-háavo* never occurs without the locative enclitic.

(12)　Makhuwa (P31, van der Wal 2009: 109)
　　　y-aá-háavo　　　*e-námá　e-motsá*
　　　sm9-pst-be.present 9-animal 9-one
　　　'There was an animal …'

A second type involves univerbation of an erstwhile locative object prefix and a copula. As suggested in Bernander et al. (in press), the Mawiha predicate *-pawa* in (13) has its origin in merger of the class 16 locative object prefix *-pa-* with the copula *-wa* 'be'. The (near-) absence of locative object prefixes as obligatory locative elements in Bantu existential constructions of the locative-existential type is probably due to the limited distribution of locative object prefixes in Bantu languages more generally (Marlo 2015, Zeller forthcoming).

(13)　Mawiha (P25, Harries 1940: 105)
　　　mu-ɲande mwake mu-ndi-pawa　　　*ŵa-nu*
　　　18-9.house 18.poss1 sm18-pfv-be.present 2-people
　　　'There are people in his house.'

　　The second of the two major types of dedicated existential constructions found across the language family is the comitative-existential type. In such a construction, the figure is encoded in a way that is similar to the phrase representing the companion in comitative predication. As illustrated with the example from Digo in (14), Bantu comitative-existential constructions are typically marked with a reflex of the Proto-Bantu reconstructed conjunction/preposition **na* 'and/with' (Bastin et al. 2002).

(14) Digo (E73, Nicolle 2013: 320)
      hipho kare ku-a-kala   na   mu-tu   m-mwenga
      long   ago   SM17-PST-be with 1.person 1-man
      'Long ago, there was a man.'

As pointed out by Creissels (2014), this type of existential construction is characteristic for the Bantu language family, the extension of a comitative marker to an existential being rare from a cross-linguistic perspective. Note that a locative element is present in the construction in (14) as well, in the form of a subject marker of the locative class 17. This is representative of almost all comitative-existential constructions across Bantu. It should also be stressed that, although the "basic" meaning of *na* is comitative 'with', it is a polysemic element and, in those languages where it has developed an existential reading, it typically also functions as a "possessive copula" (Marten 2013, Gibson et al. 2018), thus resembling the much more widespread cross-linguistic strategy of forming existentials from possessive predicates (Creissels 2013).

4 Negative existentials and the NEC in the language sample

After a brief description of the expression of negation and affirmative existence in Bantu languages, we now turn to the main topic of the paper: the expression of negative existentials. Our account of the Bantu findings is framed based on the model of the Negative Existential Cycle (NEC), following Croft (1991) and Veselinova (2013b, 2014, 2016). According to this model, standard negation markers can develop out of negative existential markers through three stable stages, referred to as A, B and C. Three additional transitory stages, referred to as A~B, B~C and C~A, are also involved. Each of these variationist stages simultaneously represent synchronic types. Consequently, every language of our sample has been examined and classified according to whether it belongs to one of the three "stable" types/stages of the NEC or whether it represents a "transitory" type/stage. The observation made by Veselinova (2014, 2016) that several overlapping types/stages may co-occur in a single language has also been taken into account. In the following discussion we further attempt to make diachronic inferences based on the synchronic relationship between language internal and language external variation and the pathway(s) of change posited in this model.

The variation regarding the expression of negative existentials across Bantu is summarized in Figure 1. The Figure is based on Veselinova (2016: 146), in turn

adapted from Croft (1991: 6), where the boxes with solid lines represent stable
types/stages and the boxes indicated by dashed lines represent the transitional
types/stages. (A more fine-grained and language-specific account of the forma-
tion of negative existential predication can be found in Table 1 in the Appendix).
Note that the total number of languages in Figure 1 is 100, thus exceeding the
total sample of 93 languages in this study. This reflects the fact that 7 languages
can each be classified as belonging to two types/stages, the overlapping types/
stages being A & B (2 languages), A & B(?) (2 languages), B & B(?) (1 language),
A~B & B~C (2 languages). [7] A detailed account of the various figures shown in
Figure 1 is provided in the discussion below.
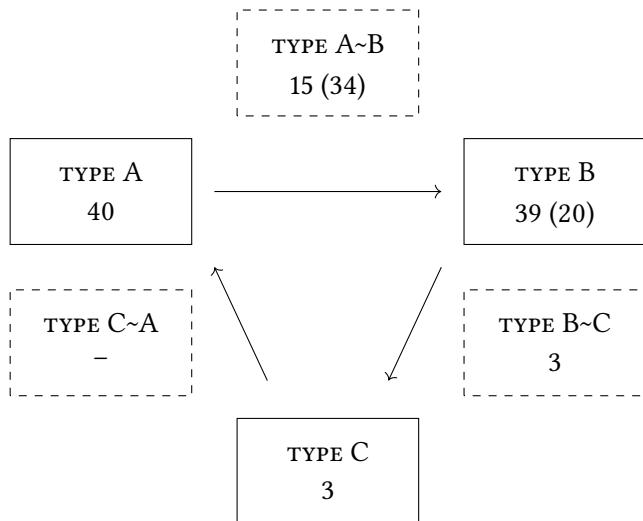
Figure 1: Stages of the NEC across the Bantu sample

As can be seen in Figure 1, the majority of existential negators across Bantu
pertain to the "earlier" stages of the cycle, thus conforming to cross-linguistic
generalizations regarding rate of frequency (Croft 1991, Veselinova 2016). This
tendency is arguably even stronger if it is taken into account that the three C

[7]It should also be noted that the numbers in Figure 1 do not take into account variation within a
single type: several languages in our sample have more than one dedicated existential strategy.
When they belong to the same type/stage, typically type B, this is only counted once with the
B / B(?) case being the only exception, this in order to keep the parallel liberal/conservative
numbers coherent.

types and one of the B~C types of this figure are plausibly the result of contact-induced change involving one and the same source language, namely, Swahili. A word of caution is warranted here, however, regarding the presentation of the data regarding the relationship between negative existentials of the stable Type B and those of Type A~B. In many cases, our sources have only provided examples with negative existential constructions in the present tense. This has made it difficult to determine with certainty whether a language really makes use of a negative existential of Type B or A~B.[8] We therefore decided to use two numbers. The first number (without parentheses)[9] represents the liberal count, which takes the absence of a description of other means of negative existential predication as an indication of a special Type B status of the negative existential marker in question. The second number (in parentheses)[10] represents the alternative, more conservative count, where the absence of examples of usage outside of the present temporal domain is taken to indicate that the negative existential is of Type A~B. The following two sections each discuss one half of the cycle. In §5, we focus on Type A and B and the transition processes between these types. In §6, we address the rarer, additional types and hence further developed stages within the cycle found in Bantu, including those induced by contact with Swahili. In §6, we also raise the question of meaning extensions of negative existentials in Bantu that are not necessarily connected to the NEC.

5 From non-dedicated to dedicated negative existentials in Bantu

In this section, we discuss instantiations of the first half of the NEC, that is, A, B and A~B. As seen in Figure 1 above, these three types/stages constitute the vast majority of instantiations of the NEC in Bantu, in accordance with the observed general cross-linguistic tendency (Veselinova 2016, Croft 1991). §5.1 discusses constructions that apply standard negation to affirmative existential constructions —that is, negative existentials of Type A. §5.2 continues with an account of dedicated negative existentials, either as part of a Type A~B or a Type B situation, and their evolution.

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[8] Of course, such a problem could also hold for other contextual restrictions that are not revealed in the data.

[9] The first number counts both languages classified as B and B(?) in our table.

[10] The second number counts only languages only languages classified as B in our table.

5.1 Negative existentials using standard negation

As can be seen in Figure 1, the majority of negative existentials across Bantu are formed in a compositional fashion by applying standard negation strategies to the affirmative existential construction —that is, Type A negative existentials in Croft's (1991) typology. Interestingly, although the majority of Bantu languages adhere to the compositional formation of negative existentials, there is still a lot of variation in the expression of Type A negative existentials. This reflects the formal variation within the expression of both standard negation (§2) and affirmative existence (§3) in Bantu.

All instantiations of the negative existential of Type A across Bantu involve standard negation strategies. However, languages vary (both internally and externally) as to whether standard negation is applied to a non-dedicated or, as in the great majority (roughly three quarters) of the cases, to a dedicated affirmative existential. In the latter case, languages vary in terms of which specific type of dedicated affirmative existential is involved, thus prompting more fine-grained distinctions within the single category of Type A negative existentials.

An example of a Bantu language where standard negation is applied to a non-dedicated existential construction is Swahili. In (15), the standard pre-initial negative marker is attached to a type of existential predication that is described as underspecified in relation to plain locational predication in §3.1 (cf. the Swahili examples in (9)).

(15) Swahili (G42, Kanijo, p.c. 2018)
      ha-yu-po   *nguluwe mw-enye ma-bawa*
      NEG-SM1-LOC.COP16 9.pig   1-having 6-wings
      'There is no pig with wings.'

There are also languages in which standard negation applies to the dedicated existential constructions discussed in §3.2. Thus, Ikizu and Kisi are examples of standard negation combined with dedicated locative-existential constructions. In the Ikizu case, the affirmative existential involves an obligatory locative enclitic (16), whereas the existential in Kisi is characterized by a locative subject marker, as in (17). Note that standard negation in Kisi employs a post-verbal negative particle.

(16) Ikizu (JE402, Luke 1:61, Gray 2013: 54)
      Ndora mʉ-bahiiri   banyu   ta-ree-ho   wi riina   riyo!
      look   18-2.blood.relative 2.POSS2PL NEG-be-LOC16 1.of 5.name 5.DEM2
      'Look, among your blood relatives there is no-one of that name!'

(17) Kisi (G67, Ngonyani 2011: 157)
n-dofi   a-bhʊlile   ku-yele   he bhu-sipa   ma-gono agho
1-fisherman SM1-say.PFV 17-be.PFV NEG 14-sardine 6-day   6.DEM2
'The fisherman said there were no sardines in those days.'

Similarly, standard negation may apply to affirmative existential constructions of the comitative type. Swahili is a case in point. In addition to the non-dedicated existential construction illustrated in (15), Swahili makes use of a dedicated comitative-existential. The corresponding negative construction simply adds the standard pre-initial negative marker *ha-*. Recall that these constructions typically also involve locative marking, in this case the class 16 locative subject marker *pa-*.

(18) Swahili (G42, King'ei & Ndalu 1989: 25)
ha-pa-na   m-tu   a-si-ye-fanya   ma-kosa
NEG-SM16-COM 1-person 1-NEG-REL1-make 6-mistake
'There is no person who does not make mistakes.'

Some languages that are categorized as belonging to Stage A because they employ standard negation strategies in negative existential constructions, display minor irregularities. Since the irregularities are typically attested in present tense contexts they could be suggestive of the emergence of a dedicated negative existential. Makwe is a case in point. One of the negative existential strategies found in Makwe involves standard negation in combination with a locative–existential predicate (*-pali*) derived from the univerbation of a class 16 object prefix *pa-* and the copula *-li* 'be', as seen in (19a). The corresponding affirmative construction also makes use of a locative–existential predicate (*-pwawa*), which, however, is most probably the result of the merger of a class 16 object prefix *pa-* with the verb *-wa* 'be' (rather than *-li*), as seen in (19b). The locative–existential predicate *-pali* is a negative polarity item as it cannot be used in affirmative contexts. It only occurs in negative present tense contexts. Other temporal contexts make use of *-pwawa* in combination with standard negation (19c).

(19) Makwe (P231, fieldnotes, Devos 2008: 375)

   a. *a-ya-paáli   ma-tatiízo*
      NEG-SM6-exist 6-problem
      'There are no problems.'

   b. *u-ni-pwáawa mw-íimbo*
      SM3-PFV-exist 3-song
      'There is a song.'

    c. *a-ku-na-pwaw-íije   na   sukáali*
       NEG-SM17-PST-exist-PFV with 9.sugar
       'There was no sugar available.'

Another example comes from Shangaji, which has a dedicated locative-existential strategy marked by an obligatory locative enclitic, as seen in (20a). This can be negated through standard negation, which involves the pre-initial negative marker *kha-*, as in (20b). However, the copula verb *-wa*, present in the affirmative construction, is reduced to zero in the negative construction, thus turning the locative enclitic into a locative copula.[11]

(20)   Shangaji (P312, Devos, fieldnotes)

    a. *leélo zi-waá-pho   pwilímwíithi*
      today SP10-be-LOC16 10.mosquito
      'Today there are (a lot of) mosquitos.'

    b. *leélo kha-zí-wó   tthonddóowa o-túulu*
      today NEG-SP10-LOC17 10.star   17-above
      'Today there are no stars in the sky.'

5.2 The rise of dedicated negative existential strategies

53 of the languages – more than half of our sample – can be considered to belong to Type B or Type A~B of the NEC, thus having a dedicated negative existential strategy which does not merely involve the application of standard negation to an affirmative existential construction. In this section, we first explore the etymology of dedicated negative existential markers across the Bantu family. We then address the transition between stage A and B —that is, the emergence of dedicated negative existentials in Bantu.

5.2.1 Dedicated negative existential constructions

Dedicated negative existential constructions in Bantu are often marked by inherently negative lexemes in combination with locative marking. There are two main lexical sources involved in such dedicated negative existential constructions: verbs and adjectives/adverbs. Both categories can be etymologically linked

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[11]Note that the affirmative existential construction makes use of a series of locative demonstrative enclitics (*-pho*, *-kho* and *-mo*), whereas the negative existential construction uses a series of locative relative enclitics (*-vo*, *-wo* and *-mo*).

to a negative source meaning thus conforming to a common cross-linguistic pattern (Veselinova 2013b). Two geographically more restricted patterns have also been identified. The first concerns non-verbal predication whereby the noun referring to the figure is followed by a negative particle dedicated to the expression of negative existence (and other non-verbal predication types). The second involves locative subject marking in combination with a verbal enclitic with an as yet unclear etymology. This section takes a closer look at all four more or less recurrent sources, starting with the least unexpected one.

Bantu languages commonly recruit inherently negative verbs as negators (see Givón 1973; 2001: 382–383). This is typically the case in prohibitive propositions and, by extension, other types of more marked verbal negation (see e.g. Bernander 2018, Devos & Van Olmen 2013, Güldemann 1999, Nurse 2008: 191–193, and also the brief discussion in §2 of this paper). Our investigation shows that lexical verbs of similar denotations are often also recruited as negative existential markers in Bantu, always in combination with locative marking. This can be seen in the examples below from Ruwund 21 and Kagulu 22.

(21) Ruwund (L53, Nash 1992: 839)
p-ììkil   côm
sm16-not.be 7.thing
'There is nothing there.'

(22) Kagulu (G12, Petzell 2008: 167)
kw-ichak-a   wa-nhu
sm17-be.without-fv 2-people
'There are no people.'

Arguably, similar processes of semantic bleaching apply to those verbs recruited as negative existentials as to those becoming negative auxiliaries in marked negation types. An important difference is the fact that negative verbs that become negative existentials are always inflected with locative subject markers. Thus, locative marking is a persistent feature in both affirmative and negative existential constructions across Bantu. This adheres to the close contiguity in meaning between location and existence, given the basic conceptualization that an entity occupying a space also exists (Lakoff 1987: 407; see also Gaeta 2013, Koch 2012) and, by contraposition, that an entity not occupying a space does not exist.

The most typical original meaning of a negative existential verb is 'be without, lack', as in the example from Kagulu in (22) above. Other examples include *-vʊla* 'lack' and *-bhʊlá* 'lack' in Kinga (G65) and Bende (F12) respectively (from Proto-Bantu **-bʊd-* 'lack; be lacking; be lost' (Bastin et al. 2002)), *-gaya* 'lack' in Bena

(G63) and Hehe (G62), and *-hela* 'lack' in Pogolo (G51) and Ndamba (G52). It is worth noting that the meanings 'be without, lack' express the polar denotation of the affirmative comitative-existential strategy, discussed in §3. This suggests that this conceptualization of existentials, typical for Bantu languages, applies to the formation of negative existentials even beyond those of Type A.[12] Arguably, it also supports the suggestion of Veselinova (2013b) that negative existentials represent a separate functional domain from affirmative existentials, making statements about the absense of something rather than negating an existence, and thus do not have to be secondary formations to affirmative existentials. More generally, this fact can be seen as reflecting the conceptual interaction and semantic contiguity not only between location and existence, but also between possession and existence both synchronically and diachronically (see e.g. Koch 1999, 2012, Heine 1997, see also Veselinova 2013b).

That being said, there are also lexical sources that do not denote negative possession, but which still arguably have an inherently negative meaning. In several cases the source is a lexical verb simply meaning 'not be', in accordance with a more general cross-linguistic tendency (see Veselinova 2013a, 2016). One such example is the negative existential *tìti* in Duala (A24), which according to Ittmann (1939, 1976) stems from an archaic verb *tìtá* 'not be, not exist' inflected for the perfect. Another example is *-ììkil* in Ruwund, as seen in (21) above. Lusoga (JE16), Bena (G63) and Vwanji (G66) appear to make use of a reflex of the reconstructed verb **-gìd-* 'abstain from, avoid, refuse'. A final example of a negative existential derived from a negative verbal source in Bantu is *-fwa* 'die', which is used in both Kisanga (L35) and Kaonde, as illustrated in (23).

(23) Kaonde (L41, Foster 1960: 30)
       késha   tu-kékala na   ma-tába lélo   ka-fwá-ko
       tomorrow SM1PL-be COM NCP6-corn today NEG-die-LOC17
       'Tomorrow we shall have corn, today there is none.'

In total, 22 languages – almost a quarter of our sample – employ inherently negative verbs in the formation of negative existential constructions, whether this is as the sole marker or in conjunction with other strategies.

Another frequent and widespread source of negative existentials in our sample of Bantu languages is not a verb but rather an adjectival or adverbial form meaning 'empty' (and/or with similar meanings). Of the 15 attestants, the most

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[12]Interesting in this regard is Gogo (G11) which appears to form negative existentials by applying standard negation to a comitative-existential construction, whereas it employs affirmative constructions of the locative-existential type.

typical case involves reflexes of the Proto-Bantu stem *-tʊ́pʊ́* 'only, empty, in vain' (Bastin et al. 2002, Angenot-Bastin 1977) in combination with a locative class marker. Examples (24) and (25) from Kwangali and Ndengeleko exemplify this pattern. Note that there is a mismatch in class agreement between the *-tʊ́pʊ́* form and the locative nominal argument in (25). This lack of automatic agreement suggests that the referential locative reading has been lost, which points to a further decategorialization of the construction as a whole.

(24) Kwangali (K33, Dammann 1957: 108)
      mo-ru-pasa m(u)-tupu mema
      18-11-bowl 18-empty 6.water
      'In the bowl there is no water.'

(25) Ndengeleko (P11, Ström 2013: 284)
      n-tʊ́pʊ́   oomba   ku-lw-íi
      18-empty 9/10.fish 17-11-river
      'There is no fish in the river.'

  Nine languages of our sample have a negative existential involving *-tʊ́pʊ́* with a locative prefix. The other seven languages not discussed above are summarized in (26).

(26) **Languages with a negative existential derived from *-tʊpʊ***
      F.12 Bende   *hátuhú ~ kútuhú*
      F.22 Nyamwezi *hadʊhʊ ~ ndʊhʊ*
      G.35 Luguru   *muduhu*
      L.33 Luba   *patupu ~ kutupu ~ mutupu*
      L.35 Kisanga   *patupu ~ kutupu ~ mutu(pu)*
      P.13 Matumbi   *patʊpʊ ~ kutʊpʊ ~ ntʊpʊ*
      P.14 Ngindo   *haduhu*

Some other words with roughly the same meaning have also been recruited into negative existential constructions. This can be seen in the form *-bule*, which is found in Swahili (G42) and which is thought to derive from the Arabic word *bure* [برع] 'bestow of free will', and, by extension 'in vain' (Johnson 1939: 42; TUKI 2014: 48). A similar form, presumably borrowed into the language from Swahili, can also be seen in Kami, a highly endangered language spoken in Tanzania which has been in sustained contact with Swahili.

(27) Kami (G36, Petzell & Aunio 2016)
      Sweden ha-bule   tangawizi
      Sweden 16-neg.ex 9/10.ginger
      'There is no ginger in Sweden.'

Another example is the form *-waka* 'only, in vain, naked' recruited as a negative existential marker in Ngoni (N.12) and also in Manda, as exemplified in (28).

(28) Manda (N11, Bernander 2017: 335)
      sénde   pa-wáka?
      9/10.money 16-empty
      'Is there no money (left)?'

In ten languages, spoken in parts of Gabon, Congo and the Democratic Republic of the Congo (DRC), negative existence is expressed by non-verbal predication – that is, the figure is simply followed by a negative particle. Duma is a case in point. The copula *li*, which is present in the affirmative existential construction in (29a) is not attested in the negative existential construction in (29b); whereas standard negation involves both pre-initial *ka-* and clause-final *vɛ* (29c), only the latter is used for the expression of negative existence.

(29) Duma (B51)

      a. affirmative existential (Adam 1954: 148)
          mungubili mu li   i   tswa ngundu
          1.pig   SM1 COP LOC garden
          'There is a pig in the garden.'

      b. negative existential (Adam 1954: 148)
          baãti   bo   vɛ
          2.porter PERS.2 NEG
          'There are no porters.'

      c. standard negation (Mickala-Manfoumbi 1988: 144)
          besú   ka-li-bóma   mútu   vɛ
          PERS.1PL NEG-SM1PL-kill 1.person NEG
          'We do not kill the man.'

Languages in this area typically have a discontinuous or double standard negation strategy, which combines a pre-verbal, pre-initial or post-initial negative marker with a second post-verbal (either immediately following the verb or in clause-final position) negative marker (Devos & van der Auwera 2013). In some languages, the negative marker used for the expression of negative existence is identical to the standard post-verbal negative marker, as seen in the Duma example (29) and also in (30) from Nduumo (cf. also §5.2.2).

(30) Nduumo (B63, Adam 1954: 141, 148)

    a. standard negation
       bisi   ka li   dji buyu ng'i
       PERS.1PL NEG SM1PL eat honey NEG
       'We have not eaten the honey.'

    b. negative existential
       abiti   ng'i
       porter NEG
       'There are no porters.'

However, in a few languages the existential negator formally differs from the post-verbal standard negator, as shown by the examples in (31) from the closely related language Mbete.

(31) Mbete (B61, Adam 1954: 141, 148)

    a. standard negation
       bisi   le   ha dja bvugi ng'i
       PERS.1PL SM1PL NEG eat honey NEG
       'We have not eaten the honey.'

    b. negative existential
       abiti   kali
       porter NEG
       'There are no porters.'

It should be noted that the Nduumo standard post-verbal negative marker in (30) can be replaced by the negative marker *onyang'a*, as in, *abiti onyang'a* 'there are no porters'. The semantics and the range of use of Mbete form *kali* and the Nduumo form *onyang'a* are not entirely clear. Biton & Adam (1969: 114, 171) give the translation equivalents 'no' and 'none, nil', respectively, suggesting an origin in a negative answer particle in Mbete and a negative indefinite pronoun in Nduumo. However, meanings reminiscent of **-tópó* 'only, empty, in vain' are attested as well. As can be seen in 32, both elements can be used to express 'empty'.

(32) a. Mbete (B61, Biton & Adam 1969: 649)
       djyala kali
       'empty handed'

    b. Nduumo (B63, Biton & Adam 1969: 649)
       bvyala onyang'a
       'empty handed'

Whether the existential negator is identical or not to the post-verbal standard negator, we consider this particular type of negative existential construction to be specialized, specifically, of type A~B (if only used in the present tense) or of type B (and plausibly even type B~C or C if the existential negator indeed spreads to standard negation). In §6.3 we discuss the possible enrollment of these existential negators in the expression of standard negation through a Jespersen Cycle. §6.1 addresses the possible usage extension of these existential negators to other types of non-verbal predication and vice versa.

Finally, there is a small set of only 4 languages spoken in a contiguous area in Malawi and Zambia where negative existence is expressed by adding an enclitic to affirmative existential predication of the locative existential type. The enclitics are *-je* in Tumbuka (N21), *-be* in Chewa/Nyanja (N31), *-ye*/*-ve* in Nsenga (N41) and *-be* in Nyungwe (N43). The etymology of these arguably cognate forms is as yet unclear to us. In at least the Chewa/Nyanja case, cf. 33, the enclitic displays a curious polysemy between expressing negative existence/possession when combined with the copula *-li*/*-ri*, and expressing the phasal meaning 'still' when combined with a verb or even a noun (Hetherwick 1916: 116, Watkins 1937: 97, 99, Price 1953: 209, Stevick & Hollander 1965: 116, 205, 279, Paas 2004: 20–21, Mchombo 2004: 60, 68, Kiso 2012: 150, 153, 161).

(33)   Chewa/Nyanja (N31, Stevick & Hollander 1965: 117, 205, 279)

    a. negative possession
ndi-li-be   *ma-lalanje*
SM1SG-be-NEG/POSS 6-orange
'I don't have any oranges.'

    b. negative existential
kuno   *ku-li-be*   *ma-lalanje ambili*
17.DEM1 17-COP-NEG/EX 6-oranges 6.many
'There aren't many oranges around here.'

    c. persistive
a-ku-gon-a-be
SM1-PRS-sleep-PER
'He's still sleeping.'

Stevick & Hollander (1965: 279) express some doubts about the tonal identity between negative existential *-be* and persistive *-be*. This, together with the fact that 'still' does not appear to be a common source of negative existence or vice versa (Heine et al. 1993 and Heine & Kuteva 2002, for example, do not mention a

conceptual shift in either direction), might suggest that homonymy rather than polysemy is at play here. However, the semantic connection between 'still' and 'empty', which, as has been shown above, is a common source of negative existentials in Bantu, is confirmed by data from Tumbuka (N21). Tumbuka has an element *waka*, cognate with Manda and Ngoni *-waka*, which is used adverbially to express 'empty(ly), in vain' and in combination with the copula *-ri* to express 'still', as illustrated in (34).

(34) Tumbuka (N21, Young 1932: 120–121)

    a. 'empty, in vain'

        i. *w-iz-a*   *waka*
            SM1-come-PFV empty
            'S/he has come empty-handed / for no particular purpose.'

        ii. *w-a-gon-a*   *waka*
            SM1-PST-sleep-FI empty
            'S/he slept without food / without the evening meal.'

    b. persistive
       zuwa li-ri   *waka*
       5.sun SM5-COP still
       'The sun is still shining / There is still daylight.'

This might suggest that the lexical source of *-be* is similarly an element expressing 'empty' and that this element has developed multiple grammatical functions.

As a final note, it should be mentioned that we are even less sure about the etymology of other instances of Bantu negative existentials in our sample. Further research might thus add new sources of negative existentials or give additional evidence for the suggested etymologies.

5.2.2 Variation between standardly negated and dedicated negative existentials

In accordance with cross-linguistic tendencies (Veselinova 2016), there are several examples of Bantu languages in the transition stage A~B where a negative existential may be expressed both through applying standard negation strategies (to either a non-dedicated or a dedicated affirmative existential) or, alternatively, a dedicated negative existential marker. As is typical in these cases, the usage of the specialized existential is confined to the present, standard negation being employed in other temporal contexts (Veselinova 2013b, 2016). Luba is a case in

point. In the present tense, Luba can make use of a dedicated negative existential strategy involving *-tupu*, a reflex of *-*tʊ́pʊ́*, discussed in the previous section. In all other temporal contexts, standard negation is applied to the affirmative existential of the locative-existential type, as can be seen in (35).

(35)   Luba (L33, Beckett 1951: 126)

   a.   *le   ku-di lu-pete? ku-tupu-lo*
        INTER 17-COP 11-knife? 17-empty-11
        'Is there a knife? There is not.'

   b.   *ke-kwa-di-po   mwepo nansha mu-tyetye*
        NEG-17.PST-COP-NEG 3.salt   even   3-little
        'There was not even a little salt.'

Ombo constitutes a similar case. In the present tense, the dedicated inherently negative verb *-áfa* 'not be' is recruited for the expression of negative existence (36a), whereas other temporal contexts resort to standard negation applied to an affirmative existential of the comitative-existential type, as seen in (36b).

(36)   Ombo (C76, Meeussen 1952: 30)

   a.   *k-áfa   lʊ-kula*
        SM17-not.be 11-knife
        'There is no knife.'

   b.   *ku-tá-íká   la-nsímba*
        SM17-NEG-be.PST COM-10.lion
        'There were no lions.'

For 15 of our languages, the sources claim that such a situation holds. However, given the fact that not many sources provide an extensive account of the expression of negative existence, let alone the variation within, it is likely that this number should actually be higher. Furthermore, dedicated negative existentials might have emerged after the publication of the sources, seeing that negative existentials typically are subject to renewal (Veselinova 2016) and the verbal systems of Bantu languages in particular are characterized by rapid innovation and change (Nurse 2008: 25). An indication of such a situation, with what appears to be an emerging dedicated negative existential, comes from Kinga, a language which can be described as belonging to variationist Type/Stage A~B. In Kinga, a negative existential proposition may be produced by employing standard negation strategies, as in (37a). Alternatively, a dedicated negative existential marker may be used, derived from the inherently negative verb *-vʉla* 'lack' and inflected with a locative subject marker, as in (37b).

(37) Kinga (G67, Eaton, p.c. 2017)

    a. *ni-pa-li   i-soda* (*~/nɪpali ɪsoda*)

         NEG-SM16-COP 9-soda

         'There's no soda.'

    b. *kʊ-vɔl-a   soda*

         SM17-lack-FV 9.soda

         'There is no soda.'

However, there is no account at all of the negative existential use of *-vʉla* in the grammar on Kinga by Wolff (1905). What is more, according to Helen Eaton (p.c.), *-vʉla* with a negative existential only turns up five times in the New Testament, whereas the version with standard negation is far more frequent. Similarly, the neighboring and closely related language Bena is claimed to employ standard negation with the affirmative existential construction (Morrison 2011: 378). However, going through an annotated collection of Bena narratives (Eaton 2015a), we found not only one, but two negative existential markers transparently derived from inherently negative verbs plus locative marking. In fact, there is a set of languages spread across the Bantu-speaking area that appears to make use of several dedicated negative existentials. Other examples of languages with several dedicated negative existentials are the Mozambican variety of Ngoni, Bende in Tanzania, Luba in DRC and Lusoga in Uganda (cf. Table 1 of the Appendix). Unfortunately, the sources seldom elaborate on the functional differences between these various markers. In the case of Bena, however, there might be dialectal or other lectal differences at play, Bena being characterized by relatively extensive language-internal variation (cf. Morrison 2011: 30–35; Morrison 2015; Mitterhofer 2013).

6 Further processes of change

The focus of this section is the later language types and stages of the NEC as reflected in the Bantu sample. Specifically, we look at types/stages where the negative existential marker has expanded into the domain of standard (verbal) negation. As can be deduced from Figure 1 in §4, this does not seem to be very common in the Bantu languages. There is a possibility that some of the illocutionary particles hypothesized by Güldemann (1999) to have developed into standard negation markers, as described in §2, ultimately stem from negative existential markers. However, we have failed to find any indications of such a scenario in

our data. In fact, it seems that in those cases where the negative existential marker has acquired an extended function as a standard (verbal) negator in Bantu, there are typically specific sociolinguistic factors such of language contact at play. Such a case is addressed in §6.4. First, however, we discuss usage extensions of the negative existential marker outside of verbal negation (§6.1). Then we turn to usage extensions involving marked negation types (§6.2) and finally a possible case of intertwining between the negative existential cycle and the Jespersen Cycle is discussed (§6.3).

6.1 Extensions of negative existentials outside of verbal negation

One usage extension concerns the cross-linguistically well-attested development of negative answer particles ('no') and negative indefinites ('nothing'/'nobody') out of negative existential forms (see Schwegler 1988, Croft 1991, Veselinova 2013b, 2014, 2016). Instantiations of such a change from internal negator to external negator are found at least in Ombo (C76), Nyamwezi (F22), Ngoni (N12), Matumbi (P13) and Yao (P21).

In Yao, *ngapagwa* 'nothing, no one, never' is derived from a negative existential form involving standard negation applied to an existential predicator -*pagwa*, which is itself derived from a merger between the locative object prefix -*pa*- and the light verb -*gwa* 'fall, occur' (Sanderson 1922: 72, Whiteley 1966: 174). Compare the examples in (38).

(38) Yao (P21, Sanderson 1922: 72)

    a. *m-ku-saka   chichi? ngapagwa*
       SM2PL-PRS-want what   nothing
       'What do you want? Nothing.'

    b. *nyama nga-ni-si-pagwa*
       9.game NEG-PST-SM9-exist
       'There was no game.'

Another example of this usage extension can be seen in Matumbi, where the negative answer particle *kutupo* 'no', exemplified in (39a), is clearly related to the negative existential form, which can be seen in (39b).

(39) Matumbi (P13, Krumm 1912: 46, Odden 1996: 304)

    a. *kutupo, ba-bi   Kibata*
       no   SM2-be Kibata
       'No, they are in Kibata.'

> b. *uláa   ndʊpɔ́*
>   9.rain 18.vain
>   'There is no rain.'

Similarly, in Ombo, the negative existential form *káfa* 'there is not', consisting of a class 17 subject prefix *ku-* and the inherently negative verb *-áfa* 'not be', can be used as a negative answer particle expressing 'no' (Meeussen 1952: 30).

Another type of usage extension relates to the fact that negative existentials, negative plain locational clauses and negative possessives are often marked in similar ways in Bantu languages. As touched upon in §5.2.1, there is a conceptual closeness, and consequently a semantic contiguity, between such expressions that can be observed more generally across languages. In Bantu, this conceptual closeness is reflected in both affirmative and negative existential constructions. Dedicated affirmative constructions are typically of the locative or the comitative/possessive type. Moreover, locative marking is a salient feature in both types of existential construction. This is also true for dedicated negative existential constructions, which furthermore often involve lexical items with the meaning 'lack, be without'. Heine (1997) and Heine & Kuteva (2002: 241–242) postulate a unidirectional pathway leading from possessive predicates to existential constructions. However, it is interesting to note that there are also examples of the reverse pathway in our data, —that is, from negative existential to negative possessive. That this is indeed the case can be deduced from the transparent locative marking and lexical meanings involved in the possessive constructions in question. Tanzanian Ngoni can be used to illustrate this. Just like its neighbor and closest relative Manda (discussed in §5.2.1, example (28)) Ngoni expresses negative existentials through a construction consisting of a locative prefix attached to a lexeme *waka* originally meaning 'empty, naked, only'. However, as can be seen in (40), in Ngoni it is also possible to express negative possessive propositions with the negative existential, merely by the addition of a subject possessor.

(40)   Ngoni (N12, Ebner 1939: 32)
       ne'   kwawaka chi-pula
       PERS.1SG NEG.EX   7-knife
       'I don't have a knife.'

Koch (2012) discusses similar affirmative constructions in Mandarin, a topic-prominent language (as are the Bantu languages). He suggests that the possessive reading stems from the introduction of a second, thematic participant, introduced as a topic. Thus, example (40) could be paraphrased as 'as for me, there is no

knife'. The introduced topic has then been reinterpreted (and conventionalized) as a possessor, the existential pivot as the possessee and consequently the whole existential construction as a construction expressing possession. Although further and more thorough investigation is needed, this explanation seems to hold for negative existentials becoming negative possessives in Bantu languages.

This being said, when a language uses one and the same (dedicated) strategy for the negation of possessive, plain locational and existential clauses and the etymology of the particular strategy is unclear, it is hard to determine the origin of this strategy. Tetela presents such a case. As can be seen in (41), the invariable *keéma* (different from standard negation, which involves a pre-initial or a post-initial negative marker) is used for the negation of plain locational (41a), possessive (41b) and existential clauses (41c).

(41)   Tetela (C71, Labaere 1970: 100, 102)

    a. *owánji keéma-kɔ́*
        1.chief NEG-LOC17
        'The chief is not there.'

    b. *dimí   keéma langéló   léngo*
        PERS.1SG NEG   with_village there
        'I do not have a dwelling there.'

    c. *keéma olemp ɛlɔ́*
        NEG   work today
        'There is no work today.'

The etymology of *keéma* is unclear. It is described as a particle, expressing 'no, not, nothing, there is nothing (to say, to ask)' (Hagendorens 1957: 155) but as explained above, such meanings could also have derived from its use as a negative existential marker. Languages like Nduumo, Mbete and Duma similarly use one and the same (dedicated) strategy for the negation of locational, possessive and existential clauses. This is illustrated in (42) for Mbete. Again, the etymology of the dedicated negator *kali* cannot be ascertained (cf. also the discussion in §5.2.1).

(42)   Mbete (B61, Adam 1954: 141, 148)

    a. *bisi   ho   tca cwaha kali*
        PERS.1PL LOC16 bush   NEG
        'We are not in the bush.'

    b. *me   bila kali*
        PERS.1SG food NEG
        'I do not have food.'

c. *ekwo   kali*
cassava NEG
'There is no cassava.'

6.2 From negative existential to other marked negation types: The case of Ruwund

In Ruwund, negative existence can be expressed by applying standard negation, consisting of the discontinuous negative marker *ka-...-p*, to the affirmative existential construction. This is illustrated in (43).

(43)   Ruwund (L53, Nash 1992: 839)
kì-kw-aa-d-àà-p   mi-long
NEG-SM17-PST-be-FV-NEG 4-problem
'There weren't any problems.'

In present tense contexts, a dedicated construction involving the forms *pììkil* (cf. (21)) and *kwììkil* built from the negative verb *-iikil* and a locative subject prefix can be used. This is shown in 44.

(44)   Ruwund (L53, Nash 1992: 839)
kw-ììkil   mi-long
SM17-be.not 4-problem
'There are no problems.'

These forms have spread to other marked negation types, being also used to express prohibitives (45a) and other negative deontic meanings (45b), as well as occurring in tag questions (45c) and in a special construction expressing a particular type of metalinguistic negation (conveying strong affirmation) (45d). Recall that the locative subject marking – of class 17 in the two previous examples and of class 16 in the examples in (45a,c) – suggests that the usage expansion indeed started out from the negative existential forms.

(45)   Ruwund (L53, Nash 1992: 842)

a. *p-ììkil   wa-mu-lej*
SM16-be.not/PROH 2SG.NAR-OM1-tell
'Don't tell her/him.'

b. *kw-ììkil   ku-làb   ku shikòl*
SM17-be.not 15-be.late 17 school
'Better not be late for school.'

c. *p-ììkil   wà-cì-landin*
   SM16-be.not/TAG SM1.PST-OM7-buy.PFV
   'S/he did not buy it, did s/he?'

d. *a-màn-a   mar   kw-ììkil   mu-tàpu*
   SM2-saw-PST 6.difficulty SM17-be.not 3-way/META
   'They suffered terribly.' (lit.: 'They saw difficulty there isn't a way.')

6.3 Possible enrollment of existential negators in a Jespersen Cycle

A number of closely related Bantu languages spoken in parts of Gabon, Congo and DRC express negative existence through non-verbal predication whereby the figure for which non-existence is predicated is followed by a negative particle (see also §5.2.1). These languages typically make use of a discontinuous negative marker consisting of an inherited (verbal) negator and a second post-verbal negator for the expression of standard negation. Regarding the relation between the existential negator and the second standard negator, a curious variation is observed. First, there are languages where the existential and the post-verbal standard negator are identical, cf. (30) from Nduumo. Additional examples come from Iyaa (46) and Engungwel (47).

(46) Iyaa (B73c, Mouandza 2001: 439, 436)

    a. standard negation
       ndé a   á-yěne   pé ku mu-síti
       PERS1 NEG SM1-go.PFV NEG 17 3-forest
       'He has not gone to the forest.'

    b. negative existential
       bààtà   pé
       2.person NEG
       'There are no people.'

(47) Engungwel (B72a, Rurangwa 1982: 162; Raharimanantsoa, p.c. 2017)

    a. standard negation
       mɛ   ka   ŋgyɛ́   olá   wɛ
       PERS.1SG NEG SM1SG.know 15.cook NEG
       'I do not know how to cook.'

    b. negative existential
       onsɔ́ ã-ngyel ngingi wɛ/pyɛ[13]
       in   6-soup 1.fly   NEG
       'There is no fly in the soup.'

Next, there are languages in which negative existence and standard negation involve formally different (post-verbal) negative markers, cf. (31) from Mbete. Tiene in (48) and Beembe in (49) show this pattern as well.

(48)   Tiene (B81, Ellington 1977: 138, 137)

    a. standard negation
       ka-lé-môn-e   *nuká* *kɔ*
       NEG-SM1PL-see-PFV animal NEG
       'We didn't see the animal.'

    b. negative existential
       eyaame wɛ
       thing   NEG
       'Nothing is the matter / There is nothing.'

(49)   Beembe (H11, Nsayi 1984: 155, 162)

    a. standard negation
       mè   *n-síí-tín-à*   *mù-káándá kò*
       PERS.1SG SM1SG-NEG-write.PRF 3-letter   NEG
       'I have not written a letter.'

    b. negative existential
       mà-bèénbè mǒ   *pè*
       6-pigeon   PERS.6 NEG
       'There are no pigeons.'

The form of the (dedicated) existential negators is very similar to the form of the standard/existential negators in (46) and (47) above. Could this be indicative of a spread from existential negation to standard negation through enrollment into a Jespersen Cycle? The fact that there are also languages, like Dzing in (50) below, that do not display (regular) discontinuous standard negation but still express negative existence through the combination of a figure and a negative particle suggest that this is indeed what has happened.

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[13]We are not sure whether this variation is also attested in standard negation.

(50) Dzing (B86, Mertens 1938: 333, 377)

　　　a. standard negation
　　　　　mɛ   bifwanisu kɛɛ-jala
　　　　　PERS1SG 8.picture   NEG.SM1SG-sell
　　　　　'I do not sell pictures.'

　　　b. existential negation
　　　　　muuŋ mu   bisaa ati
　　　　　3.salt LOC18 8.food NEG
　　　　　'There is no salt on the food.'

What is more, Mertens (1938: 378) indicates that double negation involving the post-verbal negative marker *ati* does occur, be it very sparingly, to *'renforcer une négation'* [strengthen negation] in Dzing. This could be interpreted as the beginning of a Jespersen Cycle and the recruitment of an existential negator to strengthen standard negation. Croft (1991) suggests a similar path for the Australian language Mara and the Wintuan language Wintu. van der Auwera et al. (2022 [this volume]) explicitly attribute the use of the existential negator in standard negation in these two languages to a Jespersen trajectory. Still, a note of caution is needed. Bantu post-verbal negators are known to be prone to borrowing (Nurse 2008: 180). Formally similar post-verbal standard negative markers, as in the closely related languages in (46) and (47), could therefore be ascribed to language contact rather than to a language-internal usage extension of an existential negator. Both scenarios could involve an intermediary step whereby the existential negator developed negative indefinite meanings such as 'no, nothing, none' (cf. §6.1) before being recruited in a Jespersen Cycle with or without borrowing. However, we know too little about the etymology of these post-verbal negative elements to be certain of this.

6.4 *hapana* 'there is not, no' in Swahili and beyond

This section discusses the case of *hapana*, one of only few examples from Bantu where an original negative existential has entered the domain of standard (verbal) negation. However, such an extension in use has taken place in pidgins and creoles and under specific sociolinguistic circumstances of high levels of sustained language contact. Similar to what has been described for the development of Russian *net* in Sino-Russian pidgin (Veselinova 2013b, 2016), it seems that the extension in use of *hapana* comes from its earlier development in Standard Swahili into a proposition-external negator. That is, the form *hapana* is used in Standard

Swahili as a negative existential of the comitative type, meaning, 'there is not with' (cf. (18) above), but also as a negative answer word as illustrated in (51).

(51)   Swahili (G42)
       U-na-kwenda   Bagamoyo? Hapana.
       SM.2SG-PRS-go Bagamoyo   no
       'Are you going to Bagamoyo? No.'

The word *hapana* has thus developed from a negative existential to also expressing proposition-external negation, which, in turn, has facilitated its reconceptualization into a proposition-internal (standard) negator. Veselinova (2013b, 2016) suggests that this development is specifically prominent in contact varieties where language competence is relatively low and the word 'no', being frequent (and salient), is easily reinterpreted as a main negator. Our investigation lends further support to this hypothesis.

To begin with, there is the case of Kisetla which is "a pidginized form of Swahili spoken between Europeans and Africans in those parts of Kenya where there were, or still are, large European settlements" (Vitale 1980: 51). In the Kisetla variety, *hapana* has generalized over all negative constructions. As shown already in examples (1a) and (1b) in §1, in Standard Swahili, sentential negation involves the addition of negative prefixes, taking either the form of a pre-initial marker *ha-* or a post-initial marker *-si-* (appearing in non-main clause contexts). However, in contrast to the situation in Standard Swahili, in Kisetla *hapana* can appear in both main clause and non-main clause contexts as the sole marker of negation. This can be seen in (52a) and (52b).

(52)   Kisetla (G40C, Vitale 1980: 57–58)

       a.   *yeye   hapana oa*
            PERS.3SG NEG   marry.FV
            'He has not married.'

       b.   *hapana pig-a   mimi*
            NEG   hit-FV PERS.1SG
            'Don't (you) hit me!'

A similar process of change can be considered to have occurred in Bunia Swahili. Bunia Swahili is a Congolese variety of Swahili that has been heavily affected by Central Sudanic languages (Nico Nassenstein, p.c. 2017). In Bunia Swahili, it is not only the case that *hapana* has been recruited as a standard negator; it has also been further decategorialized and eroded from a free-standing word to an

inflectional prefix *pa-*. This fact, illustrated in (53) below, indicates that a new form–meaning pair differing from the original negative existential has emerged in Bunia Swahili.

(53)   Bunia Swahili (no Guthrie code, Nassenstein, p.c. 2016)
       Ba-li-kwa   tembey-aka na   bayonette, ba-kisu ivi,
       SM3PL-PST1-be walk-PST2   COM 9.bayonet 2-knife like.that
       ba-pa-li-kwa   tembey-aka na   bunduki.
       SM3PL-NEG-PST1-be walk-PST2   COM 9.rifle
       'They were walking around with bayonets, knives of that kind, they were not walking around with firearms.'

Finally, Schicho (1992) discusses the introduction of *hapana* into standard negation in yet another Swahili variety, namely Lubumbashi Swahili. In this case, however, *hapana* has been recruited as the second, 'emphatic' post-verbal exponent of discontinuous negation marking *á la* stage II of the Jespersen Cycle (cf. van der Auwera 2009). This is, in turn, reminiscent of a more general pattern across Bantu where post-verbal negative particles originate from proposition-external negators (see Devos & van der Auwera 2013).

(54)   Lubumbashi Swahili (G40F, Schicho 1992: 84)
       Ha-ba-wez-i   ku-mu-pig-a   hapana.
       NEG-SM2-can-NEG.PRS 15-OM1-hit-INF NEG
       'They won't beat him.'

It would seem that it is not only in pidginized forms of Swahili that *hapana* has been reanalyzed as a (proposition-internal) verbal negator. Thus, Nurse (2007) accounts for an interesting case in Pogolo (G51). According to him, it is likely that *hapana* was borrowed as a consequence of the earlier presence of colonial sugar plantations in the Pogolo-speaking area, where Swahili served as a lingua franca. An eroded version of *hapana*, *(ha)pa-*, has fused with the verbal word in Pogolo where it functions as a (prefixal) verbal negator, as seen in (55).

(55)   Pogolo (G51, Nurse 2007)
       hapa-tu-hemer-a
       NEG-SM1PL-buy-FV
       'we are not buying'

The use of *hapana* as a verbal negator has not spread to all contexts in Pogolo, and past and relative clause constructions make use of the original post-verbal

negator *ndili.* In relation to the NEC, this would suggest that Pogolo is a language of Type B~C –that is, a language where a marker originating from a negative existential has expanded into marking standard negation, albeit not in all contexts. However, such a conclusion is problematic, taking into account that *hapana* was introduced in the language as a negative answer word and is not used to mark negative existential predicates in Pogolo. Although the data are slim on this matter, it would seem that negative existentials instead are marked either with the construction *pi-hera* (i.e., similar to in neighboring Ndamba, for which see §5.2.1), or with standard negation (Hendle 1907). Taken together, this means that Pogolo is to be characterized as belonging to both Type A~B and Type B~C.

7 Summary and conclusions

The expression of negation in Bantu languages is known to be prone to renewal. This also applies to negative existentials, which display considerable synchronic variation.

As accounted for in this study, a high percentage of Bantu languages apply standard negation strategies to affirmative existential constructions in order to express negative existentials. Within this type, a high degree of formal variation is attested due to variation in both the formation of affirmative existentials and the expression of standard negation in Bantu languages. Within the category of dedicated negative existentials, formally different constructions are also attested. Languages sharing a similar source for a dedicated marker are often scattered across the Bantu-speaking area. This is especially true for negative existentials recruiting inherently negative verbs, the other sources showing a more regional distribution. On the other hand, there are large areas consisting of more or less a continuum of language varieties which all belong to Type/Stage A. Taken together, this suggests that the functional domain of negative existence has been subject to constant renewal and innovation within the Bantu language family.

Still, the expansion of existential negators into the domain of standard verbal negation does not appear to be a common pathway of change among the Bantu languages. According to Veselinova (2016), the most frequent way a negative existential is recruited into expressing standard negation in her sample is through its use with nominalized verb forms. However, there are hardly any indications of negative existentials being used with nominalized verb forms in Bantu. As shown by Güldemann (1996, 1999), negation of nominalized forms of lexical verbs – typically assigned to noun class 15 – is instead recurrently achieved by use of post-initial negation markers (56), or inherently negative auxiliaries (57), negation strategies reserved for more marked propositions in Bantu (cf. §1 & §2).

(56) Shangaji (P312, Devos fieldnotes)
khaácu   y'   *oo-sí-pwéch-ey-a*   *váháali*
9.cashew 9.CONN 15-NEG-cleave-STAT-INF 16-place
'a cashew nut which is not broken anywhere'

(57) Manda (N11, Bernander 2018: 659)
ku-kótók-a kú-y-a   *wákápi*
15-NEG-INF 15-come-INF alone
'to not be alone'

This could serve as an explanation as to why negative existentials typically do not expand towards the domain of standard negation in the Bantu language family. Nevertheless, as discussed in §5.2.1, a regionally restricted set of languages does use a non-verbal construction for the expression of negative existence –that is, the figure is simply followed by a negative particle. Interestingly, the same negative particle is used in these languages for the negation of other types of non-verbal predication too, typically involving possessive or locational clauses but in some languages also prohibitives or infinitives. In Mbete, the existential negator *kali* is said to sometimes replace the standard post-verbal negative marker *ni* in infinitival clauses, as seen in (58).

(58) Mbete (B61, Adam 1954: 141)
me   *hoyia*   *kali*
PERS.1SG 15-know-INF NEG
'not knowing [it]'

In §6.3, it was suggested that in some of these languages, existential negators like *kali* might have become exponents of standard negation through enrollment in a Jespersen Cycle. Whether the enrollment in a Jespersen Cycle involved the development of negative indefinite meanings is hard to tell.

However, that is exactly what appears to have happened in Lubumbashi Swahili, where the use of the Standard Swahili existential negator *hapana* 'there is not' as an obligatory exponent of double negation was prompted by its use as a proposition-external negation expressing 'no'.

Otherwise, intertwining between the negative existential cycle and the Jespersen Cycle appears to occur only rarely in Bantu languages. Instead, a Jespersen Cycle can sidetrack a potential Negative Existential Cycle by directly recruiting the same negative lexemes to strengthen standard negation. Kami can serve to illustrate this. As seen in (27), repeated here as (59a), negative existentials make

use of the negative lexeme *bule* preceded by a locative prefix. The same lexeme, but without the locative marking, can be used to strengthen (standard) negation, as illustrated in (59b).

(59)   Kami (G36, Petzell & Aunio 2016, Petzell, p.c. 2016)

    a.   existential negation
        Sweden ha-bule   tangawizi
        Sweden 16-NEG.EX 9/10.ginger
        'There is no ginger in Sweden.'

    b.   standard negation
        si-m-towile   bule Faisal
        NEG.1SC-OM1-hit.PFV NEG Faisal
        'I have NOT hit Faisal.'

In the end, the only clear cases of a negative existential marker becoming the standard negative marker occur in language varieties that have been heavily influenced by contact. At least two Swahili varieties and one language heavily influenced by Swahili use (a reduced form of) the external negator *hapana* 'no' derived from a comitative existential negator in Standard Swahili for the expression of standard negation.

Other types of usage expansion are attested, however. The first concerns the formal similarity between negation strategies used for negating existential, locational and possessive clauses, as well as, in some languages, all types of non-verbal predication. However, in the absence of a clear etymology for the negative marker in question, the direction of the usage expansion cannot be ascertained. A clear case of usage extension starting from the negative existential marker is attested in Ruwund. Its dedicated negative existential composed of an inherently negative verb and crucially also a locative subject marker has spread to other marked negation types, including prohibitives.

It should be kept in mind, however, that this study presents a first exploration of negative existentials in Bantu languages. Additional descriptive data, as well as in-depth studies of language-internal and language external (micro-) variation in the expression of negative existence, might disclose the etymologies of some negative existential strategies encountered in our sample and bring to light other dedicated negative existential strategies. Further research into Bantu negative existentials might even come to show that the NEC plays a more important role in negation renewal in Bantu languages than accounted for in this paper.

Acknowledgements

Abbreviations

1, 2, 3	noun classes 1, 2, 3 etc.	NEG	negation
CJ	conjunct form	OM	object marker
CONN	connective	PER	persistive
CONT	continuous	PERS	personal pronoun
COP	copula	PFV	perfective
DEM	demonstrative	PL	plural
DRC	Democratic Republic of the Congo	POSS	possessive
		PRF	perfect
EX	existential	PREP	preposition
FUT	future	PROH	prohibitive
FV	final vowel	PRS	present
HAB	habitual	PST	past
IMP	imperative	REF CD	referential concord
INF	infinitive	REL	relative
INTER	interrogative	SBJV	subjunctive
IPFV	imperfective	SM	subject marker
LOC	locative	STAT	stative
META	metalinguistic	TAG	tag particle
NAR	narrative	TUKI	Taasisi ya Uchunguzi wa Kiswahili (Institute of Kiswahili Research)
NEC	Negative Existential Cycle		

Appendix A The data set for Bantu negative existentials

	#, -	The number sign <#> and the hyphen <-> differentiate free-standing negatives from negative affixes.
	COP	Copula
	EXIST	(Affirmative) existential (whether dedicated or non-dedicated)
Key to the table	LOC	Locative element
	SN	Standard verbal negation, which here refers to both primary and secondary negative marking (as both negate verbs)
	$SN_{1/2}$	Marks the various negators of a discontinuous negation strategy (i.e. a reflex of stage II of Jespersen Cycle).

The Guthrie numbers for referential classification of the Bantu languages are taken from Maho's (2009) updated list.

Table 1: The data set for Bantu negative existentials

Name	ISO	Guthrie	Construction	Etymology	Stage	Other meanings	Source(s)
	code	code				(when noted)	
Duala	dua	A24	titi	*tità 'not to be, not to exist' (infl. in PRF)	change to B(?)	neg. locational	Ittmann (1939), Ittmann (1976)
Bafia	ksf	A53	-yin	'not be'	change to B(?)	neg. locational	Guarisma Pupineau (1992)
Eton	eto	A71	SN-EXIST	–	A		van de Velde (2008)
Ewondo	ewo	A72(a)	sɔ̀kig	'not be' + SN₂	A		Essono (1993)
Bulu	bum	A74a	1) -sɛ́kik	1) 'not be' + SN₂	A~B	1) -sɛ́ neg. copula used for loc, ex, poss, qualification	Alexandre (1966)
			2) tɛkɛ	2) tɛ + SN₂		2) neg. inf, prohibitive, neg. conditional, 'without'	
			3) sǎ	3) ?		3) neg. identification, subsecutive clause	
Orongu	(mye)	B11b	SN-EXIST	–	A		Ambouroue (2007)
Kota	koq	B25	ǹdɛ̀ká	'not one'	change to B(?)		Piron (1990)
Tsogo	tsv	B31	SN-EXIST	–	A		Marchal-Nasse (1979)
Duma	dma	B51	# v?	–	change to B(?)	neg. locational; possessives; NEG2 of discont. SN	Adam (1954)
Nzebi	nzb	B52	SN₁-EXIST SN₂	–	A~B	NEG2 of discont. SN	Marchal-Nasse (1987)
Mbete	mdt	B61	kali	NEG+'be'(?)	change to B(?)	neg. locational; infinitives; possessives; indef. attributives; 'no'	Adam (1954)
Nduumo	nmd	B63	1) ngʼi	1) ?	1) B	1) NEG2 of discont. SN; neg. locational; possessives	Adam (1954)
			2) oñana	2) ?	2) change to B(?)		
Engungwel	ngz	B72(a)	1) SN₁ # EXIST SN₂	1) –	1) A	2) NEG2 of discont. SN?	Raharimanantsoa (p.c.)
			2) pyɛ~wɛ	2) 'none'	2) B		

Name	ISO	Guthrie	Construction	Etymology	Stage	Other meanings	Source(s)
Iyaa	iyx	B73c	*pé*	'none'(?)	change to B(?)	NEG2 of discont. SN; neg. locational; prohibitive	Mouandza (2001)
Teke-Tyee	tyx	B73d	1) SN$_1$ # EXIST SN$_2$ 2) *we*	1) –SN$_2$ 2) 'none'	1) A 2) B		Raharimanantsoa (p.c.)
Teke-Eboo	ebo	B74B	1) SN$_1$ # EXIST SN$_2$ 2) *we*	1) – 2) 'none'	1) A 2) change to B(?)		Raharimanantsoa (p.c.)
Tiene	tii	B81	1) SN-EXIST 2) *we*	1) – 2) 'none'(?)	1) A 2) change to B(?)		Ellington (1977)
Dzing	diz	B86	*ati*	?	B–C	neg. possessives; neg. plain locational; attributives; infinitives; reinforce standard negation	Mertens (1938)
Mboshi	mdw	C25	# SN		A		Amboulou (1998)
Lingala	lin	C30B	EXIST # SN	–	A		Maniacky (p.c.)
Ntomba	nto	C35a	*-mbe*	'not be'	B		Mamet (1966)
Tetela	tll	C71	*kěma*	'not, none'	A	neg. possessives; neg. plain locational	Jacobs (1964)
Ombo	oml	C76	1) SN-EXIST 2) LOC-*áfa*	1) – 2) 'not be'	A–B	neg. identification; 'no'	Meeussen (1952)
Bushong	buf	C83	*kwa*	?	change to B(?)		Vansina (1959)
Holoholo	hoo	D28	SN-EXIST (?)	–	change to B(?)		Coupez (1955)
Budu	buu	D332	SN-EXIST	–	A		Asangama (1983)
Kikuyu	kik	E51	SN-EXIST	–	A		Englebretson & Wa-Ngatho (2015), Grégoire (1975)
Kamba	kam	E55	SN-EXIST	–	A		Whiteley & Muli (1962)
Gweno	gwe	E65	SN-EXIST	–	A	–	Philippson & Nurse (2000)

Name	ISO	Guthrie	Construction	Etymology	Stage	Other meanings	Source(s)
Digo	dig	E73	sn-exist	–	A	–	Nicolle (2013)
Bende	bdp	F12	1) loc-*tuhú* / 2) loc-(*a*)*bhulá*	1) 'only, empty, in vain' / 2) 'lack'	B	?	Y. Abe (p.c.)
Nyamwezi	num	F22	loc-*dɘhɘ*	'only, empty, in vain'	B	'no, nobody, nothing'	Maganga & Schadeberg (1992), P. Kanijo (p.c.)
Rangi	lag	F33	sn-exist	–	A		Gibson (2012), Dunham (2005)
Mbugwe	mgz	F34	sn-exist	–	A		Gibson & Wilhelmsen (2015)
Gogo	gog	G11	loc-*si-na*	'be without' (neg.comitative)	B	'no'	Cordell (1941)
Kagulu	kki	G12	loc-*ichaka*	'lack, be without'	B		Petzell (2008)
Luguru	ruf	G35	loc-*duhu*	'only, empty, in vain'	change to B(?)		G. Moses (p.c.)
Kami	kcu	G36	loc-*bule*	'nothing at all, not yet'(?); < Sw. *bure* 'for free, in vain'	B	neg. possessive	Petzell & Aunio (2016), Petzell (p.c.)
Kisetla (Swahili pidgin)	sta	G40C	sn-exist	–	C	sn	Vitale (1980)
Lubumbashi Swahili	swc	G40F	sn-exist		C	postverbal emphatic negator	Schicho (1992)
Bunia Swahili	swc	G40x	sn-exist	–	C	sn	Nassenstein (p.c.)
(Standard) Swahili	swh	G42	sn-exist	–	A	'no'	Marten (2013)
Pogolo	poj	G51	1) loc-*hera* / 2) *hapana*	1) 'in vain, for nothing' / 2) Sw. borrowing(?)	1) A~B / 2) B~C		Nurse (2007), Hendle (1907)
Ndamba	ndj	G52	loc *hela*	'just, any'	B	neg. possessive	Novotná (2005), Edelsten & Lijongwa (2010)
Hehe	heh	G62	loc-*gaya*	'lack'	B		Velten (1899), L. Ngwasi (p.c.)

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Name	ISO	Guthrie	Construction	Etymology	Stage	Other meanings	Source(s)
Bena	bez	G63	1) SN-EXIST 2) LOC-gaya 3) LOC-zila	1) – 2) 'lack' 3) 'refuse'	A~B	2) neg. possessive	Morrison (2011), Eaton (2015a)
Pangwa	pbr	G64	SN-EXIST	–	A		Stirnimann (1983)
Kinga	zga	G65	1) SN-EXIST 2) LOC-vɔla	1) – 2) 'be without, not be in possession of'	A~B		Wolff (1905), Eaton (p.c.)
Vwanji	wbi	G66	1) SN-EXIST 2) LOC-sili	1) – 2) (< *-gid- 'refuse'?)	A~B	neg possessive; neg relative, 'w/ o' (conj.)	Eaton (p.c.)
Kisi	kiz	G67	EXIST # SN	–	A		Ngonyani (2011)
Beembe	beq	H11	# pe	–	B?	neg. locational	Nsayi (1984)
South-East Kongo	kon	H16h	1) SN_1 # EXIST # SN_2 2) nkatu	1) – 2) 'emptiness, uselessness, zero, desolation, void, blank, vacancy, nought'	A~B		Bentley (1887)
Kinyarwanda	kin	JD61	ntaa	'be not' (* < COP ni + NEG -ta-)	change to B(?)	"exclusive marker"	Kimenyi (1980)
Luganda	lug	JE15	SN-EXIST	–	A		Ashton et al. (1954)
Lusoga	xog	JE16	1) LOC-zila 2) mpagho	1) 'reject as a result of anger'; 'not have' 2) ?	change to B(?)		Nabirye (p.c.)
Jita	jit	JE25	SN-EXIST	–	A		J. Malima (p.c.)
Ikizu	ikz	JE402	SN-EXIST	–	A		Gray (2013)
Gusii	guz	JE42	SN-EXIST	–	A		Whiteley (1956)
Ikoma-Nata	ntk	JE45	SN-EXIST	–	A		A. Laine (p.c.)
Lwena/Luvale	lue	K14	SN-LOC-exi	'not be'	change to B(?)		Horton (1949)

Name	ISO	Guthrie	Construction	Etymology	Stage	Other meanings	Source(s)
Kwangali	kwn	K33	1) SN-EXIST 2) LOC-*tupu*	1) – 2) 'empty'	A~B	neg. possessive	Dammann (1957)
Holu	hoo	L12b	LOC-*eesi*	'not be'	change to B(?)	neg. locational	Daeleman (2003)
Luba	lub	L33	1) SN-EXIST 2) LOC-*tu(pu)* 3) *fwa*-LOC	1) – 2) 'empty' 3) 'die'	A~B	neg. locational	Beckett (1951), van Avermaet & Mbuya (1954)
Sanga	sng	L35	1) SN₁-EXIST # (SN₂) 2) LOC-*tú(pú)* 3) *fwa*-LOC	1) – 2) 'empty' 3) 'die'	A~B	neg. locational	Hadelin (1938), Coupez (1981)
Kaonde	kqn	L41	*fwa*-LOC	'die'	B		Broughall Woods (1924), Foster (1960)
Lunda	lun	L52	LOC-*osi*	?	B		Kawasha (2003)
Ruwund	rnd	L53	1) SN 2) LOC-*iikil(inga)*	1) – 2) ?	A~B		Nash (1992)
Fipa	fip	M13	SN-EXIST	–	A		Struck (1911)
Malila	mqc	M24	SN-EXIST	–	A		Eaton (2015b)
Ndali	ndh	M301	SN-EXIST	–	A		Botne (2008)
Nyakyusa	nyy	M31	SN-EXIST	–	A		Persohn (2017)
Lamba	lab	M54	SN-EXIST	–	A		Doke (1938)
Tonga	toi	M64	LOC-*nyina*	'be w.o.'	B		Collins (1962)
Manda	mgs	N11	1) SN 2) LOC/CL7-*waka*	1) – 2) 'empty, just'	A~B	neg. poss.	Bermander (2017)
Ngoni (Tz.)	ngo	N12	LOC-*waka*	'empty, just'	B	'no'(?); neg. possessive	Spiss (1904), Ngonyani (2003), Mapunda (p.c.)

Name	ISO	Guthrie	Construction	Etymology	Stage	Other meanings	Source(s)
Ngoni (Moz.)	no code	N12x	1) *naku(va)* 2) *njěta*	1) SN-INF-'be' 2) ?	1) B-C 2) A-B	1) external negation of main predication with fully inflected main verb; contrastive meaning; negative rhetoric question	Kröger (2011, n. d.)
Matengo	mgv	N13	EXIST # SN	–	A		Yoneda (2000, p.c.)
Tumbuka	tum	N21	LOC-COP-*je*	'be ?'	B		Kiso (2012), Vail (1972)
Nyanja-Chewa	nya	N31	LOC-COP-*be*	'be still'(?)	B		Bentley & Kulemeka (2001), Kiso (2012), Grégoire (1975)
Nsenga	nse	N41	LOC-COP-*ye/-ve*	'be without'	B		Ranger (1928)
Nyungwe	nyu	N43	LOC-COP-*be*	'be ?'	change to B(?)		Grégoire (1975)
Ndengeleko	ndg	P11	LOC-*tějpó*	'empty'	B		Ström (2013)
Matumbi	mgw	P13	*ntəpó-ndəpó*	LOC18-'empty'	B	neg. possessive 'no'	Krumm (1912), Odden (1996)
Ngindo	nnq	P14	LOC-*duhu*	'empty'	change to B(?)		Gromova & Urmanchieva (2005)
Yao	yao	P21	SN-EXIST	–	A		Sanderson (1922), Whiteley (1966)
Makonde	kde	P23	SN-EXIST	–	A		Leach (2010), Kraal (2005)
Makwe	ymk	P231	SN-EXIST	–	A		Devos (2008)
Makhuwa	vmw	P31	SN-EXIST	–	A		van der Wal (2009), Katupha (1991)
Shangaji	nte	P312	SN-EXIST	–	A		Devos field notes)
Manyika	mxc	S13	SN-EXIST		A		Stevick & Machiwana (1960)
Xhosa	xho	S41	SN-EXIST		A-B		Ström (p.c.)
Zulu	zul	S42	SN-EXIST		A		Grout (1859)
Thswaa	tsc	S51	SN-EXIST		A		Gadelii (1998)

The NEC in Bantu languages

Type in the NEC

- ■ Type A, 36 langs
- ⊕ Type A>B, 13 langs
- ● Type B, 17 langs
- ○ Type B(?), 16 langs
- ◉ Type B>C, 1 lang [Dzing]
- ◇ Type C, 3 langs
- ▫ Overlapping types A and B, 2 langs
- ▫ Overlapping types A and B(?), 2 langs
- ▪ Overlapping types A>B and B>C, 2 langs
- ▫ Overlapping types B and B(?), 1 lang [Nduumo]

Map data: Rasmus Bernander, Maud Devos, Hannah Gibson
Map design: Ljuba Veselinova
Software used: ArcMap 10.6

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

400 200 0 400 Kilometers

Figure 2: NEC in Bantu

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Chapter 3

The negative existential cycle in Chadic

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Chadic languages, like languages of West and Central Africa more generally, are known to make use of typologically rare negation strategies. Not only do many Chadic languages exhibit bi-partite negation, there is also a tendency for the second of these two verbal negators to occur after the verb, in contrast to a cross-linguistic preference for pre-verbal negation. This particular study examines the extent to which Croft's (1991) Negative Existential Cycle (NEC) may be demonstrated across Chadic languages. Furthermore, the study explores the use of the NEC as an explanatory framework in determining sources and pathways of verbal negation in Chadic languages. An important implication of this study is that identification of the B~C stage of the NEC elucidates the relationship between verbal negation and negative existential predication, as well as the relationship between these domains and other domains of the grammar such as aspect.

1 Introduction

In this paper, I consider the applicability of the types and stages of Croft's (1991) Negative Existential Cycle (henceforth NEC) to the Chadic language family – a family which already exhibits a cross-linguistically unusual negation system. In Croft's framework, there are three types of languages, A, B, and C that form a diachronic cycle. The direction of change is A~B, B~C, and C~A, where a special negative existential form arises, subsequently comes to be used as a verbal negator, and is then supplemented by a positive existential so that it is restored to a regular negative + existential construction. In brief, these internally variable stages represent historical changes in process as negative existential predication comes to mark verbal negation. Croft's types and stages are summarized here:

Type A: There is no special negative existential predicate. The affirmative existential predicate is negated by the ordinary verbal negator.

A~B: A special negative existential predicate is found in addition to the regular negative existential form.

Type B: There is a special negative existential marker that is distinct from the ordinary verbal negator.

B~C: The negative existential predicate begins to be used for ordinary verbal negation, but is restricted to specific contexts.

Type C: The negative existential predicate is identical in form and position to the verbal negator.

C~A: The negative-existential-cum-verbal-negator is in the process of being reanalyzed as only a negative marker and a regular positive existential verb begins to be used with it in negative existential constructions.

I find examples of most – though not all – of these types and stages in the Chadic family. However, while some languages fit neatly into given stages, this work follows previous scholarship (e.g. Veselinova 2016) in suggesting that languages sometimes exhibit overlap between types or stages. Beyond identification of the NEC in Chadic, a goal of this paper is to suggest that an exploration of the NEC is illuminative in identifying sources of verbal negation, taking the Chadic family as an example. In Chadic, there is great variation in the expression of negation in terms of phonological and morphological form as well as the number of markers used in negative constructions. Existential predication appears to be one pathway through which new forms come to serve as verbal negators.

All data included in this paper comes from available grammars. According to Glottolog (Hammarström et al. 2018), there are roughly 200 Chadic languages. These are spoken across northern Nigeria, southern Niger, Southern Chad, the Central African Republic, and parts of Northern Cameroon. Of these, there exist an approximate 60 available grammars or grammatical sketches. Following Newman (2000), these languages can be divided into four subgroups: Western, Central, Eastern, and Masa. There is an unequal distribution of languages across the family with the largest numbers belonging to the Western and Central subfamilies and a mere ten languages belonging to Masa. Scholarship has largely favored Western and Central languages and these comprise the majority of languages presented in this paper. The languages included herein were selected

primarily through convenience. Upon perusal of the approximate 30 grammars available to me, I was able to determine evidence of the cycle in 12 of these languages, three from the Western branch, eight from the Central branch, one from the Eastern branch, and none from Masa. Some grammars were produced several decades ago, meaning the level of description and inclusion of evidence fall below contemporary standards; namely, some grammars included unglossed examples with little to no accompanying contextual information. In cases where there are no glosses, I have reconstructed them myself.

The organization of the paper is as follows. I begin with a brief introduction of interesting issues within the Chadic negation system. This is followed by a presentation of examples of languages within each of the types and stages of the NEC. I then submit some examples of languages that do not fit neatly into any one type or stage. This is followed by a discussion of the implications of the data as a whole. In the final section, I propose common sources for verbal negators in Chadic and discuss the merits of including existential predication as one of these sources.

2 Negation in Chadic languages

Before addressing the NEC, it should be acknowledged that the verbal negation system itself is quite unusual in Chadic. In a study on the distribution of negative word order, Dryer (2009) finds that VO & V$_{\text{NEG}}$ languages – those where the negative marker follows the verb – are a typological phenomenon unique to Central Africa (Niger-Congo, Nilo-Saharan, and Chadic) and, to a lesser extent, to New Guinea. Though there are isolated cases of VO & V$_{\text{NEG}}$ languages around the world, there is nowhere with such a concentration of examples as is found in these two regions. It has been observed as early as Jespersen (1917) that there is a cross-linguistic preference for negators to occur directly before the verb, yet in Chadic languages, which are most frequently but not always SVO, the negative marker occurs not only after the verb, but in the final position of the clause. In the great majority of cases, the verb may be followed only by time adverbials and interrogatives.

Additionally, many languages across the Chadic family employ bi-partite negation markers, though Proto-Chadic negation appears to have been single-marked in clause-final position (Newman 1977). In his classic study of negation, Dahl (1979: 92) finds that where there is bi-partite negation in his sample, the two negators nearly always surround the verb. He takes this to suggest a general tendency for negators to occur as close to the finite element of the clause as possible.

Yet this is rarely what happens for Chadic, as the first negator in these languages often occurs before the subject and the second negator often occurs after the object where the dominant word order is SVO. Indeed, Dahl (1979: 95) cites West African languages as typologically unusual among his sample.

3 The negative existential cycle across Chadic languages

In Chadic languages, given the sparsity of resources and examples provided in many grammars of individual languages, it is difficult to get a sense of language change over a long period of time. Thus, rather than focusing on the evolution of negation within individual languages, the focus of this study is on evidence of the stages of NEC across the Chadic language family.

The NEC, as an explanatory framework, illuminates the relationship between the domain of negative existentials and of verbal negation. Negative existential predicators differ from verbal negators by virtue of the fact that they indicate a state rather than an action or a process; they serve to express the absence of an entity and to pragmatically remove a referent from the scene (Veselinova 2013). Verbal negation, on the other hand, refers to the negation of a declarative clause with a verbal predicate in the sense of Dahl (2010) and Miestamo (2005). Given the differing functions, these domains are constantly formally distinguished, though they also interact closely. In this section, I present examples of Chadic languages that fit each of the types and stages of the NEC.

3.1 Type A

In Type A languages there is no special negative existential predicator, but the negation of the affirmative existential is performed by the verbal negator. This type appears to be particularly widespread in Chadic languages, appearing in at least a dozen languages surveyed, though not all are represented in this chapter for the sake of space. In Pa'anci, a West Chadic language, the affirmative existential *ani* occurs with the regular verbal negator *wa* to negate existence, as in (1a). The negator *wa* also occurs in final position in utterances with verbs and is followed only by a sentence-level emphatic particle *na*, as in (1b). Skinner (1979: 102) notes that *ani* is derived from a "locative verb feature bundle" *ánà*, followed by an associative preposition *i*. (1c) is an example of an affirmative existential utterance.

(1) Pa'anci (Skinner 1979: 102, 150)

    a. ***ani***   *ambi* ***wa***
        one.CONT.ASSOC water NEG

        'There is no water.'[1]

    b. *ná munde na dava **wa** na*
        3SG say   3SG come NEG EMPH

        'He said he did not come.'

    c. ***ani***   *aci*   *aħari pangwa*
        one.CONT.ASSOC guinea.corn inside corn.bin

        'There is guinea corn in the bin.'

It should be noted that *ani* and *wa* occur at opposite ends of the clause. The distance of the verbal negator from the existential predicate suggests the separate functional domains of negation and existential predication, making the frequency of Type A understandable.

In Gidar, a Central Chadic language, the affirmative existential verb *tà* (derived from the copula) must co-occur with the verbal negator *ɓà* in order to mark negative existence, as in (2a). The marker *tà* is purely existential and does not code existence in a location. All negative clauses in Gidar are marked by the clause-final particle *ɓà*, as in (2b). (2c) is an example of an affirmative existential utterance.

(2) Gidar (Frajzyngier 2008: 251, 311, 309)

    a. *ɗə́f **tà**-y án də̀-dàw   kàyí-t **ɓà***
        man be-3M REL 3M-DEP.PROG want-3F NEG

        'There is no man who wants her.'

    b. *mə̀lìy də̀-dàw   dáw sá **ɓà***
        chief 3M-DEP.PROG walk even NEG

        'The chief didn't even walk.'

    c. *ɗíi **tà**-ŋ   *də́-dà(w)*   *káí-tə́-nì*
        men be-3PL 3M-DEP.PROG want-3F-PL

        'There are many men who desire her.'

As there is no special negative existential form in Gidar, it is clearly a Type A language.

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[1]All Pa'anci glosses were constructed by the author.

3.2 A~B

In this synchronically variable stage, there is a special negative existential form in addition to the regular negative existential form. Croft (1991: 7) describes the special negative existential as "usually but not always a contraction or fusion of the verbal negator and the positive existential form".

In Hausa, a West Chadic language, there are two negative existential forms, *bâ* and *bābù*, shown in (3a), which are distinct in quantity and tone from the bi-partite verbal negator *bā…ba* used in tenses, aspects, and moods other than continuous and subjunctive, as in (3b). In negative continuous utterances, the verbal negator is *bā*. Generally, the two negative existentials may be used interchangeably, though the former occurs more frequently when there is a nominal predicate. When there is no overt object, only *bābù* can be used. The word *bābù* is also sometimes used colloquially to mean 'no', often as an elliptical response. The affirmative existentials in Hausa, *àkwai* and *dà*, as in (3c) and (3d), bear no resemblance to the negative existentials nor to the verbal negators. However, like the negative existential predicator, both occur in phrase-initial position.[2]

(3) Hausa (Newman 2000: 178–179, 357)

    a. **bābù/bâ** *sauran àbinci*
       NEG.EX other food
       'There is no food remaining.'[3]

    b. **bà** *zā* *mù biyā sù* **ba**
       NEG FUT 1PL pay 3PL NEG
       'We will not pay them.'

    c. **àkwai** *wani bằkō*   *à*   *kōfằ*
       EX   INDF stranger PREP door
       'There is a stranger at the door.'

    d. **dà** *kuɗī*
       EX money
       'There is money.'

In Hausa, then, there is a second negative existential form, but there is no evidence that this is the result of fusion with an affirmative existential. Newman

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[2] *dà* is also the morpheme used for the preposition 'with'. While *dà* is followed by an independent pronoun, *àkwai* makes use of weak object pronouns. Furthermore, *dà*, unlike *àkwai*, can never be stranded unless it is followed by *àkwai*; indeed, in some dialects, *dàkwai* has fused into a single word, cf. Newman (1971).

[3] All Hausa glosses have been constructed by the author.

(2000) addresses the dispute regarding the relation between *bābù* and *bâ*. Some, such as Eulenberg (1971), take *bābù* as the original and *bâ* to be a phonologically reduced form. Newman (1971), however, proposes that the source for this alternate form *bābù* is a fusion, *bâ* NEG + *ābù* 'thing', a change attested in other Chadic languages as well. As evidence against *bābù* as basic, he cites the fact that it takes independent rather than object pronouns as its complement. Additionally, Newman notes that *bâ* might have been borrowed from Kanuri, as the negative existential therein is of the same shape.

It is possible that *bâ* is losing its distinction as a negative existential, given its resemblance to the clause-initial verbal negator *bà,* lending to the fusion of a new form *bābù* to be preferred in certain areas of the grammar as a solution to ambiguity. Evidence for this lays in the use of *bābù* in emphatic utterances, as in dispute and disagreement. Croft (1991) discusses the "close diachronic association" between negative existentials, negative interjections and verbal negators in connection with this stage. Hausa is of A~B because there is a second negative existential form which has some restricted uses.

In Lele, an East Chadic language, the locative anaphora, *màní*,[4] which is also used to mark affirmative existence, as in (4a) and (4b). This form can be negated by the verbal negator, *ɗé*, as in (4c), in accordance with Type A. Additionally, there is a form *wíléŋ* 'lack' which serves as a negative existential, as in (4d).

(4)   Lele (Frajzyngier 2001: 196)

    a. *kùmnó **màní***
        God   there
        'God exists'

    b. *ɗíglè káŋ kàsà **màní***
        year DEM corn there
        'there is corn this year'

    c. *kùmnó **màní ɗé***
        God   EX   NEG
        'God does not exist'

    d. *kùmnó **wíléŋ***
        God   NEG.EX
        'God does not exist'

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[4]It should be noted that the primary role of *màní* is locative anaphora, though it is used on occasion to mark affirmative existence as in the examples given.

Given that the form *màní...dé* can be substituted for *wíléŋ* in the same utterance, there does not appear to be restriction of these forms.

3.3 Type B

In Type B there is a special negative existential marker which is distinct from the verbal negator. Muyang, a Central Chadic language, is exemplary of this type. Here, the negative existential *bī* differs from the affirmative existential, as in (5a), and the existential *bù*, as in (5b) differs from the verbal negator *dò*, as in (5c).

(5) Muyang (Smith & Gravina 2010: 27, 118)

　　a. *ā-bī*
　　　 3SG-NEG.EX
　　　 'He/she is not there.' or 'There isn't any.'

　　b. *ā-bù*
　　　 3SG-EX
　　　 'He/she is there.' or 'There is some.'

　　c. *kā-ɮāx dò*
　　　 2SG-roar NEG
　　　 'You do not cry out.'

A perhaps less obvious example of a language belonging to Type B is Mina, a Central Chadic language where the negative existential construction appears to be diachronically young. Verbal negation in Mina is marked by a clause final particle *skù*, as in (6a). The verbal negator has scope over the entity immediately preceding it. The affirmative existential *dáhà* (often shortened to *dá*) must co-occur with the verbal negator *skù* to create a negative existential predicate, as in (6b). Mina differs from other Chadic languages in that the existential predicate and the verbal negator neighbor one another. It may be that this fact contributes to the clipped *dà* existential form in negative existential predicates that is typically in its full form in affirmative existentials as in (6c).

(6) Mina (Frajzyngier et al. 2005: 46, 66, 261, 267)

　　a. *á tì-y-á-h hà nék skù*
　　　 3SG see-GO-2SG 2SG good NEG
　　　 'He does not see you as a good person.'

　　b. *kó   mə̀ lə́ɓ-yîi dá skù*
　　　 QUANT REL wet-PL EX NEG
　　　 'Not even one [page] was wet.'

c. *tèbéŋ   tɔ́   ndìr   ɗáhà*
  granary GEN sorghum EX
  'There is a granary of sorghum.'

d. *mɔ́ mbɔ́ɗ   zɔ́ v-yíì   ɗà skù*
  REL surpass EE who-PL EX NEG
  'Who is superior? Nobody.'

It appears from the available data that *ɗá skù* is coming to serve as its own lexical unit. Evidence for this is provided by (6d) where *ɗá skù* can constitute a complete clause. Haspelmath (1997) finds that it is not uncommon for negative existentials to perform the function of indefinite pronouns in many Oceanic languages.

Though the negative existential form here is transparent, it appears to be stable.

3.4 B~C

Croft (1991: 9) calls this synchronic variable stage "the most important step in support of our hypothesis", and it certainly seems to generate the most interesting questions. Here, the negative existential predicator begins to be used for ordinary verbal negation. The negative existential may compete with the verbal negator, sometimes being used instead of it.

Hdi, a Central Chadic language, is probably the best example of this stage. Here, verbal negation is typically marked by *á … wà/wù* as in (7a). The forms *wà* and *wù*, are free variants, though some speakers show preference for one or the other. The affirmative existential is *màmú* (sometimes reduced to *màá*) and cannot occur with the verbal negator, as in (7b). In order to negate existence, the form *xàɗú* 'lack' is used with a single negative marker at the end of the clause, as in (7c).

Additionally, there is evidence that *xàɗú* is coming to replace the first verbal negator, not just in existential utterances, but in verbal utterances as well. Frajzyngier & Shay (2002) note that *xàɗ* codes negative subjunctive in imperfective as well as negative imperfective in the indicative mood, as in (7d). These authors also state that the *xàɗ … wà* frame codes "pragmatically dependent negative clauses", such as negative relative clauses, negative conditional protases, and negative conditional and temporal apodoses as well as concluding clauses after another statement has been made, as in (7e).

(7) Hdi (Frajzyngier & Shay 2002: 41, 89, 152, 380, 385)

    a. *ɗvà **'á** xdí-xà tá l'école **wù**, ká-'á*
       like NEG Hdi-PL OBJ school (Fr.) NEG COMP-3SG
       '"Hdi do not like school," he said.'

    b. *índà dimanche ná **màmú** marriage ndánà*
       every Sunday (Fr.) COMP EX   marriage now
       'Every Sunday there is a marriage now.'

    c. ***xàɗú** ìmí **wà***
       lack water NEG
       'There are no rains.'

    d. ***xàɗ**-ká kà ǹghá tsá **wà***
       lack-2SG SEQ look DEF NEG
       'You should not look at it.'

    e. ***xàɗ** xɘ̀ŋ tà ksá-f-tà dágálá **wà***
       lack 3PL IPFV catch-up-REF many NEG
       'They do not catch many.'

There may be something similar beginning to happen in Wandala, though this is underdeveloped. Wandala is a Central Chadic language where verbal negation is marked by *k* (clause-internally) or *kà* (when in clause-final position). The negator is placed after the verb and before the nominal subject or object, as in (8a), which exhibits VSO word order. Only when the verb is not followed by an argument does the negative particle occur clause-finally. Negative existential clauses are formed through the use of *ɓákà* or *ɓaakà* in clause-initial or clause-final position, depending on whether the information presented is old or new, as in (8b).

    Generally, the negative existential and the verbal negator do not co-occur, though there are some rare instances in which they do, as in (8c). It is unclear what function is served by combining these elements, but it is possible that the final *kà* here is simply a clipped form of the negative existential, as there are cases where the negative existential is repeated, as in (8d).

(8) Wandala (Frajzyngier 2012: 85, 208, 436, 583)

    a. *tsà-n-á **k** nábbà*
       stop-3SG-GO NEG Nabba
       'He did not stop Nabba.'

b. *á   yà-wá   ə́lvà-á-rwà   ɓákà*
well 1SG-COM word-GEN-1SG NEG.EX
'Well, I have no words.'

c. *ŋán kínì   sé   à   hàyà bà dó   nə̀   ŋánnà ɓákà*
3SG CNTR.FOC only 3SG like   FOC man DEM DEF   NEG.EX
péɗà-á-r   nà   kà
means-GEN-3SG DEM NEG
'She, she likes only the man that does not have any means.' [or 'only useless men']

d. *ɓákà   ùrà   tà   tàttàyà à   j-ú   g-íyà   ɓákà*
NEG.EX person 3PL search 3SG surpass-VENT to-1SG NEG.EX
'One does not look for a person to surpass me.'

The open question that emerges from the data from Hdi (and, to a lesser extent, from Wandala) is what purpose is served by the enforcement of the verbal negator by the negative existential.

3.5 Type C

In Type C, the negative existential is identical in form and position to the verbal negator, demonstrating "polysemy between negative existential meaning and verbal negation" (Croft 1991: 12). This occurs rarely in Chadic languages, but appears in Gude, a Central Chadic language.

In all TAM in Gude, the verbal negator, *pooshi,* exactly resembles the negative existential, *pooshi*, as exhibited by the negated verbal phrase in (10a) and the negative existential utterance in (10). The negative existential does not appear related to the affirmative existential *tə'i*; rather, Hoskison (1983: 90) suggests that *pooshi* is formed from *pə* used in phrases of refusal and *uushi* 'thing', as also attested in Hausa above. In the completive aspect, there is an alternative verbal negation strategy which uses *ma…mə* surrounding the verb stem, as in (10b), which follows VSO word order unlike the other examples.

(9)   Gude (Hoskison 1983: 71,90, 91)

(10)   *pooshi nwanwu də Gyala*
NEG.EX chief   at Gyala
'There is a no chief at Gyala.'

a. *pooshi Musa kii   faara*
NEG   Musa threw stone
'Musa did not throw a stone.'

b. ***ma**-ka-**mə***   *Musa faara*
   NEG-throw-NEG Musa stone

'Musa did not throw a stone.' [5]

This negative completive strategy is rare and exists alongside the more typical strategy of marking verbal negation through use of the negative existential.

3.6 C~A

I do not have strong evidence for a synchronically variable C~A stage in Chadic where the negative-existential-cum-verbal-operator comes to be reanalyzed as an ordinary verbal negator and begins to occur with the affirmative existential in negative existential clauses. As noted by Croft (1991: 19), this is perhaps unsurprising given that Type C is relatively unstable and typologically uncommon. He reasons that the lack of an existential predicate is anomalous in the minds of speakers, leading to the introduction of a positive existential relatively quickly, thus returning a given language to Type A.

4 Overlap between types and stages

Veselinova (2016) has pointed out that overlap between types occurs to a greater extent than perhaps conceded by Croft (1991). In this section, I consider a few examples of Chadic languages where the data available do not warrant easy placement in any one type or stage.

4.1 Overlap of Type A and Type B

As mentioned earlier in the paper, in Chadic it is common for there to exist two options to negate existence within the same language. In the first, a negative existential predicate is formed through a positive existential and a verbal negator (Type A). In the second, there is a distinct negative existential predicator (Type B). Often these forms of negation are used interchangeably, though sometimes the negative existential serves additional functions. The presence of additional functions suggests that the negative existential in these languages is newer than the verbal negator. However, it is not the case in all languages that a clear line can be drawn between what functions are performed by each of these types.

In Ngizim, a West Chadic language, the negative existential *góo*, as in (11a), differs from the verbal negator *bái*, as in (11b). Consistent with Type B, the two may

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[5]Glosses added to the originally unglossed example.

not co-occur. The form *góo* can additionally mean 'without', but is not limited to this meaning. However, consistent with Type A, the affirmative existential *naa* may also co-occur with the verbal negator *bai* to form a negative existential predicate, as in (11c).[6]

(11) Ngizim (Schuh 1972: 84, 455)

    a. *zaaman Mai Maadi dá-bənci **goo** ža*
       time   king Madi STAT-PASS without war

       'The time of King Madi passed without war.'[7]

    b. *dee ii Ngwajin **bai***
       3SG LOC Ngwajin NEG

       'He didn't come to Ngwajin.'

    c. ***naa** mərak **bai***
       EX oil   NEG

       'There is no oil.'

In Makary Kotoko, a Central Chadic language, the negative existential *ɗalá* in (12a) differs from the verbal negator *wa* in (12b), and the two may not co-occur, consistent with Type B. The negative existential occurs in the same position of the clause as the verbal negator. However, the locative copula *nda* 'be at'[8] may also co-occur with the verbal negator to produce a negative existential phrase of Type A, as in (12c). Allison (2020: 347) writes, "[t]he locative copula construction is primarily used in affirmative contexts, though I have a half-dozen examples in the corpus where it occurs in a negative clause."

(12) Makary Kotoko (Allison 2020: 299, 306, 308)

    a. *nyi   ro   m-ú gə re   əl   **ɗalá***
       thing:ABSTR MOD:F IRR-1SG say 2PL:IO NEUT:3SG:F NEG.EX

       'I don't have anything to say to you.' (lit. thing that I say to you doesn't exist)

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[6]It is quite common for negative existentials to have an additional 'without' meaning (Veselinova 2013: 20).

[7]All Ngizim glosses constructed by the author.

[8]There are examples in Allison (2020) where this marker is purely existential.

b. *ā*   *bíā*   *ʃārgū*   *ro-gə*
3SG.M.COMPL attend sickness MOD.F-POSS

abá=n-gə́-dan   *dó=he-**wa***
father=MOD.M-POSS-3PLDET.F=LOC-NEG

'He wasn't there when his father was sick.' (lit. he didn't attend his father's sickness)

c. *wáādə **nda***   *lə*   ***wa*** *ɗe halâs*
trust   be.at:M PRO NEG SR okay

'If you don't trust me then okay (never mind).'

It is unclear whether these languages should belong to the A~B stage. An argument against including them there is that there is no evidence that the special negative existential forms are contextually restricted.

4.2 A~B and B~C

Buwal, a central Chadic language, does not fit neatly into any one variable stage. Viljoen (2013: 293) is the only author of the Chadic grammars I consulted to directly address the NEC, noting that Buwal is somewhere between Type A and Type C.

In Buwal, the verbal negator is *kʷáw*, as in (13a), and the affirmative existential marker is *akā*, as in (13b). These two forms have fused to create the negative existential *áskʷāw/ákʷāw* in (13c). The combination *aká skʷāw*[9] is still found with the same meaning as *áskʷāw/ákʷāw*, but the former occurs less frequently than the latter. The emergence of the special negative existential form is consistent with the stage A~B.

Buwal also exhibits aspects of stage B~C where the negative existential is gradually substituted for the verbal negator in parts of the grammatical system. In Buwal, the verbal negator represents denial of a corresponding positive assertion and is pragmatically dependent, whereas the negative existential is a simple negative assertion that is not pragmatically dependent – it need not be understood in reference to an affirmative clause, as in (13d). Viljoen (2013: 293) notes that Buwal is clearly not a Type C language, as she has 22 examples of a 765 example corpus of verbal clauses demonstrating that the combination *aká skʷāw* can also be used for verbal negation. The form *ákʷāw* performs a verbal function as well, as shown in (13e).

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[9]The form *aká kʷāw* is never found.

(13) Buwal (Viljoen 2013: 97, 293, 454, 477, 490)

    a. *sā-ndā   āká   á   dámāw **kʷáw***
       1SG.SBJ-go ACCOMP PREP1 bush   NEG
       'I didn't come back from the bush.'

    b. *béǥē   nxʷā-jé **ákā***
       enclosure goat-PL EX
       '… there is a goat enclosure.'

    c. *fāgʷālākʷ zēnéj **ákʷāw***
       leprosy   again NEG.EX
       'There is no more leprosy (lit. leprosy again didn't exist).'

    d. *sā-ká-zàm   wdā **ákʷāw***
       1SG.SBJ-PFV-eat food NEG.EX
       'I haven't eaten food.' [The speaker does not want food]

    e. *á-kā-ndā   á dámāw ákʷāw*
       3SG.SBJ-IPFV-go to bush   NEG.EX
       'She is **not** going to the bush.'

5 Discussion

The findings of this paper are summarized in Table 1.

I have noted in this paper that Type A languages are common in Chadic; indeed, there are a fair number of examples of Type A languages beyond those included herein. Languages of this type are likely to exist for a considerable period of time due to the high level of productivity where the verbal negator applies to the existential predicate in a similar manner as it applies in negating other predicates. Because of the period of time that this stage is likely to endure, it is understandable that there are several examples of this type. There are also two examples of Type B, some of which (as in Mina) appear to be diachronically young. Due to the continued presence of a positive existential predicate, it is difficult to find languages that are purely Type B, as the Type A strategy endures.

Given constraints on time and resources, I have not addressed all Chadic languages with published grammars, but from the available evidence, Type C certainly appears to be uncommon. Croft (1991: 18) observes that the rarity of this type "is due to the special status of the existential situation as a 'nonverbal' predication, and to the association of negation and emphasis". Where this type does

Table 1: The NEC cycle forms in Chadic

Language	Affirmative existential	Verbal negator	Negative existential(s)	Type or stage
Pa'anci [pqa-NGA]	ani	wa	ani...wa	Type A
Gidar [gid-CMR]	tà	ɓà	tà...ɓà	Type A
Hausa [hau-NGA]	àkwai/dà	bà...ba, bā	bâ; bābù	A~B
Lele [lln-TCD]	mànî	ɗé	mànî...ɗé/wílérŋ	A~B
Mina [hna-CMR]	ɗáhà/ɗá	skù	ɗá...skù	Type B
Muyang [muy-CMR]	bù	bī	dò	Type B
Hdi [xed-CMR]	màmú/màá	á...wù; xàɗú	xàɗú	B~C
Wandala [mfi-CMR]	áŋkwè/áŋk	kà/k; ɓákà	ɓákà	B~C
Gude [gde-NGA]	tə'i	pooshi	pooshi	Type C
Ngizim [ngi-CMR]	naa	bai	naa...bai; goo	A and B
Makary Kotoko [mpi-CMR]	nda	wa	ɗalá	A and B
Buwal [bhs-CMR]	akā	kʷáw	áskʷāw/ákʷāw	A~B and B~C

appear, it is unlikely to endure for long before a distinct existential form crops up alongside the negative existential-cum-verbal negator.

Generally, it is more common to find evidence of variable stages in Chadic languages than non-variable stages, which is unsurprising given that languages are not restricted to any one stage of the NEC at a given time; as new methods for negating existential predicates emerge, old forms are not necessarily lost, though often become restricted to certain domains of speech. The B~C stage is perhaps the most interesting in that it sheds the most light on the functions of negation and negative existential predicates, particularly the issue of which domains of the grammar begin to make use of the negative existential to perform verbal functions. Among the languages included in this paper, relevant domains include pragmatic dependence and aspect. For instance, in Hdi, the negative existential is beginning to be used to code negative subjunctive in imperfective as well as negative imperfective in the indicative mood. In Gude, though a Type C language, the negative existential performs negation in all aspects, but completive aspect has an alternative strategy in the negative. Miestamo & van der Auwera (2011: 72) find that the restriction of aspectual categories under negation is especially apparent in African languages, most notably those grouped in Nigeria (Niger-Congo, Nilo-Saharan, and Chadic). Additional cross-linguistic evidence suggests that certain aspects, such as perfective, are less compatible with negation (e.g. Schmid 1980: 39; Matthews 1990: 84, though see and Miestamo & van der Auwera

2011 for counter evidence). The question of the relationship between negation and aspect, as well as the role of pragmatic dependence, merits future study in Chadic.

6 Existentials as a source for verbal negation

An exploration of a synchronic and diachronic cycle such as the NEC has additional merit in identifying sources of verbal negators. Newman (1977: 30) reconstructs the Proto-Chadic negative marker as *wa in clause-final position. The the particles for verbal negation of many Chadic languages differ significantly from this proto-form. Some forms are predictable through regular sound change, whereas other forms seem to have come about through different pathways.

In this section, I address some potential sources of Chadic verbal negators.

Cross-linguistically, negation and interrogatives are known to share a close relationship. Interrogatives are far less direct than negation and provide a face-saving strategy with which to express negation. In Daba, a Central Chadic language, for instance, one strategy of coding negation is through the use of the interrogative *vú*, as in (14). In Mina too, negation may be coded by the aspectually dependent habitual marker *r(a)* and the interrogative *vù* in clause-final position, as in (15). Here, not only is negation coded, but also the emotional state of the speaker, such as displeasure or astonishment. Note that no verbal negator is used.

(14) Daba (Lienhard & Giger 1975: 86)
dàlà   dà vú
money 1SG Q
'Je n'ai pas d'argent' (Lit: 'Est-ce qu'il y a d'argent')
'I don't have any money' (Lit: 'Is there any money?'

(15) Mina (Frajzyngier et al. 2005: 268)
ngùl   nə́ zə̀m skə̀n nə́ r   vù
husband 1SG eat   thing 1SG DEP.HAB Q
'My husband, he does not eat my food!'

Table 2 presents similarities between the form of the verbal negator and the form of the interrogative within the same language.

An additional source for negation, the lexical item 'thing', was noted earlier in this paper in relation to Hausa and Gude. This lexical item often combines with a lesser used negator to create an emphatic negative form. Often, these forms may

Table 2: Verbal negators and interrogative forms

Language	Verbal negator	Interrogative marker
Pévé	tsú…mi	mi; su
Goemai	môu	mmoe
Buwal	kʷaw / skāw	kwá/skwá
Pero	á…m	á

Table 3: Verbal negators and 'thing'

Language	Verbal negator	Lexical item 'thing'
Daba	ɗakun/kun	kə́n
Gude	pooshi	ooshi
Mina	skù	skə̀n
Kanakuru	woi…u	wói
Ngizim	bai	bài

be used as independent expressions and need not include the single argument of an existential predication. These are represented in Table 3.

The fusion of a negator and 'thing' can lead to a negative existential or to a verbal negator, though if a verbal negator, it has likely become semantically bleached. An examination of the processes involved in the NEC is informative regarding the relationship of these 'nothing' forms to negative existence.

There remain several negative markers unaccounted for by these findings. Some of these appear to come from existential sources. In Wandala, the negative existential *ɓákà* has come to occur in the same clause-final position as the verbal negator which is *kà*. It may well be that *kà* is a clipped form of *ɓákà*. In Buwal, there is a clear relationship between the affirmative existential *akā*, the verbal negator *kʷáw,* and the negative existential predicator *áskʷāw/ákʷāw*.

Many existential forms – both positive and negative – also contain *d(V)* particles, which occur in mostly bisyllabic form. Table 4 lists some examples.

In Daba, the negative existential is *ɗaha,* which is nearly identical in form to the affirmative existential in the neighboring language, Mina, which is *ɗáhà*. Lamang, which is to the West of these languages, has the existential form *hà/xà* and Wandala to the Northeast has the affirmative existential *xàdú*. It may be that this *h(V)* or *x(V)* form is related to the stative locative/general locative form *á* that

Table 4: Verbal negators and negative existentials

Language	Verbal negator	Negative existential
Daba	ɗakun/kun	ɗaha
Zoɗi	ɗiː…ndi	aɗa
Baraïn	dō	díjò

is attested in so many languages (Uldeme, Gidar, South Giziga, Makary Kotoko, Zaar, Hona, etc.). This *d(V)* form, which frequently surfaces in East Chadic and some Central Chadic languages as verbal negators, is not entirely clear, but may have been borrowed from outside the family. In any case, verbal negators are found in affirmative existential constructions which supports the notion in NEC that existential forms come to take on and lose negative functions in a cyclical manner.

7 Conclusion

In this paper I have identified most of the types and stages of Croft's (1991) Negative Existential Cycle in Chadic languages. Additionally, I have followed Veselinova (2016) in observing that not all languages fit neatly into a type or a stage and therefore it is also useful to consider overlap of types and stages. I have found that negative existentials may sometimes be sources of verbal negators in Chadic, though interrogatives and the lexical item 'thing' appear more often to provide pathways to verbal negators in this particular family. Croft's (1991) framework – especially the identification of the missing B~C stages – sheds light on processes of negation and the relationship between negation and negative existential predication, as well as their relationship to other domains in the grammar. In Chadic, two domains of interest are aspect (especially imperfective and perfective) and pragmatic dependence.

Abbreviations

1	first person	LOC	locative
2	second person	M	masculine
3	third person	MOD	non noun modification marker
ABSTR	abstract		
ACCOMP	accomplishment	NEG	negative
ASSOC	associative	NEG.EX	negative existential
CNTR	contrastive	NEUT	neutral aspect
COMP	complementizer	OBJ	object
CONT	continuous	PASS	passive
DEP	dependent (aspect)	PFV	perfective
DEF	definite marker	PL	plural
DEM	demonstrative	POSS	possessive
DET	determiner	PREP	preposition
EE	end of event marker	PROG	progressive
EMPH	emphatic	PRO	non-human/locative pronoun
EX	affirmative existential		
F	feminine	Q	question
FOC	focus	QUANT	quantifier
FUT	future	REF	referential
GEN	genitive	REL	relative marker
GO	goal orientation	SBJ	subject
HAB	habitual	SEQ	sequential
IPFV	imperfective	SG	singular
INDF	indefinite particle	SR	switch reference marker
IO	indirect object	STAT	stative
IRR	irrealis	VENT	ventive

Table 5: ISO 693-3 codes for languages included

Language	code	country	Branch	Source
Baraïn	bva	TCD	East Chadic	Lovestrand (2012)
Buwal	bhs	CMR	Central	Viljoen (2013)
Daba	dbq	CMR	Central	Lienhard & Giger (1975)
Gidar	gid	CMR	Central	Frajzyngier (2008)
Goemai	ank	NGA	West	Hellwig (2004)
Gude	gde	NGA	Central	Hoskison (1983)
Hausa	hau	NGA	West	Newman (2000)
Hdi	xed	CMR	Central	Frajzyngier & Shay (2002)
Hona	hwo	NGA	Central	Frajzyngier (1995), Frajzyngier & Jordan (1995)
Kanakuru	kna	NGA	West	Newman (1974)
Lamang	hia	NGA	Central	Ekkehard (1983)
Lele	lln	TCD	East	Frajzyngier (2001)
Makary Kotoko	mpi	CMR	Central	Allison (2020)
Mina	hna	CMR	Central	Frajzyngier et al. (2005)
Muyang	muy	CMR	Central	Smith & Gravina (2010)
Ngizim	ngi	CMR	West	Schuh (1972)
Pa'anci	pqa	NGA	West	Skinner (1979)
Pero	pip	NGA	West	Frajzyngier (1989)
Pévé	lme	TCD	Masa	Shay (2020)
South Giziga	giz	CMR	Central	Shay (2021)
Uldeme	udl	CMR	Central	Kinnaird & Kinnaird (1998)
Wandala	mfi	CMR	Central	Frajzyngier (2012)
Zaar	say	NGA	West	Caron (2015)
Zoɗi	dot	NGA	West	Caron (2002)
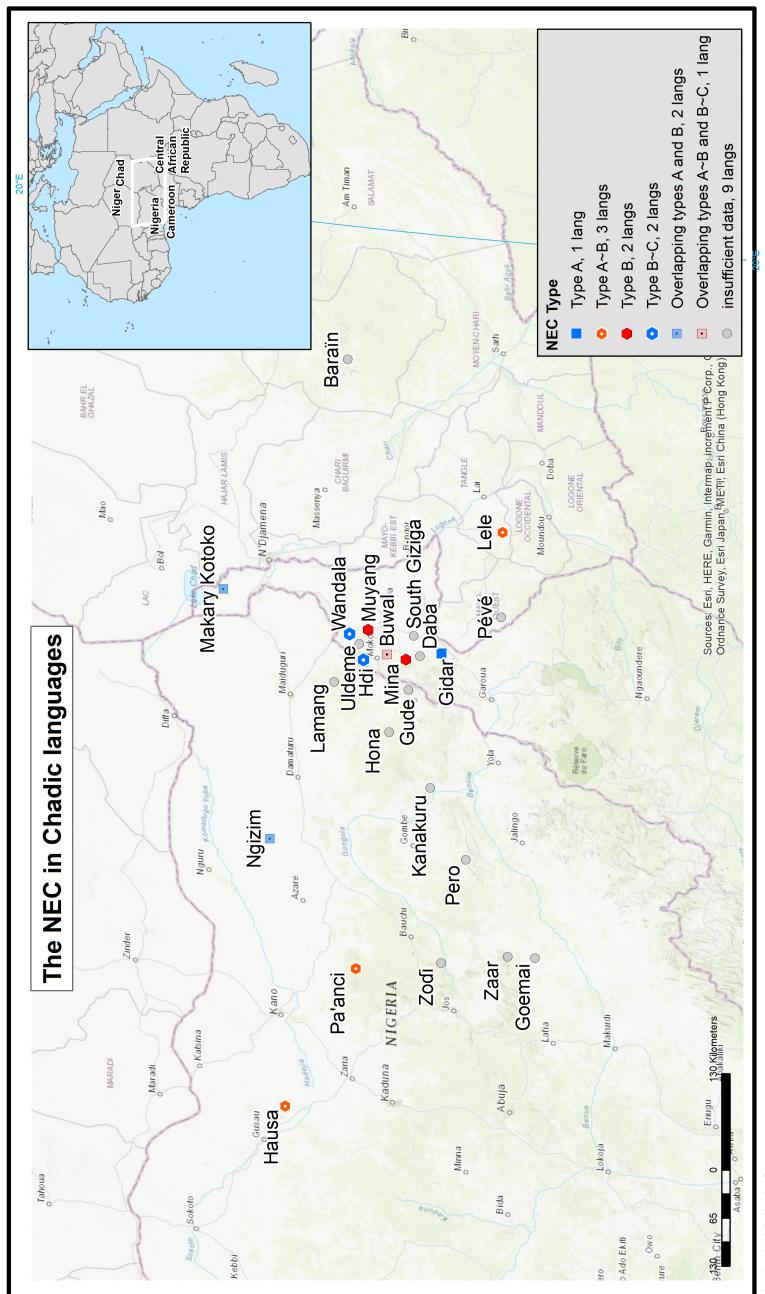
Figure 1: NEC in Chadic

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Chapter 4

Extensions and commonalities in negative existential cycles in Arabic

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The many varieties of Arabic together exhibit numerous existential particles, all of them negated with the usual verbal negator *mā* or occasionally the common Semitic *lā*. A few of those, *ʔys*, *šī*, and *bī*, exhibit stages of a negative existential cycle. All three cycles share commonalities. Associated with an incipient stage A>B, each undergoes a univerbation between the negator and the existential particle. With the *šī* cycle, this involves either reflexes of a fusion between the negator *mā* and *šī* as *māšī*, or a further step involving the negator *mā*, a 3rd-person pronoun *hū* or *hī*, and the existential particle *šī*: *mā hū/hī šī > mahūš > mūš > muš/miš*. A univerbation of the existential *bī* proceeds along an analogous pathway: from *mā bi* through *mā hū bi > mahub > mub*. As for *ʔys*, it has fused with the negator *lā* to form *laysa*. In all three cycles, these univerbations extend into the domain of equational sentence negation. Another commonality is that as the cycles progress, the original existential particles themselves disappear, to be replaced by new ones. In the *bī* and *šī* cycles, it is the preposition *fī* 'in', which has become grammaticalized as an existential particle. In the *laysa* cycle, existential *ʔys* is replaced by demonstratives *hunāka* and *θamma* 'there'. The univerbations in all three cycles can operate in sub-domains of verbal negation. The stages that the three cycles have reached permit a comparative diachrony. Because the *laysa* cycle is the only one to reach a full-on stage C>A, it must be the longest running, followed by the *šī* cycle, which appears to be entering upon a Stage C in Egyptian Arabic and has done in one southern Yemeni variety. The *bī* cycle, having reached only an incipient stage A>B and beyond would be the most recent.

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1 Introduction

Extant spoken Arabic varieties exhibit amongst themselves reflexes of at least six separate existential particles. Of these, two show developments characteristic of a negative existential cycle (Croft 1991) variously distributed amongst Arabic dialects. For its part, the Arabic of writing, descended from an archaic form, no longer spoken as a native language and different in many ways from the many varieties of spoken Arabic, also shows signs of having passed through a negative existential cycle. We shall summarize the workings of the cycle with each of the three existential particles, observing the commonalities that their cycles share with each other.[1] The stages of completion that these respective cycles have reached will admit proposing a relative chronology.

The first of the cycles to be addressed in §2, is called the *laysa* cycle, after the negator *laysa*, which derives from an existential *ʔys*, no longer in use. The earliest Arabic writing of any length, the Quran, dating to the seventh century, exhibits an early stage of the cycle, with later stages to be seen in collections of the prophetic tradition of the ninth century, in some writings from Muslim Spain of the twelfth century, and subsequent writings, up to the present day.

The second, addressed in §3, is called the *šī* cycle, after an existential particle *šay(y)/šē/šī* of the southern Arabian Peninsula attested in spoken Arabic dialects of the lower Arabian Gulf, Oman, and Yemen. Some original data from Emirati Arabic that will be presented as examples of usage are drawn from a series of oral history recordings, in which pre-nineteen-sixties residents of the old town of Sharjah describe life in the emirate before the oil boom. These are housed at the Sharjah Museums Authority (SMA), acknowledged here with thanks.

The third, addressed in §4, is the *bī* cycle, named for an alternate to the better-known existential particle *fī* of which Croft speaks (1991: 7). Some of the data from that discussion are also drawn from the SMA recordings. Statistics pertaining to usage of existential negators involving *bī* come from a corpus of Gulf Arabic (Gumar).[2]

Finally, §5 addresses some of the salient commonalities that the three Arabic cycles share, placing those into the broader typology of negative existential cycles, there and in the conclusion placing them into a historical perspective.

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[1] The four other Arabic existential particles (listed in Table 1 at the start of section 3) show no sign of entering a negative existential cycle.

[2] https://camel.abudhabi.nyu.edu/gumar/

2 The *laysa* cycle

An existential particle *ʔys* is attested in a few medieval Arabic lexicographical works.[3] In the earliest of these, the eighth-century Omani lexicographer al-Farahidi (d. 786 AD) says that, in his day, *ʔys* may have fallen out of usage except for a single living idiomatic expression, which he adduces:

(1)   *ʔat-ni*   *b-h*   *mn*   *ḥyθ*   *ʔys*   *w*   *lys*
      come.PFV PREP-PRO.M.3SG PREP ADV EX   CONJ NEG.EX
      'He came [to] me with him/it from wherever. (lit. where there and not there)' (al-Farāhīdiī 2003: 105)

al-Farahidi remarks that *ʔys* denotes existence, and *lys*, which he derives from *lā ʔys*, denotes nonexistence. Some ninth-century Arabic philosophical writing uses the two with those meanings (Gihami 2002: 35). Soon afterwards, the affirmative existential particle *ʔys* disappears from living usage, leaving the negative *laysa* abundantly attested in the Arabic of writing from that day to this. Consequently, we may assume that an existential particle *ʔys* did once obtain in some varieties of Arabic and it that was negated with the common Semitic negator *lā*:[4]

(2)   *lā*   *ʔys*
      NEG EX
      'Not there [is]'[5] (al-Farāhīdiī 2003: 105)

The regular Arabic verbal negator, *lā*, negating an existential particle, makes this a characteristic type A construction, in which, as Croft defines it, "there is no special existential negative form, and the negative existential construction is the positive existential predicate plus the ordinary verbal negator" (1991: 6–7). In the Arabic of writing, verbal negations almost always proceed with a reflex of *lā* (sometimes *mā*):

(3)   *lā*   *a-ʕraf*
      NEG 1SG-know.IPFV
      'I [do] not know.' (Adwan 2000: 144, 158)

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[3]The *laysa* cycle is examined in much greater detail in Wilmsen (2016a).

[4]Other Semitic languages possess similar existential particles, with some, including Arabic, retaining only the negated form. Their origins are much discussed and debated amongst Semiticists. Nevertheless, despite some disagreement around the derivation of *laysa* (Wilmsen 2016a, Al-Jallad 2018), a plurality consensus holds that it does, indeed, derive from *lā ʔys* (see Blau (1972), Gensler (2000), Lipiński (2001: 464–465, 488–489); summarized in Wilmsen (2016a: 329–331) & Wilmsen (2017: 298–299).

[5]In Arabic, a copula is usually not expressed in present time predications. The enclosing of the English copula in brackets in the gloss is meant to reflect that.

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2.1 Stage A>B of the *laysa* cycle

Croft continues, defining a stage A>B as involving "a special existential negative form, usually but not always a contraction or fusion of the verbal negator and the positive existential form" (1991: 7). This is what the surviving negative existential particle *laysa* is. A Stage A>B would have seen a conventional negation of existential *ʔys* with *lā*, as that in example (1), coexisting with *laysa*. That may have happened before Arabic became fully attested in writing, but there is no remaining record of it. Nevertheless, *laysa* can stand by itself in denying the existence of something, to the extent that the thing denied need not be mentioned. In modern writing, this holds especially for negating locational sentences of the type, 'At/for/in/with the X is/are Y' (4a). Nor is *laysa* the sole negator of existential predications; the regular negator *lā* also negates them without the need for an expressed existential particle (4b):[6]

(4) a. *laysa fī   l-maktab illā anā   w   anta*
         NEG.EX PREP DET-office CONJ PRO.1SG CONJ PRO.M.2SG
         'There [is] not in the office except you and I.' (Adwan 2000: 273)

  b. *lā   ilāha illā   llāh*
      NEG god   except Allah
      '[There is] no god except Allah.' (Quran 37:35)

As such, *laysa* does function as a special negative existential form in certain types of existential negations, whereas the usual negator *lā* can also negate existential predications, albeit without need for an expressed positive existential. This would be a type of a stage A>B.

2.2 Extension into equational sentence negation

Aside from that, *laysa* also negates non-verbal predications of all sorts, whether existential or otherwise. This has been the case at least since the 7th century AD, when extensive Arabic writing began to appear:

(5) a. *laysa ka-miθli-hi   šayʔ*
         NEG.EX PREP-likeness-PRO.M.3SG thing
         'There [is] not [a] thing like His likeness.' (Quran 42:11)

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[6]The examples of usage with *laysa* are from written sources, meaning that geographical provenance is largely irrelevant. A map charting the spoken Arabic dialects that are passing through negative existential cycles that are addressed below can be found in Figure 1.

b. *laysa ð-ðakaru ka-l-ʔunθā*
   NEG DET-male PREP-DET-female
   'The male [is] not like the female.' (Quran 3: 36)

Sentences of the type in (5) are what Li and Thompson call "equational sentences … in which an identificational or member/class relationship is expressed between two NPs" (1977: 419). That is, equational sentences express relationships between the subject and predicate that in languages like English, French, and Spanish require a copula. Equational sentences are characteristic non-verbal predications in spoken and written Arabic alike, in which a copula, verbal or otherwise, is lacking. When a copula is needed, it is usually one of the 3rd-person pronouns (Li & Thompson 1977: 431–433):[7]

(6)   Palestinian Arabic (Li & Thompson 1977: 431)

   a. *hiyye   le-mʕallme*
      PRO.F.3SG DET-teacher
      'She [is] the teacher.'

   b. *il-bint   hiyye   le-mʕallme*
      DET-girl PRO.F.3SG DET-teacher
      'The girl [is] the teacher.'

Li & Thompson (1977: 420) label sentences of the first type (6a) "topic-comment constructions" and the second "subject-predicate constructions", noting that both Hebrew, and Palestinian Arabic (among other languages) have developed a copula by means of the topic-comment construction. In actuality, what holds for Palestinian Arabic holds, with minor variations, for all varieties of Arabic: when a copula is needed, it is expressed as a 3rd person pronoun. As far as written Arabic is concerned, topic-comment and subject-predicate constructions alike are characteristically negated with *laysa*, while verbal predications are negated with reflexes of *lā*, as in (3).

2.3 Subsequent stages of the *laysa* cycle

A stage B would see "only a special negative existential form" (Croft 1991: 9). Veselinova (2014: 1338; 2016: 153) observes that stages of the cycle, especially a stage B, may be skipped entirely, and it appears that the *laysa* cycle has done so. Occasionally, however, *laysa* can negate verbs, characteristic of a stage B>C (Croft

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[7]For more on equational sentences and the copular function of 3rd person pronouns in Arabic, see Eid (1983, 1991) and Choueiri (2016).

1991: 9–10), and when it does, it is usually for pragmatically marked purposes, notably in posing contrasts between a denial and an assertion (7a) or in rhetorical negations (7b), as in the following from an early genre of Arabic literature, collected sayings of the prophet Muhammad (*Hadith*) compiled by al-Buḫārī (2000: d. 870):

(7) a. *laysa   ya-riθ-u-ni   ʔillā   ʔibnat-i*
         NEG.EX 3M-inherit.IPFV-IND-PRON.1SG except daughter-PRO.1SG
         'None inherits [from] me except my daughter.' (al-Buḫārī 2000: Vol.
         VIII p. 151)

     b. *a laysa   ʔamara-kum*
         Q NEG.EX command.PFV-PRON.2MPL
         '[Has] he not commanded you?' (al-Buḫārī 2000: Vol. VI p. 864)

In (7a), the predication might still be read as an existential negation: 'There is none inherits from me.' Nevertheless, *laysa* can occasionally negate verbs in apparently unmarked usage:[8]

(8) *laysa ya-drī   kayfa ħadaθa   al-ʔamr*
     NEG 3M-know.IPFV ADV   happen.PFV DET-thing
     'He knows not how the thing happened.' (Kanafani 2006: 28)

Because the negation in (7) and other verbal negations with *laysa* would usually be effectuated with a reflex of *lā*, the choice to negate the verb with *laysa* must invest the statement so produced with some added pragmatic meaning.

As for a Stage C, "in which the negative existential form is the same as the ordinary verbal negator" (Croft 1991: 11), the *laysa* cycle reached it only in the extinct 12th century Arabic dialect(s) of Muslim Iberia (Al-Andalus), where reflexes of *laysa* had become, "an almost universal negator of the perfective, … imperfectives, and nominal sentences" (Corriente 2013):

(9) a. *las   kān   dara-yt-uh*
         NEG.EX be.PFV.3S know.PFV-1S-PRON.3M
         'I had not known it.' (Corriente 2013: 126)

     b. *las   ni-sammī   aḥad*
         NEG.EX 1S-name.IPFV one
         'I mention not anyone.' (Corriente 2013: 126)

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[8]A rarity in other spoken varieties of Arabic, reflexes of *laysa* survive as what Holes (2006: 26) calls a "fossilized remnant" in some southern Peninsular dialects of Arabic, where they can negate verbal predications (Al-Azraqi 1998: 142–144), typical of a stage B>C.

c. *las   niḥun ṣibyān*
NEG.EX PRO.1PL children
'We [are] not children.' (Corriente 2013: 126)

2.4 Terminal stage of the *laysa* cycle

Nevertheless, *laysa* has everywhere entered upon a Stage C>A, "in which the negative-existential-cum-verbal-negator begins to be reanalyzed as only a negator, and a regular positive existential … comes to be used with it in the negative existential construction" (Croft 1991: 12).[9] In the Arabic of writing especially, two existential particles *θamma* and *hunāka*, both meaning 'there', and a passive-voice construction involving the verb *ya-ǧid* 'he finds' > *y-ūǧad* 'it [is] found' appear in the 8th and 9th centuries (Wilmsen 2016a: 354–356). The usual verbal negator *lā* most often negates the verb form: *lā y-ūǧad* (lit. 'it [is] not found' understood to mean 'there is not'; example [10a]). Otherwise, *laysa* negates the two existential particles, as in the following from the Hadith collections of Ibn Ḥanbal (d. 855) and al-Buḫārī (10b & 10c):

(10)   a. *fa-lā   y-ūǧad   fī-hi   šayʔ*
CONJ-NEG M.3SG-found.IPFV PREP-PRO.M.3SG thing
'And there [is] not in it [a] thing.' [lit. 'And not found in it thing']
(al-Buḫārī 2000: Vol. VIII p. 1256)

   b. *laysa θamma dinār   wa-lā   dirham*
NEG.EX EX   currency CONJ-NEG currency
'Not there [is] [a] dinar and not [a] dirham.' (al-Buḫārī 2000: Vol. VIII p. 1323)

   c. *laysa hunāka dinār   wa-lā   dirham*
NEG.EX EX   currency CONJ-NEG currency
'Not there [is] [a] dinar and not [a] dirham.' (Ibn Ḥanbal no date: Vol. IX, p. 507)

Both of the latter two existentials, originate as remote demonstrative pronouns, corresponding in usage to English 'there'. In the earliest extensive Arabic writing, the Quran, dating to the middle seventh century, *θamma* appears once as an existential particle, but a reflex of *hunāka* appears only as a demonstrative.

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[9]Croft actually says "a regular positive existential verb" (Croft 1991: 12). But in Arabic, the existential particles are almost always not verbs. For its part, *laysa* exhibits the peculiar quality of inflecting as a perfective verb to negate present-time predications. There is no sign that it ever existed in an imperfective form (see discussion in Wilmsen 2016a: 341–346).

Negation of either with *laysa* begins to appear in writing after the middle of the ninth (Wilmsen 2016a: 354–355). The *laysa* cycle had thus passed through all of its stages by that time.

It can rightly be asked why all stages of the *laysa* cycle appear to be stacked one atop the other. In the first place, Croft himself notes the overlap of stages (1991: 22; c.f. Veselinova 2016: 146, 149, 151–154). In the second, the Arabic of writing was codified in the eight through tenth centuries and has changed but little since then, such that Arabic texts produced in the eighth century remain intelligible to readers today, and modern writers adhere to their modes of expression (Wilmsen 2016a: 340). As it stands, the *laysa* cycle is not likely to proceed further, with *laysa* becoming the regular negator, precisely because of the archaic character that its users cultivate to the present day, tolerating but little deviation from it. Noteworthy, too, is that *laysa* is used in writing but hardly ever in speech.

3 The *šī* cycle

For their parts, spoken varieties of Arabic possess between themselves several existential particles (Eid 2008).[10] These are listed in Table 1.

Table 1: Existential particles in spoken Arabic varieties

Existential particle	Negation	Provenance
aku	*mā-kū(-š)*	Iraq, Kuwait, Bahrain
bī	*mā bī(-š)*	Syrian steppes, central/ southern Arabian Peninsula
fī	*mā-fī(-š)*	Libya, Egypt, Levant, Arabian Peninsula/Gulf
kāyen	*mā-kāyen-š*	Morocco, Algeria
šī	*mā šī*	Bahrain, UAE, Oman, Yemen
θamma, famma, emm	*mā (θ/f)ammā-š, mem-š*	Tunisia, Malta

Most dialects of Arabic possess only one existential particle, but the Arabic varieties of the southern Arabian Peninsula are remarkable for the presence of multiple particles. Bahrain has *aku, fī*, and *šay* (Holes 2016: 110); the Yemen has *šī, fī*, and *bī* (Behnstedt 2016: 346–348, maps 136 & 137); and Oman and the UAE

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[10]The *šī* cycle is examined at greater length in Wilmsen (2020a).

possess both *fī* and *šī* – the latter variously realized as *šayʔ*, *šayy*, *šē*, or *šī* (Reinhardt 1894: 112; Johnstone 1967: 170; Brockett 1985: 24; Holes 1990: 71; Holes 2016: 24–28; Davey 2016: 162). All of these are negated with the negator *mā* common to all spoken dialects of Arabic, which, characteristic of a stage A, negates verbal predications and non-verbal existential predications alike. Indeed, (Croft 1991: 7) adduces usage from Syrian Arabic as an example of a stage A. Compare Croft's examples with an almost identical matched pair from Emirati Arabic:

(11) Emirati Arabic (Sharjah)

   a. *mā a-ʕraf   ism-ə*
       NEG 1SG-know.IPFV name-PRO.M.3SG
       'I know not its name.' (SMA data)

   b. *mā   šay biyūt*
       NEG EX houses
       'There [were] no houses.'(SMA data)

For its part, the exential particle *fī* has not proceeded beyond Stage A, but exential particle *šī* has. In Emirati Arabic, *šī* shares the existential function with *fī*:

(12) Emirati Arabic (Sharjah)
      mā šī fayda
      mā fī fayda
      NEG EX benefit
      'There [is] no benefit.' (SMA data)

A contrast in usage obtains between the two particles in their affirmative and negative functions in Emirati Arabic. Wilmsen (2020a: 528) had observed from limited data that the negation *mā šī* occurs about twice as often as the affirmative *šī* and that affirmative existential predication occurs more often with *fī* than with *šī*. The SMA recordings, from which some of the data for the current study come, reveal a more precise view of the matter. In them, speakers who have occasion to use existential predications use a reflex of *māši* in negation 90 times, as opposed to 32 with *mā fī*. To the contrary, they use *fī* in affirmative existential predication 34 times as opposed to their using *šī* in the affirmative only six times, with some speakers not using it at all. That is, full 85 percent of existential predications are with *fī* and 72.8 percent of existential negations are with a variant of *māši*.[11]

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[11]A similar situation obtains in Yemeni Dialects of Arabic, in which, as Behnstedt observes, "the negative form may differ from the positive one in its base lexeme ... such as *bū* 'there is', *mā šī* 'there is not' (2016: 345). We shall return to existential *bī* below.

These figures are summarized in Table 2.

Table 2: Occurrences of Emirati existentials and their negations in SMA oral histories

	šī	*fī*	*māšī*	*mā fī*
Speaker 1F	0	0	25	4
Speaker 2F	3	1	21	5
Speaker 1M	0	10	18	8
Speaker 2M	2	13	17	7
Speaker 3M	1	5	6	4
Speaker 4M	0	5	3	4
Totals	6	34	90	32
Percentages	15	85	72.8	26.2

3.1 Stage A>B of the *šī* cycle

Such alternation in usage is in accordance with Croft's conception of Stage A>B, in which "a special negative existential form is found … in addition to the regular existential form" (1991: 7). In this case, the regular existential form being precisely the *fī* that he adduces, albeit for the Syrian Arabic of Damascus. So, too, are univerbations between the negator and the existential particle common in a stage A>B, the negator so formed existing side-by-side with the regular negator + existential particle construction. Existential *šī* does form a univerbation with the negator *mā* to form *maši*. In such a form, reflexes of *maši* can stand alone as an element of negation:

(13)   Emirati Arabic (Sharjah)
   lāʔ   (.) mašay (.) inʕidm-it   ha-l-ašyāʔ
   NEG   NEG.EX   disappear.PFV-F.3SG DEM-DET-things
   'No. There [are] not. These things have disappeared.' (SMA data)

A caveat is that according Croft, "the contracted form is the newer one" (Croft 1991: 7). This is likely true of *maši*; but existential *fī* and its negation *mā fī* are relatively new, too. This much has been said about Omani dialects of Arabic (Brockett 1985: 24; Holes 1990: 71; Bernabela 2011: 61; Davey 2016: 171). It appears to be true of Emirati Arabic, too.

3.2 Extension of Stage A>B in the *šī* cycle

A further univerbation occurs between the negator *mā*, a 3rd-person pronoun *hū* 'he/it [is]' or *hī* 'she/it [is]'), and the existential *šī*, usually but not always reduced to /-š/:

(14)   a.   *mā hū šī*   *> māhūš > mūš > muš*
        NEG PRO EX   NEG   NEG   NEG

    b.   *mā hī šī*   *> mahīš > mīš > miš*
        NEG PRO EX   NEG   NEG   NEG

A clear indicator of the derivation comes from Tunisian Arabic and the closely related peripheral (or remnant or enclave) variety of Arabic Maltese. Tunisian Arabic exhibits several reflexes of both, including *māhūš(i) mauš(i), mūši, muši, muš,* and *māhīš(i) mayīš, maiš, mîši, miši, miš;* it even has a reduced form *mumš,* derived in the same manner as that in (14), but with the plural 3rd person pronoun *hum* 'they/them' (Singer 1984: 718). For its part, Maltese exhibits the derivation in its orthography, which represents the word, realized *mūš* in speech, as <mhux>. Other such precursors to *muš* and *miš* are widely attested and well documented in Arabic dialects from the Yemen to Morocco.[12]

Like *laysa*, both *maši* and *muš/miš* have extended into the negation of equational sentences, especially in dialects of the Yemen (Watson 1993: 253, 258),[13] where, for example, in the dialect of Sana'a, Yemen, either *miš* or *muš* in addition to shortened forms *māš* or *maš* negate equational sentences (Watson 1993: 253–256):

(15)   a.   *māš hī*   *ħāliy-ih*
        NEG PREP.F.3SG pretty-F.SG
        'She [is] not pretty.' (Watson 1993: 256)

    b.   *anā miš fi-l-bayt*   *ğāls-ih*
        PRO NEG PREP-DET-house sitting-F.SG
        'I [am] not sitting at home.' (Watson 1993: 258)

In Arabic varieties elsewhere, reflexes of *muš/miš* and *maši* also negate non-verbal predications as the usual negator of equational sentences:

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[12]Rather than reference the many studies documenting the phenomenon, reference is here made to the discussion in Wilmsen (2014: 100–101).

[13]In Emirati Arabic, equational sentences are usually negated with *mū* or *mub*, more on which below.

(16) a. Lebanese Arabic (Beirut)
          hiyye   miš hōn
          PRO.F.3SG NEG DEM
          'She [is] not here.' (Own data)[14]

      b. Egyptian Arabic (Cairo)
          ir-rayyis   miš hina
          DET-headman NEG DEM
          'The boss [is] not here.' (Woidich 2006: 334)

      c. Moroccan Arabic (Casablanca)
          huwa   maši hna
          PRO.M.3SG NEG DEM
          'He [is] not here.' (Harrell 2004: 155)

The negator *miš* is found in Emirati Arabic, too, but it is likely a borrowing from Egyptian and Levantine varieties of Arabic, brought to the Emirates by the large expatriate populations of speakers of those varieties, who are attracted to the Emirates by the many career opportunities.

3.3 Excursus on grammatical *šī*

It behooves us to note the plural *ašyāʔ* 'things' in (14) and its singular form *šayʔ* 'thing' in (10a), one of the many words with that designation in Arabic (c.f. *ʔamr* in [8]). Before much was known about existential *šī*,[15] speculation had it that the *ši* in negation (i.e., the suffixed /-š/ in some varieties in Table 1) derives from the word for 'thing'. The stock demonstration of this being as follows:

(17) *mā katab   ši   > mā katab-š*
      NEG write.PFV thing   NEG write.PFV-NEG
      'He wrote not [a] thing.' > 'He wrote not.'

As such, it has even been suggested that it plays a role in a presumed *Jespersen cycle* in Arabic (Lucas 2007). Briefly, Jespersen cycle refers to the process whereby a lexical item such as, emblematically, the French word *pas* 'step' becomes closely bound up with negation and can come to replace the negator itself,

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[14]The Lebanese examples in (17) and (19) are drawn from my observations while living in Beirut from 2007 to 2016.

[15]Although it had been attested sporadically since the late 19th century (Reinhardt 1894: 112; Johnstone 1967: 170; Brockett 1985: 24), it has remained largely unexamined until recently (Holes 2016: 24–28, Wilmsen 2017, 2020a).

as with some colloquial French varieties, which negate with *pas* alone without the standard preposed negator *ne*. The difficulty with postulating this cycle for Arabic, as pointed out by Woidich (1990: 139), is in the unmotivated change of valence between the transitive 'he didn't write a thing' and 'he didn't write' and the loss of the predicate between 'it is not a thing' and 'it is not.' What is more, it happens that reflexes of *šī* perform many functions in spoken Arabic varieties; in interrogation, negation, as an indefinite article, and a quantifier (Wilmsen 2014: 44–63; Wilmsen 2017). All of these are presumed to derive from the *šī* of 'thing' (for a recent iteration of this, see Glanville 2018), even though many of them are quite un-thing-like in semantics.

3.4 The B>C Stage of the *šī* cycle

A true stage B would see "only a special negative existential form" (Croft 1991: 9). That has not yet occurred in the Arabic dialects possessing reflexes of *šī* as an existential particle. Like the *laysa* cycle, the *šī* cycle appears to have skipped a stage B. It resumes in Stage B>C, which Croft defines as "gradual substitution of the negative existential for the verbal negator in only part of the verbal grammatical system" (1991: 10). Accordingly, *miš/muš* and reflexes can occasionally negate verbs:

(18)   Egyptian Arabic (Cairo)

   a.   *miš ħa-yi-gi*
        NEG FUT-3-come.IPFV
        'He will not come.' (Doss 2008: 87)

   b.   *miš ʔul-ti   la-k*
        NEG say.PFV-1SG DAT-PRO.M.2SG
        '[Did] I not tell you?' (Doss 2008: 87)

   c.   *miš ittafaʕ-t   maʕ-āh   wa-bass   maḍḍ-ēt-uh*
        NEG agree.PFV-1SG PREP-PRO.M.3SG PREP-ADV had.sign.PFV-1S-PRO.3M
        'I didn't just agree with him; I had him sign.' (Doss 2008: 86)

   d.   *bi-ya-axud   fulūs   miš bi-y-gīb   fulūs*
        HAB-3-take.IPFV money NEG HAB-3-get.IPFV money
        'He takes money; not brings money.' (Al-Sayyed & Wilmsen 2017: 248)

e. Lebanese Arabic (Beirut)

b-a-ʕzim-kon   *ʕalā ʔahwe miš ti-šrab-ū*   *šāy*

HAB-1SG-invite.IPFV-PRO.2PL PREP coffee NEG 2-drink.IPFV-PL tea

'I'm inviting you for coffee; [Mind] you not drink tea [beforehand].'
(Own data)

Verbal negation with *miš/muš* instead of the usual *mā* usually imparts some especial pragmatic meaning to the negation. That in (18b) is a rhetorical negation, a negative assertion intended to solicit an affirmative reply; in (18c) it is metalinguistic negation, denying something other than the truth value of the utterance (the speaker, did, in fact, agree); (18d) contrasts a negated proposition against its affirmative; and (18f) is a dehortative (Wilmsen 2016b). In any of these, the regular verbal negator *mā* can, and usually does, apply. As such, these are not true instances of a Stage B>C. For its part, (18a), as an example of a regularly applied verbal negations in a specific sub-domain of verbal negation, is a manifestation of a true Stage B>C. It furthermore appears that *miš/muš* is trending towards the negation of pragmatically unmarked verbs in the dialect of Cairo (Brustad 2000: 303; Doss 2008; Håland 2011; Wilmsen 2020a: 519).

3.5 Stage C and beyond of the *šī* cycle

A characteristic Stage C appears in only two dialects of Arabic: the Egyptian Arabic of the Sharqia governorate north of Cairo, and in the dialect of the Abyan province of southernmost Yemen. As for the former, *miš* "used for negation of imperfect and perfect verbs … appears to be common" (Håland 2011: v, 70–72):

(19) Egyptian Arabic (Sharqia Governorate)

a. *miš xad-it*   *ʕalā l-luġa*
NEG take.PFV-F.3SG PREP DET-language
'She [has] not taken to [= gotten used to] the language.' (Håland 2011: 59)

b. *miš yi-nfaʕ*
NEG 3-benefit.IPFV
'It benefits not.' (Håland 2011: 72)

So, too, have there been reports of the spread of verbal negation with *muš/miš* in the dialect of the capital city Cairo (Brustad 2000: 301–306; Doss 2008; Wilmsen 2020a: 525), but these remain to be explored in greater detail. It is, nevertheless, a phenomenon of which speakers of Egyptian Arabic are aware (Brustad 2000: 301; Håland 2011: 65–72).

As for the latter, "the Abyani dialect, in particular the Zingabari dialect … employs a single negative marker mish [sic] to negate all types of constructions" (Ahmed 2012: 33), making it a true stage C:

(20)　Yemeni Arabic (Abyan Governorate)

　　a.　*bū-k　　　　miš dafaʕ　dayūn-uh*
　　　　father-PRO.M.2SG NEG pay.PFV debts-PRO.M.3SG
　　　　'Your father paid not his debts.' (Ahmed 2012: 35)

　　b.　*miš ya-zūr-u　　giddit-hum　　　ði-l-ayām*
　　　　NEG 3-visit.IPFV-PL grandmother-PRO.3PL DEM-DET-days
　　　　'They visit not their grandmother these days.' (Ahmed 2012: 38)

A stage C>A appears to be attested only in dialects of Egypt, wherein *muš/miš* may occasionally negate the existential *fī*, which is otherwise more normally negated with the verbal negator *mā*:

(21)　a.　Egyptian Arabic (Cairo)
　　　　miš fī sabab muħaddad
　　　　NEG EX reason defined
　　　　'There [is] no special reason.' (Doss 2008: 89)

　　b.　Egyptian Arabic (Sharqia Governorate)
　　　　miš fī šuɣl hina
　　　　NEG EX work DEM
　　　　'There [is] no work here.' (Håland 2011: 71)

Meanwhile, the erstwhile existential particle *šī/šay* has almost completely lost its identity in most varieties of Arabic, where it has become grammaticalized into a new negator *miš/muš*, as well as assuming other functions (Wilmsen 2014: chpt. 3; Wilmsen 2017). This bespeaks another commonality with the *laysa* cycle: As the existential particle is incorporated into a negator and becomes involved in all manner of equational-sentence negation, it loses its existential identity and is replaced by a newer existential particle.

4　The *bī* cycle

An existential *bī* obtains from the Syrian Plateau (Behnstedt 1997: 346–348, map 336), through Central Arabia (Ingham 1994: 44–45), to the Yemen (Behnstedt 2016: 346, map 136).[16] As with the existential particle *fī* (Croft 1991: 7), negations of ex-

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[16]I have addressed the *bī*-cycle in greater detail in an as yet unpublished manuscript Wilmsen (2020b).

istential particle *bī* are usually type A, with the regular verbal negator (in spoken Arabic *mā*) negating the existential particle:

(22) a. Yemeni Arabic (al-Hudeidah)
      mā ya-ʕref-š   *ðe*
      NEG M.3SG-know.IPFV-NEG DEM
      'He knows not that.' (Simeone-Senelle 1996: 210)

    b. Yemeni Arabic (Sana'a)
      ħānā mā bih ħadd
      DEM NEG EX one
      'Here there [is] no one.' (Watson 1993: 163)

Both existential *bī* and existential *fī* likely derive from an original common Semitic preposition **pi* meaning 'in' (Lipiński 2001: 470), and, as prepositions, the two are often interchangeable in their usage (Cowell 2005: 479). Likewise, as existential particles, the two are also almost identical in their usage, albeit usually appearing separately in distinct dialects, probably both deriving from the preposition and an affixed 3rd person pronoun:

(23) *bī-/fī-h*   *> bī(h)/fī(h)*
     PREP-PRO.M.3SG   EX

Of the two, *bī* shows signs of entering a negative existential cycle, whereas *fī* does not.

4.1 Excursus on grammatical *bi-*

Aside from being an existential particle and a preposition meaning 'in' or 'with', the latter often with instrumental usage, for example, *bi-l-īd* 'by hand', *bi-* performs other grammatical functions in diverse varieties of Arabic, serving as a proclitic marker of the indicative mode in Egyptian (Woidich 2006: 61, 280–284) and Levantine (Cowell 2005: 180, 324–329) varieties of spoken Arabic.[17] Woidich delineates its major functions in Egyptian Arabic as marking the actual (a) or habitual (b) action of the verb:

(24) Egyptian Arabic (Cairo)

    a. *dilwaʔti bi-t-labbis*   *il-ʕarūsa*
      ADV   IND-F.2SG-dress.IPFV DET-bride
      'Now, she [is] dressing the bride.' (Woidich 2006: 281)

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[17]Retsö (2014: 64) lists other Arabic dialects where it also functions as such.

b. *l-ʔaṭri   bi-y-ʔūm   is-sāʕa   tamanya*
   DET-train HAB-M.3SG-arise DET-hour eight
   'The train leaves at eight.' (Woidich 2006: 281)

It also functions as a marker of futurity (Cowell 2005: 326):

(25) Syrian Arabic (Damascus)
      baʕd bukra   b-i-rūħ   ʕa-l-madrasa
      PREP tomorrow FUT-3-go.IPFV PREP-DET-school
      'The day after tomorrow, he will go to school.' (Cowell 2005: 324)

Marking futurity is also one of its main functions in the dialects of the Arabian Gulf, Oman, and Yemen (Persson 2008, Retsö 2011, 2014). In Egyptian and Syrian Arabics, the future so marked is more of an imminent potentiality, whereas in southern peninsular Arabic the future could be any time from near (26a) to far (26b):

(26) Emirati Arabic

      a. *iðā   ṣār   maʕ-i   šayy b-a-ttaṣil*
         COND happen.PFV PREP-PRO.1SG thing FUT-1SG-contact.IPFV
         fī-k
         PREP-PRO.M.2SG
         'If anything happens with me, I'll call you.' (Jarad 2017: 750)
      b. *b-a-kammil   dirāst-i   f-amrīkā*
         FUT-1SG-continue.IPFV study-PRO.1SG PREP-name
         'I will continue my studies in America.' (Jarad 2017: 751)

The origins of the verbal prefix *bi-* are also disputed, with some proposing that in Gulf and southern peninsular varieties of Arabic it is a verb of volition *abā/y-abī* 'he/it wanted/he/it wants' (Retsö 2014: 67; Owens 2018: 217–219), while that of the Egyptian and Levantine dialects of Arabic is the preposition *bi-* (Retsö 2014: 66, 70).[18]

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[18]The derivation of the *bi-* verbal prefix in the Arabian peninsular dialects makes sense, in that verbs of volitions are very common sources for future markers. A simple reconstruction from that source, however, is complicated by its use in Yemeni and Omani Arabic as marking both the habitual/indicative and the future. See discussion of the merits of these and other derivations and references to the pertinent studies of the matter in Wilmsen (2020b), where it is argued that another grammatical function of *bi-*, as an adjunct to negation, addressed in the next section, does, indeed, arise from the preposition *bi-*, but by way of existential *bī* (< *bi-hi* 'in it'), which then becomes involved in an attenuated negative existential cycle.

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4.2 Negations with *bi-* in equational sentence negation

Another grammatical function of *bi-*, not hitherto explored in any depth, is its involvement in negation, whereby it may act conjointly with the regular verbal negator *mā*, usually in the negation of equational sentences:

(27) Emirati Arabic (Sharjah)
čidb ʕalā xaṭa mā bi-zēn
lie PREP fault NEG NEG-good
'[A] lie about an error [is] not good.' (SMA data)

The two negators *mā* and *bī* can merge into a single negative particle, by which they act upon equational sentences in a manner analogous to that of *māšī*:

(28) a. Omani Arabic (Sharqiyya)
ʕadan māb zēna al-ḥīn
name NEG good DET-time
'Aden [is] no good now.' (Holes 2008: 485)

b. Emirati Arabic (Sharjah)
ba-ti-ylis-ūn   fī   l-maylis   ti-smaʕ-ūn   fī-h
FUT-2-sit.IPFV-PL PREP DET-majlis 2-hear.IPFV-PL PREP-PRO.M.3SG
šay   mab   zēn
thing NEG.EX good
'You would sit in the majlis, hearing something in it not good.' (SMA data)

Another commonality, attested form in Gulf Arabic from Kuwait through the Emirates is a univerbation of the negator *mā*, the 3rd person pronoun *hū*, and *bī*, yielding *mub* (Holes 1990: 64, 73, 116, 243):

(29) Emirati Arabic (Sharjah)
mub fī-š-šarǧǝ
NEG PREP-DET-place.name
'Not in Sharjah.' (SMA data)

The derivation of *mub* would have proceeded along a similar pathway to that of *muš/miš*:

(30)   *mā hū bi > mahub > mub*

4.3 The *mā hū bī* sequence: Southern Arabia *mā-hū*

Remnants of this process are on display in southern Arabic varieties from the southernmost Hadramawt province of Yemen (Al-Saqqaf 1999: 185–186) into Najd (Ingham 1994: 44) in central Arabia, and the Hijaz along the west coast (Omar 1975: 41). In these dialects, personal pronouns can affix to the negator *mā*:

(31)   a.   Haḍrami Arabic (Southern Yemen)
           māhu   rayyiẓ   minn-ak   il-kalām   da
           NEG.M.SG agreeable PREP-PRO.M.2SG DET-word DEM
           This word [is] not right from you.' (Al-Saqqaf 1999: 186)

       b.   Haḍrami Arabic (Southern Yemen)
           is-sitra   māhi   mumḥūẓa
           DET-wall NEG.F.SG mudded
           'The wall is not plastered.' (Al-Saqqaf 1999: 186)

       c.   Zahrani Arabic (Southern Saudi Arabia)
           al-bint   māhi   fi-d-dār
           DET-girl NEG.F.SG PREP-DET-house
           'The girl [is] not in the house.' (Alzahrani 2015: 305)

       d.   Zahrani Arabic (Southern Saudi Arabia)
           ar-raǧǧāl māhu   hinya
           DET-man NEG.M.SG here
           'The man [is] not here.' (Alzahrani 2015: 307)

In the central Hijaz, a reduced form *mū* exists alongside *māhu*:

(32)   *huwwa   mū min hina*
       PRO.M.3SG NEG PREP DEM
       'He [is] not from here.' (Omar 1975: 41)

4.4 The *mā hū bī* sequence: Central Arabia *muhub*

Some of the dialects of the central Arabian Peninsula take *māhū* and *mū* a step further, affixing /-b/ on the negator + pronoun:[19]

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[19]See Prochazka (2010: 127) for a rough distribution of peninsular dialects that augment *mā* + pronominal suffix with /-b/.

(33)   Najdi Arabic (Central Saudi Arabia)

  a. *Ali muhub fi l-bēt*
    name NEG.M.3SG PREP DET-house
    'Ali [is] not in the house.' (Binturki 2015: 75)

  b. *as-syār-a   mahīb xarban-a*
    DET-automobile-F NEG.F.3SG ruin-F
    'The car [is] not broken down.' (Binturki 2015: 76)

According to Ingham (1994), the elements can be further reduced, while remaining discrete units:

> In nominal sentences the construction *ma...b-* occurs. This is a peculiarity of Central Najdi [Arabic] and occurs also as an alternative structure in Classical [i.e., written Arabic].[20] With the *ma...b-* construction, the relevant personal pronoun is also introduced producing a topicalized structure of the type 'Hasan, he is not here'. The resulting complexes *ma hu b-* 'he is not' or *ma hi b-* 'she is not' are often reduced to *mu hu b-* or *mu b-* and *mi hi b-* or *mi b-*. (Ingham 1994)

Ingham does not speculate as to the origin of the *b-* in these. For his part, Binturki (2015: 74, 133; after Matar 1976) proposes that it derives from an "an emphatic −b". The parallel development between *muš/miš* and *mub*, however, suggests the possibility of a derivation from the existential particle *bī*. Wilmsen (2017: 288–289) discusses the quasi-copular qualities of grammaticalizations of existential *šī*. The *bī* of negation also possesses a quasi-copular quality.

4.5 The *mā hū bī* sequence: Arabian Gulf *mub*

Negating non-verbal predications with *mub* is emblematic of Gulf Arabic in general, but it is more common in the southern Arabian Gulf than in the northern, with the frequency of usage increasing dramatically between Kuwait, where *mū* accounts for more than 90 percent of usage, and the United Arab Emirates, where *mū* barely reaches 40 percent of usage, and *mub* approaches 50. These figures, summarized in Table 3, come from an electronic corpus of Gulf Arabic (Khalifa

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[20]The reference is to negations of equational sentences with *laysa*, which can optionally occur with *bi-*; for example, *laysa ğayyid* and *laysa bi-ğayyid* both mean '[It is] not good,' with no apparent pragmatic difference between the two. Negations with *mā … bi-* are a less-common option in written Arabic.

et al. 2016). The corpus comprises a genre of online conversational novels, composed in conversational Gulf Arabic of the countries of the Gulf Cooperation Council (GCC): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE. Not every country (and thus its corresponding dialect) is represented equally in the corpus, with roughly 61 percent of the texts coming from Saudi writers, to only thirteen percent from writers from the UAE, with numbers dropping considerably from there. Nevertheless, by comparing frequencies within each dialect area, an idea may be formed about the common usage within each one.

Table 3: Instances and relative frequencies of non-verb negators in Gulf Arabic varieties

	Kuwait		Bahrain		Qatar		UAE	
	%	#	%	#	%	#	%	#
mū	**92.46**	18609	**67.28**	475	**27.75**	543	**39.71**	20065
mahub	0.15	30	10.20	72	6.75	132	1.60	809
mub	**5.41**	1089	**20.25**	143	**46.29**	906	**47.43**	23963
hub	1.98	399	2.27	16	19.21	376	11.26	5690
Totals	100%	20127	100%	706	100%	1957	100%	50527

As may be seen, negation techniques for non-verbal predications form a cline from Kuwait to the Emirates, whereby Kuwaiti Arabic uses *mū* in roughly 93 percent of such negations and *mub* a scant 5.4 percent. The further south the dialect area, an inverse relation develops, with Qatari and the Emirati dialects use of the negator *mub* rising to between 46 and 47 percent against the use of *mū*. Noteworthy, too, is the negator *hub*, used in Qatari and Emirati Arabic.

As for the dialects of the two other GCC member states, the Gulf Arabic corpus shows an 86.5 percent usage of *mū* in texts from Saudi Arabia and a corresponding 9 percent usage of *mub*. For its part, usage in Omani texts is almost exclusively with *mū* at over 98 percent of occurrences. Omani dialects are a separate grouping from those of the Arabian Gulf, and the Saudi Arabian dialects represent at least four distinct regional groupings, central (Najdi); western (Hijazi); southern, closely related to Yemeni Arabic; and those of the eastern seaboard, which fall within the Gulf Arabic type. The origins and locales of the Saudi authors cannot always be determined, such that it cannot be certain whether they are all writing from the eastern province, in which Gulf dialects prevail. Nevertheless, the ratios of *mū* and *mub* conform to the cline from the northern Gulf to the southern.

4.6 Subsequent stages of the *bī* cycle

Generally, a negator of non-verbal predications, *mub* may occasionally negate verbs with the same sort of pragmatic intent with which the negation of verbs with *miš/muš* in (18), that in (34a) being a dehortative and in (34b) contrasting a negated proposition against its affirmative:

(34)   Emirati Arabic (Sharjah) (SMA data)

    a. *mub t-yī-ni   ʕugub   sana ti-gūl waṭani*
        NEG 2-come.IPFV PRO.1SG PREP year 2-say.IPFV patriotic
        '[Mind] you not come [to] me after a year, to say [that you are a] patriot.'

    b. *sār   i-ṭāliʕ   mnū yi-digg   il-bāb   mub gāl*
        go.PFV 3-see.IPFV who 3-knock.IPFV DET-door NEG 2-say-PFV
        gūm-ī   fulān-a   inti tāliʕ-ī-h   wa lā fulān
        arise.IMP-F so-and-so-F PREP look.IMP-F-PRO.3MS CONJ NEG so-and-so
        gūm   tāliʕ-ah
        arise.IMP look.IMP-PRO.M.3SG
        'He [himself] went [to] see who knocks [at] the door; he said not "Get up you or you, see who".'

As with verbal negations with *mub* or *miš/muš*, any of these negations can also be accomplished with the regular verbal negator *mā* or, in the prohibitive, *lā*. The use of an otherwise non-verb negator invests the utterances with an added element of meaning. As such, verbal negations with *mub* are not true expressions of a stage B>C, but they do provide impetus for a "gradual substitution of the negative existential for the verbal negator in only part of the verbal grammatical system" (Croft 1991: 10), as would be characteristic of that stage.

There is a stage C in the *bī* cycle. It is possible, however, to find *mub* negating existential *fī* in a manner consistent with a stage C>A:

(35)   Emirati Arabic (Abu Dhabi)
     il-ʕarab   mub fī fi-l-bēt
     DET-ethnonym NEG EX PREP-DET-house
     'The people [are] not there in the house.' (Al-Rawi 1990: 121)

5 Discussion

Of the three Arabic negative existential cycles, the *laysa* cycle has progressed through all stages of the cycle, reaching Stage C in an extinct variety of Arabic in

which reflexes of *laysa* were the most common negator of verbal and non-verbal predications alike. It also, to this day, usually negates newer existential particles, in the characteristic manner of a Stage C>A. The *šī* cycle has progressed into a characteristic Stage B>C in its regular negation of futurity in verbs with *miš/ muš*, a univerbation of the regular verbal negator, the 3rd-person pronoun, and the existential particle. As for the C stage and beyond, only in a few dialects of Egyptian Arabic does it appear to have moved or to be moving into a true stage C. Otherwise, only the dialects of the Abyan province of the southern Yemen have reached a complete stage C. For its part, the *bī* cycle only manifests stages of the A arc of the cycle, its sole similarity of a stage A>B being its univerbations leading to *mub*, analogous in all respects to *miš/muš* of the *šī* cycle. A univerbation by itself is not a condition for a stage A>B; the negator so formed must also continue to negate existential predications. Only in the *laysa* cycle is that to be seen, and then only in certain contexts involving locatives. It would appear that in all three cycles, the univerbation forms in an incipient stage A>B, whereupon the new negator begins to act upon other types of predications, notably equational sentences of all types. In that respect, neither *mub* nor *miš/muš* are negative existential particles as such, negating, as they do, other types of equational predications than the existential ('it is not' as opposed to 'there is not'). They do, however, derive from univerbations between the negator, a 3rd-person pronoun, and an existential particle.

A word about the missing Stage B is in order. Calling for elaboration of the negative existential cycle model, Veselinova (2014) holds that it should, "allow for lexicalizations of negation other than special negative existentials to enter the Cycle", observing that "it is a process in which not just negative existentials but also other lexicalizations of negation are involved" (2014: 1338, 1139). A commonality between all three cycles in Arabic is in an incipient stage A>B univerbation extending into equational sentence negation. Considering that at that stage in all three, too, the existential particle begins to lose or completely loses its identity as such, skipping a stage B seems inevitable. The stages of all three cycles are tabulated in Table 4, the darkly shaded cells indicating a clear manifestation of the relevant arc of the cycle, the lightly shaded ones indicating a partial or incipient entry onto a stage:

A relative chronology emerges from this. In her examination of the cycle in several language families, Veselinova (2014: 1373; 2016: 154) estimates a time frame of about two millennia for the completion of the cycle. Accordingly, by the schema in Table 4, the *laysa* cycle would be the longest running. It appears in the earliest extensive Arabic writing, dating to the 7th century AD, more than 1,300 years before present, by which time, it had reached Stage A>B (Wilmsen 2016a: 350).

Table 4: Stages of Arabic negative existential cycles

Cycle	Stage A	Stage A>B	Stage B	Stage B>C	Stage C	Stage C>A
laysa	✓	✓		✓	✓	✓
šī	✓	✓		✓	✓	✓
bī	✓	✓		✓		✓

By Veselinova's reckoning, the *laysa* cycle should have begun more than half a millennium before attested usage appears, that is, around the 2nd century AD. Indeed, it could have begun even earlier than that. Considering that it reached Stage C in the Arabic of Al-Andalus at the latest by the 12th century, its beginnings may extend to the 9th century BC.

By that same scenario, the *šī* cycle must have begun later, although it is impossible to date how much later, because the earliest documentation of an existential *šay* does not come until the end of the 19th century (Reinhardt 1894: 112), late in the progression of the cycle. By that time, the univerbation *miš/muš* had been observed as a negator of equational sentences and in the negation of verbs (Vollers 1890: 44). If the *šī* cycle has taken anywhere as long as the *laysa* cycle to come near to completion, it must have begun about the time that the *laysa* cycle was reaching Stage B, that is, the 8th or 9th century at the latest.

For its part, the *bī* cycle is evidently the youngest of the three, having reached incipient stages A>B and early manifestations of a stage A>B only. Nor does it seem likely that it will progress further. It appears that the negator *mub* had only recently reached its current form in Gulf varieties of Arabic after 18th century tribal migrations to the Gulf from the Najd (Holes 2006: 28–30), where a negator *bī* appears to have originated.

5.1 Extensions and commonalities

In worldwide and family-based sampling of languages Veselinova (2016) presents a preliminary typology of the negative existential cycle, cataloguing numerous features that appear frequently in languages undergoing it. The three Arabic cycles share in some of these, also exhibiting some properties of their own.

5.1.1 Overlap of stages

Noticeable is the cotemporal occurrence of several stages of a negative existential cycle. This is a defining feature of the negative existential cycle as Croft ini-

tially conceived of it: "The sequencing is not absolute: it is not the case that one diachronic process is completed before the next process in the sequence begins [...] Thus, sequencing of diachronic processes must allow for temporal overlap" (Croft 1991: 22). This is seen to an extreme degree in the *laysa* cycle, in which all stages are present and overlapping. Otherwise, a complete overlap of stages is unusual. Veselinova (2016: 151–154 and passim) confirms this, finding, "overlap of different, non-sequential types/stages [...] in one and the same language" (2016: 154, emphasis added) to be common.

More typical, then, is the *šī* cycle, in which stages A and A>B overlap in the Arabic dialects of the Yemen, where univerbations *māšī* and *miš/muš* are both found, both extending into the realm of equational sentence negation. Elsewhere, in the dialects of the Levant and Egypt, the existential particle is *fī*, not *šī*, although remnants of an affirmative existential *šī* persist in an indefinite quantifier (Wilmsen 2017), but the univerbation *miš/muš* of a stage A>B persists as an equational-sentence negator and as a negator of a specific subdomain of verbal negation, characteristic of a stage B>C. Verbal negations with *miš/muš* are documented in Egyptian Arabic in the late nineteenth century and mid-twentieth century, but they must have been occurring earlier. Wagner (2010: 158) has recently documented a verbal negation with *mš* in a fifteenth-century document from Egypt. A stage C is not documented until the 20th century in a provincial dialect of Egyptian Arabic, but it, too, likely emerged before then.

In the *bī* cycle, too, the existential particle is present in a stage A in a set of Arabic dialects, in the Yemen, central Arabia, and the Syrian Plateau, but the later stage A>B appears in the univerbations *mab* and *mub* in Gulf dialects. In those latter dialects, too, the existential particle is either *šī* or more recently *fī*, not *bī*, but remnants of an existential *bī* persist in the negation complex *mā b(i)*. Indeed, in the Gulf dialects, with their A>B univerbations *māšī* and *mub*, the *šī* cycle and the *bī* cycle themselves overlap. The same might be said for Yemeni varieties, where *mā b(V)*, *mā šī*, and *māšī* are found.

5.1.2 Renewal of the existential particle

Veselinova speaks of the "constant renewal of the negative existential" (2016: 173). In the Arabic cycles it is the affirmative existential particle that is constantly being renewed. In all three, the original particle disappears as the cycle progresses. That of the *laysa* cycle, *ʔys*, has long ago disappeared. In those Arabic varieties outside the southern Arabian Peninsula passing through the *šī* cycle, the existential particle *šī* has ceased to be used as such. Although grammaticalizations of the particle do persist, their existential origin is no longer transparently recognizable. In all cases, other existential particles arise to take the place of the

erstwhile existential particles that have disappeared into other grammatical operations. To paraphrase Veselinova, existential predication "is so important in human language that it is constantly maintained" (Veselinova 2016: 173).

5.2 A final commonality between Arabic negative existential cycles

We may coincidentally end, as Veselinova does (2016: 174), by drawing a distinction between the negative existential cycle and the Jespersen cycle. The *bī* and *šī* cycles share another remarkable commonality between the negators *mahub* and *mahūš*, by which each may do without negative element *ma*, resulting in the negators *hub* (cf. Holes 1990: 64, 73, 116; 2016: 106) and *huwāš* (Reinhardt 1894: 22):

(36)   a.   Emirati Arabic (Dubai)
         anā   *hub hindiyy-a*
         PRO.1SG NEG Indian-F
         'I [am] not Indian.' (Gumar)
   b.   Omani Arabic (Ad Dakhiliyah)
         huwā-š   *ʕumāni*
         PRO.M.3SG Omani
         'He [is] not Omani.' (Own data)

This gives the appearance of a so-called "Jespersen cycle" but Veselinova 2016: 53 points out a crucial difference between the two cycles: In the Jespersen cycle a particle that has little or nothing to do with negation eventually comes to oust the older negator. Contrariwise, in the negative existential cycle, an item that does belong to the negative domain is gradually incorporated into verbal negation.

6 Conclusion

The manifestations of the Arabic negative existential cycle are scattered across the map of the Arabophone world, with some varieties exhibiting only parts of the cycle. The negator *laysa*, is used universally in writing throughout the Arabophone world, but it is almost non-existent in speech, surviving as a remnant only in dialects of central and southern Saudi Arabia. The *laysa* cycle had reached the final C>A arc of the cycle but it was effectively blocked from proceeding further after the codification of the Arabic of writing beginning in the 8th century.

For its part, existential *bī* has not spread beyond the Arabian Peninsula, including the Syrian Steppes, and the *bī* cycle, too, appears the have been stymied from further development. Because the Gulf varieties of Arabic, where *mub* is

most often found, already possess other existential particles, it appears that *mub* itself has been shunted into the negation of equational sentences.

The existential particle *šī* exists as such only in the dialects of the southern Arabian Gulf, Oman, and the Yemen, yet its grammaticalizations occur in Arabic varieties from the Yemen to Morocco. So, too, is it the only one of the three cycles that appears to remain active, having already reached a full-on stage C in the Arabic of the southern Yemen, and it appears to be entering a stage C in Egyptian varieties of Arabic, too.

It appears, then, that the origin of the three existential cycles of Arabic is in Arabic varieties of the southern Arabian Peninsula, for it is there that remnants of all three remain.

Abbreviations

1	1st person	IPFV	imperfective
2	2nd person	M	masculine
3	3rd person	NEG	negator
CONJ	conjunction	NEG.EX	negative existential
DAT	dative	PFV	perfective
DEM	demonstrative	PL	plural
DET	determiner	PREP	preposition
EX	existential	PRO	pronoun
F	feminine	Q	interrogative
FUT	future	SG	singular
HAB	ongoing/habitual	SMA	Sharjah Museums
IMP	imperative		Authority
IND	indicative		

Sources

Gumar corpus: https://camel.abudhabi.nyu.edu/gumar/

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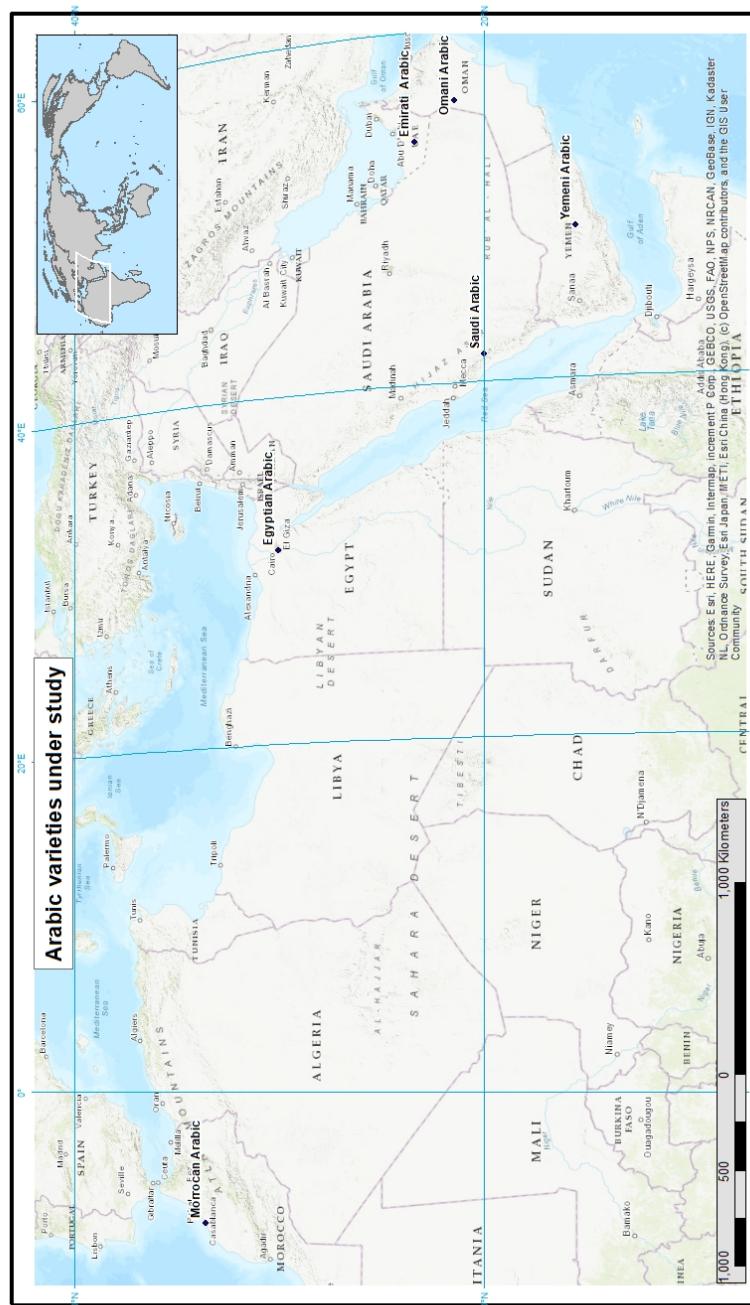
Figure 1: Arabic varieties under study

Chapter 5

The negative existential cycle in Ancient Hebrew

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Evidence of diachronic change as opposed to synchronic variation in Ancient (Pre-Modern) Hebrew is currently disputed, as is the relationship of Biblical Hebrew to later varieties of Hebrew as found in Qumran Hebrew and Mishnaic Hebrew. Recent work in historical linguistics, particularly the study of cyclical change in individual constructions, has provided a means to use stages of synchronic variation within a diachronic trajectory for analyzing how languages change. Such a diachronic trajectory includes synchronic variation, transitional stages and overlapping constructions. One cycle which manifests synchronic variation within a diachronic trajectory is the Negative Existential Cycle as introduced by Croft (1991). This cycle is evident in the ancient varieties of Hebrew and adds evidence to the claim that diachronic change is discernible in Ancient Hebrew. One additional change that is observed is a shift in subject agreement from more synthetic to more analytic in certain constructions, which is consistent with the Subject Agreement Cycle in van Gelderen (2011).

1 Introduction

Current research in the historical linguistics of Ancient Hebrew is engaged in a controversy concerning the evidence of diachronic change as opposed to synchronic variation in Biblical Hebrew and in the relationship of the language of

the Bible to later varieties of Hebrew as found in Qumran Hebrew and Mishnaic Hebrew.[1]

Traditionally, the Hebrew of the Bible was understood to exhibit at least two, if not three, diachronic stages – archaic Biblical Hebrew, classical Biblical Hebrew (of the monarchic period) and late Biblical Hebrew (of the post-exilic period).[2] Recently, however, the diachronic model has been challenged, by inter alia, Young et al. (2008) and Rezetko & Young (2014) who claim that Biblical Hebrew exhibits only synchronic variation and no clear trajectory can be made between Biblical Hebrew and the much later varieties of Pre-Modern Hebrew.[3] The issue is complicated by the oral-written context within which the Bible was written, by scribal redaction of the text, and by scribal transmission over more than a millennium. In this paper, we present an overview of the evidence for the negative existential cycle in Ancient Hebrew, including Biblical Hebrew and epigraphic Hebrew, and describe how this cycle demonstrates a trajectory from Biblical Hebrew to Qumran Hebrew and Mishnaic Hebrew.

After we introduce the syntactic indications of negative scope in Hebrew, we will describe the negative existential constructions. Then we will demonstrate the stages of Croft's (1991) Negative Existential Cycle which are present in Biblical Hebrew and how they persist or change in later varieties of Hebrew. Finally, we will demonstrate some syntactic changes in one specific construction which diffuse into post-biblical Hebrew, providing further evidence for a diachronic trajectory.

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[1]Biblical Hebrew refers to the Hebrew as found in the Hebrew Bible, which is based on the medieval manuscript tradition of the Masoretes but "reflects to a large extent varieties of Hebrew spoken in Israel from the beginning of the Iron Age (about 1200 BCE) to the Hellenistic era (about 165 BCE)" (van der Merwe, Naudé & Kroeze (2017: 1), see also pp. 2–6 for an overview of the development of Ancient [Pre-Modern] Hebrew). Qumran Hebrew reflects the Hebrew of the texts found in the eleven caves around Khirbet Qumran (ca. 200 BCE to 70 CE) (see Naudé 2003, Naudé & Miller-Naudé 2016b). Mishnaic Hebrew reflects the Hebrew of the sages, the Tannaim and Amoraim, in Palestine and Babylonia. Literature written in Mishnaic Hebrew covers the period of 70 CE to 500 CE, although Mishnaic Hebrew as a living language was spoken in Palestine only until about 200 CE (Bar-Asher 1999: 116, see also van der Merwe et al. 2017: 5, Naudé & Miller-Naudé 2016b).

[2]See van der Merwe, Naudé & Kroeze (2017: 1–6) for an overview of the development of ancient Hebrew. Archaic Biblical Hebrew (ca. 1200–1000 BCE) reflects the oldest stratum of Hebrew in the Bible, as found especially in the ancient poems. Classical Biblical Hebrew of the monarchical period (ca. 1000–586/7 BCE) includes both the Israelian dialect and the standard Judean scribal dialect and is the language of the pre-exilic prose sections of the Hebrew Bible. Late Biblical Hebrew (ca. 539–165 BCE) is the language of the post-exilic sections of the Hebrew Bible.

[3]The arguments are summarized in Naudé & Miller-Naudé (2016a,b).

As preliminary to the following discussion, we describe the syntactic features of negative scope, which relates to standard verbal negation (as illustrated in 1a and 1b) as well as the negative existential (as illustrated in 2a and 2b). There are two kinds of negative scope in Biblical Hebrew (Snyman & Naudé 2003, Snyman 2004, Naudé & Rendsburg 2013). Sentential negation occurs when the negative marker immediately precedes the verb, which is regularly in initial position in the sentence (1a). By contrast, constituent negation occurs when the negative marker precedes a non-verbal constituent (1b):

(1) a. *lōʾ=šālaḥtî   ʾet̠=han-nəb̠īʾîm*
NEG=send.PFV.1SG OBJ=ART-prophets
'I did not send the prophets.'   [BHS Jeremiah 23:21]

   b. *wə-ʿattâ lōʾ=ʾattem šəlaḥtem   ʾōt̠î   hēnnâ kî   hā-ʾĕlōhîm*
and-now NEG=M.2PL send.PFV.M.2PL OBJ.1SG here COMP ART-God
'And not you sent me here, but rather God.'   [BHS Genesis 45:8]

The scope of the negative modifies the semantic interpretation of the sentence. In (1a) above, the sentence indicates that God did not send the prophets; whereas in (1b), the sentence does not deny that Joseph was sent, but only that it is not his addresees, his brothers, who effected the sending.

Negative existential constructions usually involve sentential negation, as illustrated in (2a). Less frequently negative existential constructions may involve constituent negation.[4] In (2b) the negative existential negates a bare noun and the negative existential followed by the noun are the object of the preposition.

(2) a. *ʾên   ʿēśeb̠*
NEG.EX vegetation
'There is no vegetation.'   [BHS Jeremiah 14:6]

   b. *tib̠ʾaš   dəgāt-ām mē-ʾên   mayim*
stink.IPFV.F.3SG fish-M.3PL from-NEG.EX water
'Their fish stink from no water.'   [BHS Isaiah 50:2]

Possession is regularly expressed in Hebrew using an existential construction with a prepositional phrase headed by the preposition *l-* ('to'). With this construction, sentential and constituent negation occurs with the negative existential marker, as illustrated in (3a) and (3b), respectively, in present time:[5]

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[4]See also the examples discussed in Naudé & Rendsburg (2013: 803, §2.5) as closely related to constituent negation.

[5]The positive possessive construction uses the positive existential marker *yēš* for present time reference and a form of the copular verb *hyh* for past time, future time or non-indicative modality.

(3) a. *ʾên   meleḵ lā-nû*
  NEG.EX king   to-1PL
  'We have no king (lit. there is no king for us).'   [BHS Hosea 10:3]

  b. *ʾên   lî   bēn*
  NEG.EX to-1SG son
  'Not I have a son (lit. there is not to me a son).'   [BHS 2 Samuel 18:18]

Possession can also be expressed in Hebrew using the copula with the same prepositional phrase to indicate past time, future time or non-indicative modality. The possessive construction may involve sentential negation, as in (4a), or constituent negation, as in (4b):

(4) a. *lōʾ yihyeh   lāḵem*
  NEG COP.M.3SG.IPFV to.M.3PL
  'It will not belong to you (lit. it will not be to you).'

[BHS Jeremiah 35:7]

  b. *lōʾ lô   yihyeh   haz-zāraʿ*
  NEG to.M.3SG COP.M.3SG.IPFV ART-seed
  'Not belonging to him would be the offspring (lit. not to him will be the offspring).'   [BHS Genesis 38:9]

2 Constructions with the negative existential marker

In Biblical Hebrew, the marker of standard negation in finite, indicative verbal sentences is *lōʾ*, as illustrated in (1a) above (see also Sjörs 2018: 143–172). There is also a negative existential marker, *ʾayin* (usually vocalized as the "construct form" *ʾên*)[6] and a positive existential marker, *yēš* (5):

(5) *ên=leḥem   ḥōl   ʾel-taḥaṯ yāḏî   kî= ʾim=leḥem qōḏeš yēš*
  NEG.EX=bread common to=under hand.1SG COMP= if=bread   holy EX
  'There is no common bread on hand, but holy bread there is.'

[BHS 1 Samuel 21:5]

The two existential markers do not index tense or aspect; they default for present time. As a result, the verbal copula *hyh* is used for existential sentences that

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[6]The historical origin of the negative existential marker has been connected to the interrogative adverb and homonym *ʾayin* 'where' (see, e.g. Joüon & Muraoka 2009: 569). The two vocalizations of the negative existential relate to the syntactic contexts in which they occur; see Naudé et al. 2018, 2019.

specify perfective aspect (6a), or imperfective aspect with a future sense (6b). The verbal copula is never used to express existence that is linked to the moment of speaking.

(6) a. *lō'=hāyâ*   *gešem bā-'āreṣ*
   NEG=COP.PFV.M.3SG rain   in.ART-land
   'There was no rain in the land.'   [BHS 1 Kings 17:7]

   b. *wə-lō'=yihyeh*   *'ôḏ*   *mabbûl lə-šaḥēṯ*   *hā-'āreṣ*
   and-NEG=COP.IPFV.M.3SG again flood   to-destroy.INF ART-land
   'And there will not again be a flood to destroy the land.'
   [BHS Genesis 9:11]

The copula is also used for existential sentences which express non-indicative modality. In (7a), the positive construction is illustrated and in (7b), the negative construction illustrates the fact that the negative marker *'al* is used with non-indicative finite verbs rather than the indicative negative marker *lō'*:

(7) a. *wîhî*   *ḇə-ḵā*   *kōaḥ*   *kî*   *ṯēlēḵ*   *bad-dāreḵ*
   and.COP.JUS.M.3SG in-M.2SG strength COMP go.IPFV.M.2SG in.ART-way
   'So that there may be strength in you when you go on your way.'
   [BHS 1 Samuel 28:22]

   b. *'al=nā'*   *ṯəhî*   *mərîḇâ ḇên-î*
   NEG.NIND=please COP.JUS.M.2SG dispute between-1s
   û-ḇênê-ḵā
   and-between-M.2SG
   'Please may there not be a dispute between me and you.'
   [BHS Genesis 13:18]

This picture of the distribution of the standard negator and the negative existential marker becomes more complex, because the negative existential marker is also used to negate some verbal predications, most prominently participial predications (see Miller-Naudé & Naudé 2015), as illustrated in (8):

(8) *'ên=ham-meleḵ*   *nôšā'*   *bə-roḇ=ḥāyil*
   NEG.EX=ART-king save.PASS.PTCP[7] in-abundance.GEN=army
   'The king is not saved by the greatness of his army.'   [BHS Psalm 33:16]

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[7]The verbal form is in the Niphal stem, which is used for passive or reflexive meanings; see van der Merwe, Naudé & Kroeze (2017: 78–79).

As indicated below, the negative existential marker expands its use so that it is used to negate verbal sentences. At the same time, the participle expands its use as the main predication in a sentence.

In this section we listed the various constructions in Biblical Hebrew which utilize the negative existential markers. In the following section we examine aspects of the negative existential cycle in ancient Hebrew.

3 The negative existential cycle in Ancient Hebrew

Before demonstrating the stages of the negative existential cycle in Ancient Hebrew, a word is necessary on what constitutes a "stage" in historical linguistics. This matter is important and is connected to the debated issue of synchrony vs. diachrony, which has received increasing scrutiny in recent decades. Lass (1997: 12) poses the following question:

> How much of what looks like (synchronic) structure really is, and how much is rather detritus left behind by historical processes, that even if they leave notable residues have no particular present relevance? … In this sense a language-state as an object of academic scrutiny is no different in principle from a kidney, a mountain range, or an art style.

Certain formulations such as A > B are commonly used to represent stages of linguistic change. Another, more appropriate formulation A > A ~ B > B has been used by Croft (1991) in his seminal work on the negative existential cycle. Brinton & Traugott critique this formulation saying, "Even this is misleading, since often, especially in domains that involve meaning, earlier patterns only become restricted or fossilized, not entirely lost" (Brinton & Traugott 2005: 6). They propose an alternate formulation:

$$(9) \quad A > \left\{ \begin{matrix} A \\ B \end{matrix} \right\} > (B)$$

This formulation states that the emergence of B as a distinct stage may or may not occur. Any theory of a stage in historical linguistics must, therefore, acknowledge the mixture of older and newer forms existing contemporaneously while also acknowledging that some stages will not evolve (see also Croft 1991: 22–25, Veselinova 2016). Additionally, newer forms may emerge yet not diffuse throughout the language, but be subsumed by other forms.

In his theory of language change and diffusion, Naudé (2012) lays out four dimensions that are relevant for the analysis of ancient texts in historical linguistics. The first dimension is the idiolect that develops when the grammar of an individual differs from the input source (e.g. child and his parents). This is called the individual dimension and is the source of language change.

The second dimension is the sociological dimension. This relates to the diffusion of the change throughout the language community. Ringe & Eska (2013: 214) describe this process as follows:

> Yet, should it be the case that a syntactic parameter changes its setting from one generation to the next via imperfect learning in the acquisition process, we have to ask why we find that change takes place only gradually in the documentary record. This seeming paradox has been solved by Kroch (1989), who points out that a parameter for which only a small amount of data is present in the primary linguistic data heard during the process of acquisition can lead two learners to acquire two different grammars. This has given rise to Kroch's Grammars in Competition Hypothesis, in which parameter settings, not entire grammars, compete; it is manifested in the variation found in the documentary record as the reflex of an innovative parametric setting competes with and eventually supplants the reflex of the older parametric setting.

Naudé adds that this sociological diffusion occurs in the shape of an S-shaped curve with the new option beginning slowly, accelerating, and finally leveling off once the competition is resolved.

The third dimension is the chronological dimension. In this dimension, newer forms exist and change side-by-side with older forms called "stylistic fossils". Naudé says, "These stylistic fossils are in competition – at certain stages they are dominant and at other stages they are dominated – and they may be present in the speech community for centuries" (Naudé 2012: 73). As older forms erode and become limited in their use, newer forms pick up the slack and represent a renewal, a "diachronic cycle". This cycle is not a reversal of directionality, but a termination of one unidirectional process and the restarting of another in the same general direction (Naudé 2012: 73).

Naudé's fourth dimension acknowledges that analyzing ancient texts involves working with written language. All historical linguistic studies that span more than a few generations must interact with written text.[8] This point is important

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[8]Historical linguistics involving languages which have only a very recent written tradition (or no written tradition) can only be accomplished by comparative historical analysis of related languages or dialects for which a written tradition exists.

for our definition of a stage. The written dimension preserves a picture of the status of diffusion at the time of writing. If written texts comprise our data, then each text which gives evidence that a change has diffused represents a stage. This stage may only reflect change in a single construction, but it still should be considered a stage. For this reason, syntactic structures in different corpora reflect different stages insofar as they have qualitative differences. A stage in diachronic syntax, then, is construction-specific and is discerned by observing the degree of diffusion between written texts. These stages are part of a cycle which is constantly being renewed.

In terms of Croft's diachronic typology of the negative existential cycle, Biblical Hebrew exhibits a variable stage A ~ B in that there is a dedicated negative existential form (*ʾên*) but it is used in specific contexts in which past or future time do not need to be specified but can be inferred from the surrounding context. For those contexts which specify past or future time, the *lōʾ* + verbal copula construction is used. While it might be possible to posit that *lōʾ* + verbal copula represents a pre-biblical stage A in which the standard verbal negator is used to negate existential sentences, this stage cannot be clearly discerned in the Hebrew Bible.[9] Furthermore, the use of *ʾên* is far more prominent than *lōʾ* + verbal copula in expressing negative existential sentences in Biblical Hebrew.[10] In post-biblical Hebrew, the *lōʾ* + copula form of the negative existential decreases in use in Qumran, though it does still occur:

(10) *w-plṭh*   *lʾ*   *thyh*
      and-survivor NEG COP.IPFV.F.3SG

      'There will be no survivor.'   [DSSR 1QM 1:6]

In Mishnaic Hebrew there are very few examples of a genuine negative existential with the construction *lōʾ* + copula:

(11) *lōʾ hāyətâ   ḥāṣēr   bîrûšālayim še-ʾên-āh*
      NEG COP.PFV.F.3SG courtyard in.Jerusalem REL-NEG.EX-F.3SG

      məʾîrâ   mê-ʾôr   bêt   haššôʾêbâ
      illumined.PTCP from-light.GEN house.GEN hashshoebah

      'And there was not a courtyard in Jerusalem that was not illuminated by
      the light of the house of Hashshoebah.'   [M Sukkah 5:3]

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[9]An anonymous reviewer suggested that Job 38:26 provides an example of the standard verbal negator *lōʾ* without a copula: *ʾereṣ lōʾ ʾîš* 'a land [which] no man (is).' We argue instead that if *lōʾ ʾîš* (lit. not man) was a verbless sentence with a null (implicit) copula, it would have a pronominal clitic for disambiguation (see Naudé 1996). We understand the phrase in Job 38:26 as a noun (*land*) modified by a noun phrase with constituent negation (*no man*); the phrase means 'an uninhabited (lit. no human) land.'

[10]We have identified only 61 examples of the negative existential *lōʾ* + verbal copula in Biblical Hebrew as compared to 383 examples of the dedicated negative existential *ʾên.*

An alternative strategy for Stage A is attested in Biblical Hebrew in a single example:

(12) *lôʾ   yēš=bênênû   môḵîaḥ*
      NEG EX=between.1PL arbiter.PTCP
      'There does not exist between us an arbiter.'   [BHS Job 9:33]

This construction uses the standard verbal negator before the positive existential marker (*yēš*). This strategy does not seem to be attested in later stages of Hebrew.[11] However, this strategy occurs in Biblical Aramaic, a related Northwest Semitic language, in which the positive existential particle *ʾîṭay* is negated by the standard verbal negative *lā* (e.g. Daniel 2:10, 3:29, 4:32). In later Targumic Aramaic, the standard verbal negative and the positive existential became fused into a new existential marker *layiṭ*, an illustration of Stage B. The sole example in Biblical Hebrew may thus be an Aramaism (see Driver & Gray 1921: xlvi-xlvii) or it may reflect a change which did not diffuse or develop in Hebrew as it did in Aramaic.

In addition to the stage A~B in which both the dedicated negative existential *ʾên* and *lō* + copula occur, it is also clear that the dedicated negative existential marker *ʾên* is expanding its domain of use from existential sentences to verbal sentences – Croft's variable stage B ~ C – and this is the most dominant pattern in the Hebrew Bible.[12] The extension of the negative existential marker *ʾên* to verbal sentences occurs only when the verbal predicate is a non-finite verb and especially a participle. The fact that the participle has both nominal and verbal characteristics (Andersen & Forbes 2007, 2012: 33–35) undoubtedly facilitates the expansion of the negative existential from purely nominal predicates to participial predicates. Veselinova (2016: 157) has found that non-finite verbal forms cross-linguistically are often the first to allow negation with a negative existential marker. The stage B ~ C which is observed in Biblical Hebrew can be seen in Epigraphic Hebrew, the non-biblical materials from the time of the Bible, which can be dated paleographically. In a few examples, *ʾên* negates both verbless existential sentences (13) and verbal predicates with participles (14).

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[11]In the Mishnah, there is a single example of *lō* preceding *yēš* but this construction is unique because of its connection with the interrogative marker, meaning 'is it not the case that there exist' (with the pragmatic sense 'it is certainly the case that there are') *wahălōʾ yeš šeʾênān mōsəqîn [zîṭêhn] ʾellā ləʾāḥar rəḇêʿâ šənîyyâ.* 'But is it not the case that there are not those who pick the olives only after the second rain [falls]?' (M Peʾah 8.1).

[12]For cross-linguistic data illustrating that a contextually restricted negator expands into the domain of verbal negation, see also Veselinova (2014) for data from Hawaiʾian (Polynesian) and Veselinova (2015) for data from Zyryan Komi (Uralic).

(13)   *ʾyn*   *[p]h ksp*
      NEG.EX here silver

      'There is no silver here.'   [HAE Jer(7):2 line 1][13]

(14)   *ʾyn[n]y*   *šlḥ*
      NEG.EX.1SG send.PTCP.M.SG

      'I am not sending.'   [HAE Lak(6):1.4 lines 7–8][14]

For an example of how these constructions expand their use, in Qumran Hebrew it is possible for *ʾên* to negate an infinitival clause:

(15)   *b-htʿwpp*   *kwl*   *ḥṣy*   *sḥt l-ʾyn*   *hšb*
      when-fly.INF all.GEN arrows.GEN pit to-NEG.EX return.INF

      'when the arrows of the pit fly off without returning'   [DSSR 1QH^a 11.28]

In Mishnaic texts the plural participle may be used with *ʾên* to express an impersonal and permanent prohibition.

(16)   *nāšîm*   *wa-ʿăḇāḏîm û-kǝtannîm*   *ʾên*   *mǝzammǝnîm ʿălê-hem*
      women and-slaves   and-minors NEG.EX invite.PTCP.PL on-3MP

      'Women, slaves, or minors may not invite others.'   [M Berakot 7.2]

The use of *yēš* with the plural participle similarly expresses a general, impersonal, positive statement (Pérez Fernández 1997: 134):

(17)   *yēš* *mǝḇîʾîm*   *bîkkurîm*
      EX   bring.PTCP.M.PL firstfruits

      'There are those who bring the firstfruits.'   [M Bikkurim 1.1]

Examples (15–17) thus demonstrate that in post-Biblical Hebrew, there is further expansion of the use of the negative existential marker for the negation of verbal constructions as part of the B ~ C cycle. Although this change began in post-exilic Biblical Hebrew with a few examples, it becomes very common in Qumran Hebrew and Mishnaic Hebrew (Hurvitz 2014: 36–39).

     An additional environment where *ʾên* functions similarly to a simple negator is in a verbless locative sentence, as in example (18).[15]

(18)   *wǝ-hinnê*   *ʾên=yôsēp*   *bab-bôr*
      and-behold NEG.EX=Joseph in.ART-pit

      'Behold, Joseph was not in the pit.'   [BHS Genesis 37:29]

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[13]See also the example in HAE Lak(6):1.4 line 5.

[14]See also HAE Arad(8):40 lines 13–14.

[15]See also BHS Exodus 17:7, 1 Samuel 9:11, 14:39.

In example (18), *Joseph* cannot serve as the pivot of an existential because it is a proper name. Proper names cannot function as the pivots of existentials due to the *definiteness effect* (or *definiteness restriction*) (Milsark 1974: 195, Leonetti 2008). The definiteness effect is a cross-linguistic phenomenon of existentials whereby definite NPs are prohibited from serving as the pivot, as in the English example (19).

(19) * There is <u>it/the dog/that dog/Fido</u> (Leonetti 2008: 132)

The proper noun *Joseph* in (18), instead, is the subject of a simple predication. Example (18) demonstrates that *ʾên* may be used in locative predication. This is especially significant in light of the semantics of existential sentences. Existentials have been compared to locatives–the main difference between them being the reorientation of the figure-ground relationship. Creissels compares existentials to locatives saying,

> What distinguishes existential clauses from plain locational clauses is a different perspectivization of figure-ground relationships whose most obvious manifestation is that, contrary to plain locational clauses, existential clauses are not adequate answers to questions about the location of an entity, but can be used to identify an entity present at a certain location (Creissels 2014: 2).

Partee & Borschev (2004) introduce the notion of Perspective Centre to compare existentials to locatives. In a locative sentence, the THING is chosen as the perspectival centre while the LOCATION is chosen in an existential sentence. The difference is represented in (20), with the Perspectival Centre underlined:

(20) a. Existential
          "There is a glass <u>on the table</u>."
      b. Locative
          "<u>The glass</u> is on the table."

It is significant that in Biblical Hebrew, the negative existential particle may be used in both existential and locative sentences. Other languages which allow this have been identified in Veselinova (2013).

There is a second variable stage B ~ C in which the *lōʾ* + copula construction negates a participle. Just as the negative existential particle *ʾên* enters the verbal domain by negating the participle, *lōʾ* +copula does as well. Biblical Hebrew has only 5 examples of this construction (21).[16]

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[16]See also the Biblical Hebrew examples in BHS Exodus 23:26; Isaiah 10:14; Jeremiah 50:3; Ezekiel 41:6; Daniel 8:7.

(21) *wə-lō'=yihyû*   *'ăḥûzîm*   *bə-qîr*   *hab-bāyiṯ*
      and-NEG=COP.IPFV.M.3PL fasten.PTCP.M.PL in-wall.GEN ART-house
      'They were not fastened to the wall of the house.'   [BHS Ezekiel 41:6]

In Qumran Hebrew and Mishnaic Hebrew, the use of construction *lō'* + copula
+ participle is used in additional contexts in which Biblical Hebrew generally
use the negator *lō'* plus a perfective or imperfective verb. The Qumran Hebrew
example in (22b) uses a *lō'* + copula + participle in contrast with the Biblical
Hebrew example in (22a) which uses *lō'* + imperfective verb.

(22) a. *lō' yāḇô'*   *bêṯ*   *YHWH*
          NEG enter.IPFV.M.3SG house.GEN YHWH
          'It will not enter the house of YHWH.'   [BHS Hosea 9:4]

      b. *w-lw'   yhyw*   *b'ym*   *bl'*   *'l*   *twk*
          and-NEG COP.IPFV.M.3PL enter.PTCP.M.PL suddenly into midst.GEN
          mqdšy
          temple.1SG
          'So that they will not enter suddenly into the midst of my temple.'
                                                          [DSSR 11Q19 46:10–11]

Example (23b) illustrates that the *lō'* + copula + participle construction persists
in Mishnaic Hebrew where Biblical Hebrew would use a *lō'* + finite verb (23a).

(23) a. *wə-'āḇîw*   *wə-'immô*   *lō' yāḏə'û*   *kî*
          and-father.M.3SG and-mother.M.3SG NEG know.PFV.M.3PL COMP
          mē-YHWH   *hî'*
          from-YHWH F.3SG
          'His father and his mother did not know that it was from YHWH.'
                                                          [BHS Judges 14:4]

      b. *lō' hāyâ*   *yôdēaʿ*   *šey-yeš lô*   *rə'āyâ*
          NEG COP.PFV.M.3SG know.PTCP.M.SG REL-EX to.M.3SG proof
          û-māṣā'   *rə'āyâ*
          and-find.PFV.M.3SG proof
          'He did not know that he had proof but he found proof.'
                                                          [M Sanhedrin 3:8]

This construction provides yet another example of the expansion of forms into
post-biblical Hebrew.

    There may also be evidence for the variable stage C ~ A in which the nega-
tive existential is used not only for verbal predications, but also to negate the

affirmative existential. There is only one example in Biblical Hebrew which may possibly point to this stage:

(24) *ʾoznayim lā-hem   wə-lōʾ   yaʾăzînû   ʾap̄   ʾên=yeš=rûaḥ*
      ears   to-M.3PL and-NEG hear.IPFV.M.3PL indeed NEG.EX=EX=breath
      bə-p̄îhem
      in-mouth.M.3PL
      'They have ears, but they cannot hear; nor is there breath in their mouth
      (lit. there does not exist the existence of breath in their mouth).'

[BHS Psalm 135:17]

In (24), a sentence is predicated with the positive existential *yēš* but preceded by the negative existential *ʾên*.[17] It is possible that this example reflects poetic license or that the sentence reflects a change in the language resembling the last stage of the negative existential cycle which was not successfully diffused through the language (see Naudé 2012). With only one example, we cannot be certain about the status of a variable C ~ A stage.

We have seen extensive evidence for stages A ~ B and B ~ C of the negative existential cycle, including further expansions of the use of the negative existential marker to negate various kinds of verbal constructions in post-biblical Hebrew.

The negative existential cycle provides a means to use stages of synchronic variation within a diachronic trajectory for analyzing these Ancient Hebrew constructions. Such a diachronic trajectory acknowledges synchronic variation, transitional stages and overlapping constructions, all of which reflect the ways in which languages change over time.

4 The shift from synthetic to analytic pronominal subjects of negative existentials

In this section we revisit the question of diachronic change exhibited in the negation of the participle with special reference to constructions involving left dislocation (Naudé & Miller-Naudé 2016b). In this section we provide additional evidence that seemingly small changes involving left dislocation constructions reflect change in syntactic structures. Furthermore, some constructions which

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[17]In BHS 1 Samuel 21:9, a positive existential sentence is preceded by *ʾîn*, whose identification is uncertain. It might be an alternate spelling of the negative existential marker (the reading of some manuscripts) or it might be a mistaken vocalization of the interrogative marker *ʾên* "where?".

seem to be synchronic variants in terms of the negative cycle can be shown to be diachronically rather than synchronically related on the basis of syntax.

This section demonstrates that in addition to the expanding domains of various existential forms, the forms themselves are subject to change based on other factors. Van Gelderen (2016: 7) reviews the treatment of analytic and synthetic languages and demonstrates how macro-cycles can be discerned in addition to cycles such as the ones demonstrated in §3. In macro-cycles, languages can move from being more analytic, in which they are closer to having a one-to-one relationship between word and morpheme, to more synthetic in which isolated forms move to become more agglutinative and separate words are reanalysed morphologically as part of another word (e.g. English *going to > gonna*) (see van Gelderen 2016: 6–8 for a description of the development of this notion). As the cycle continues, eventually the synthetic forms move toward being more analytic and reproduce isolated forms again. Analytic and synthetic stages can occur simultaneously in different systems of a language. A language can be in one stage for agreement and in another for negation (van Gelderen 2016: 7). In this section, we demonstrate that the pronominal subject of participial predicates negated with the negative existential marker is manifesting a shift in agreement from a synthetic inflectional stage where the subject is a pronominal suffix into an analytic isolating stage where the subject is an independent personal pronoun.

There are three types of constructions in which the participle is negated with ʾên in Biblical Hebrew (see Miller-Naudé & Naudé 2015 for additional details). In the first type, a pronominal suffix is joined to the negative existential marker which is followed by a participle with its object and adjuncts:

(25)   *ʾim=ʾênḵā*   *mēšîḇ*   *daʿ*   *kî=môṯ*
       if=NEG.EX.M.2SG return.PTCP know.IMP.M.SG that=die.INF.ABSL
       tāmûṯ   *ʾattâ*   *wə-ḵol=ʾăšer=lāḵ*
       die.IPFV.M.2SG M.2SG and-all=REL=to.M.2SG
       'If you do not return, know that you shall surely die, you and all who are yours.'   [BHS Genesis 20:7]

This construction can be modified through left dislocation, in which a constituent appears outside the initial boundary of the sentence and is resumed within the sentence as a pronominal suffix on the negative existential marker:

(26)   *kî ha-ḥayyîm   yôḏəʿîm   šey-yāmūṯû   wə-ham-mēṯîm*
       for ART-living.PL know.PTCP.PL rel-die.IPFV.M.3PL and-ART-die.PTCP
       ʾên-ām   *yôḏəʿîm*   *məʾûmâ*
       NEG.EX-M.3PL know.PTCP.PL anything
       'For the living know that they will die, but the dead, they do not know anything.'   [BHS Qohelet 9:5]

The subject constituent (*the dead*) is left dislocated, and a resumptive subject pronoun is suffixed to the negative existential. (For the syntactic and semantic features of topicalization and left dislocation in Biblical Hebrew, see Naudé 1990, Holmstedt 2014, Naudé & Miller-Naudé 2017). The same construction occurs in Qumran Hebrew:

(27) [*wə*]-*ʾp*   *ʾmy*   *ʾynnh*   *mʾmnt*   *ʾšr*
      [and]-even mother.1SG NEG.EX.F.3SG believe.PTCP.F.SG REL

      trʾn[y]   *ʿwd*
      see.IPFV.F.3SG.1SG again

      'Even my mother, she does not believe that she will see me again.'

                                                                [DSSR 4Q200 f4:4]

The construction is also found in Mishnaic Hebrew:

(28) *haš-šum*   *wə-hab-bəṣālîm*   *ʾên-ān*   *miṣṭārpîn*
      ART-garlic and-ART-onion.PL NEG.EX-M.3PL join.PTCP.M.PL

      'Garlic and onions, they do not join together.'   [M Peah 6:9]

In Qumran Hebrew an independent personal pronoun can be used for the subject instead of a pronominal suffix on the negative existential marker:

(29) *w-ʾm*   *ʾyn*   *hwʾ*   *bḥwn*   *b-kl*   *ʾlh*
      and-if NEG.EX M.3SG distinguish.PTCP.PASS.M.SG in-all.GEN these

      'if he is not qualified in these (rules)'   [DSSR CD 13:3]

This innovation has diffused and is also found in Mishnaic Hebrew:

(30) [*wə*]-*ʾên*   *ʾat*   *yāḵol*   *lə-panəśô*
      [and]-NEG.EX M.2SG be.able.PTCP to-help.INF.M.3SG

      'And you are not able to help him.'   [M Nedarim 9:4]

In Qumran Hebrew, a left dislocated pronoun may be resumed with an independent personal pronoun following the negative existential, rather than with a pronominal suffix (contrast example 26)[18]:

(31) *w-hwʾ*   *ʾyn*   *hwʾ*   *lbwš*   *b-g[dy*
      and-M.3SG NEG.EX M.3SG dressed.PASS.PTCP in-garments.GEN

      h-qwdš
      ART-holiness

      'and he, he is not dressed with the sacred vestments'

                                                          [DSSR 11Q19 35:6 (= 11QT)]

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[18]In citations of manuscripts or epigraphic texts (e.g. from DSSR or HAE), opening and/or closing brackets are used to indicate broken texts which are reconstructed.

What is important is that the constructions found in Biblical Hebrew in which pronominal subjects of the negative existential marker are realized as pronominal suffixes (25, 26) all continue in Qumran Hebrew (27) and in Mishnaic Hebrew (28). However, new constructions in which the pronominal subject is realized as an independent pronoun are appearing in Qumran Hebrew (29, 31) alongside those inherited from Biblical Hebrew and those changes are diffusing and persisting into Mishnaic Hebrew (30). The shift from synthetic (inflectional) to analytic (isolating) pronouns is apparent in the new constructions that have developed after Biblical Hebrew. There is, however, one similar example with independent subject pronouns in post-exilic Biblical Hebrew:

(32) *wə-ʾên   ʾănî wə-ʾaḥay   û-nəʿāray   wə-ʾanšê*
and-NEG.EX 1SG and-brothers.1SG and-servants.1SG and-men.GEN

ham-mišmār ʾăšer ʾaḥăray ʾên=ʾănaḥnû pōšəṭîm   bəḡāḏênû   ʾîš
ART-guard   REL after.1SG NEG.EX=1PL put.off.PTCP clothing.1PL man

šilḥ-ô   ham-māyim
weapon-M.3SG ART-water

'So not <u>I nor my brothers nor my servants nor the men of the guard who followed me – we</u> did not take off our clothes; each (kept) his weapon (even) at the water.'   [BHS Nehemiah 4:17]

The example in (32) is striking because it involves both constituent negation of the subject with the first person plural independent pronoun (as well as conjoined noun phrases) and left dislocation with the subject resumed in the sentence proper (see Miller-Naudé & Naudé 2015). It is also the only example in the Bible which uses an independent subject pronoun for both the dislocated element and the resumed element. In this respect, the example exhibits an early change which was diffused and persisted in Qumran Hebrew and into Mishnaic Hebrew. The left-dislocation construction is a plausible environment for the birth of an idiolect which was subsequently embraced and diffused throughout the linguistic community.

Example (32) is also striking for another reason. According to the Subject Agreement Cycle as described in van Gelderen (2011: 41), the cycle of change in subject agreement often begins with the first and second person rather than third person. Van Gelderen describes three stages of the Subject Agreement Cycle. In stage (A), a full pronoun is used for the subject. In stage (B), a pronominal suffix is used for the subject. In stage (C), a new nominal element is needed alongside the pronominal suffix, usually a noun phrase functioning as the topic (van Gelderen 2011: 41). The developments in Ancient Hebrew subject agreement in

constructions with the negative existential marker display a trajectory of language change. Biblical Hebrew exhibits the stage (B) – the subject is indicated as a pronominal suffix on the negative existential – as illustrated in examples (25) and (26). Stage (B) persists in Qumran Hebrew (27) and Mishnaic Hebrew (28). Stage (C) is attested in Biblical Hebrew in only one late, post-exilic case (32), but it becomes more frequent in Qumran Hebrew (29, 31) and Mishnaic Hebrew (30).

In the second construction involving negation of the participle with the negative existential marker in Biblical Hebrew, the negative existential is followed by an explicit noun phrase subject and the participle with its objects and/or adjuncts:

(33)   *haṣ-ṣaddîq*   *ʾāḇāḏ*   *wə-ʾên*   *ʾîš*   *śām*   *ʿal=lēḇ*
      ART-righteous perish.PFV.M.3SG and-NEG.EX man put.PTCP on=heart
      'The righteous person perishes and no one considers (lit. puts it on the heart).'   [BHS Isaiah 57:1]

The construction is found in Qumran Hebrew:

(34)   *w-ʾ]yn*   *yd[yw]*   *šṭ[w]pwt*   *b-mym*[19]
      and-NEG.EX hands.M.3SG wash.PASS.PTCP in-water
      '… and his hands are not washed with water.'   [DSSR 4Q277 f1ii:11]

The construction is also found in Mishnaic Hebrew:

(35)   *ʾên*   *ḥămôr*   *yŏṣēʾ*   *bə-mardaʿaṯ bi-zman še-ʾênāh*
      NEG.EX donkey go.out.PTCP with-saddle at-time   REL-NEG.EX.F.3SG
      qəšûrâ   *lô*
      tied.PTCP.F.SG to.M.3SG
      'A donkey does not go out with its saddle cloth when it is not tied to him.'
                                                  [M Šabbat 5:4]

With a dislocated subject constituent, constructions of this type take the shape of (30) above and do not manifest the shift from suffixes to independent pronouns.

In the third construction of the negative existential marker with the participle, the negative existential occurs in a sentence in which a participle does not have an explicit subject:

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[19]The square bracket in this example indicates that the letters to the left are reconstructed because the manuscript is fragmentary.

(36) *wə-ʾim=ʾên môšîaʿ ʾōṯānû wə-yāṣāʾnû ʾēlêḵā*
and-if=NEG.EX deliver.PTCP OBJ.1PL and-go.out.IPFV.1PL to.M.2SG
'… if no one delivers us, then we will go out to you'   [BHS 1 Samuel 11:3]

This use of the negative existential marker is also found in Qumran Hebrew, as illustrated in (37):

(37) *wʾn qbr*
and-NEG.EX bury-PTCP.MS
'and no one buries'   [DSSR 4Q176:Frgs. 1–2, col. 1:4]

In contrast to example (35) in which the scope of the negative existential is the sentence, in (36) and (37), the negative existential marker syntactically modifies a null (or, implicit) subject – the scope of the negative existential particle is the null subject constituent and not the entire predication. In effect, the negative existential marker is functioning as a quantifier. Three arguments have been advanced for this claim (see Miller-Naudé & Naudé 2015, Naudé & Miller-Naudé 2016a). First, the participle is always in the unmarked masculine singular form, as illustrated in (38):

(38) *tāqəʿû bat-tāqôaʿ wə-hāḵîn hak-kol wə-ʾên*
sound.PFV.M.3PL on.ART-horn and-prepare.INF ART-all and-NEG.EX
hōlēḵ lam-milḥāmâ
go.PTCP.M.SG to.ART-battle
'They have sounded the horn and everything is prepared, but no one goes to battle.'   [BHS Ezekiel 7:14]

The finite verb (*they have sounded*) has a plural subject; the participle (*goes*) is masculine singular and has an indefinite, non-referential subject.

Second, the negative existential may be followed by a prepositional phrase which modifies the null subject and not the participle:

(39) *wə-ʾên mib-balʿāḏay môšîaʿ*
and-NEG.EX from-beside.1SG save.PTCP.M.SG
'and no one beside me saves'   [BHS Isaiah 43:11]

Third, the negative existential as a quantifier may serve as the subject of more than one participle, as in (40):

(40) *wə-ʾên=ḥōleh*   *mikkem*   *ʿālay*   *wə-gōleh*
      and-NEG.EX=sick.PTCP.M.SG from.M.2PL over.1SG and-uncover.PTCP.M.SG
      ʾeṯ=ʾoznî
      ACC=ear.1SG
      'and no one of you is concerned over me and informs me' (lit., and no one
      of you is sick for me and uncovers my ear)

The negative existential marker in (40) cannot be understood as negating the two predications expressed by the participles because negation of a predication in ancient Hebrew, either by the negative existential marker or by the marker of standard negation, regularly requires that the negative marker be overtly expressed with each predication (for the ways in which negation in poetry may differ from prose in this regard, see Miller 2005). Instead, the negative existential marker in (40) functions as a negative quantifier 'no one'.

5 Conclusion

In this paper we have provided evidence that Ancient Hebrew manifests diachronic change which corresponds to Croft's negative existential cycle. While stages A (at the beginning of the cycle) and C ~ A (at the end of the cycle) are only rarely attested in Biblical Hebrew, variable stages A ~ B and B ~ C are well attested. In Qumran Hebrew, variable stage A ~ B continues, but the use of the negative existential marker expands its range of constructions while the alternate construction for expressive negative existentials (the standard negator *lōʾ* + copula) decrease. The same is true in Mishnaic Hebrew. Variable stage B ~ C presents a similar kind of expansion involving the negative existential marker in Qumran Hebrew and Mishnaic Hebrew and a concomitant decrease in the alternative construction involving the copula. The stages of the negative existential cycle thus reveal both complex toleration of multiple constructions in single stages, as well as clear diachronic trajectories of change from Biblical Hebrew into Qumran Hebrew and Mishnaic Hebrew.

We have also demonstrated a trajectory of change from Biblical Hebrew to Qumran Hebrew and Mishnaic Hebrew in the form of the subject of a participial predicate negated with the negative existential marker. In Biblical Hebrew, the subject in this construction is a pronominal suffix affixed to the negative existential marker (synthetic morphology). In Qumran Hebrew and Mishnaic Hebrew, the subject may continue to be a pronominal suffix (synthetic morphology) or it may be an independent subject pronoun (analytic morphology). The trajectory

from a pronominal suffix to an independent subject pronoun is in accord with the Subject Agreement Cycle.

The syntactic data on negative existentials support a complexity approach to language change and diffusion in ancient Hebrew in which there is a diachronic trajectory from Biblical Hebrew to both Qumran Hebrew and Mishnaic Hebrew. This is in direct contradiction to the claims of those who deny any diachronic trajectories in ancient Hebrew.

Sources

BHS   *Biblia Hebraica Stuttgartensia.* Edited by K. Elliger & W. Rudolph. Stuttgart: Bibelgesellschaft, 1997.

DSSR   *The Dead Sea Scrolls Reader.* 2 vols. 2nd edn. Edited by Donald W. Parry & Emanuel Tov. Leiden: Brill, 2014.

HAE   *Handbuch der Althebraischen Epigraphik.* 3 vols. Edited by Johannes Renz & Wolfgang Röllig. Darmstadt: Wissenschaftliche Buchgesellschaft, 1995.

M   *Six Divisions of the Mishnah (Shisha Sidrei Mishnah).* Eshkol edition. Accordance software, 2000.

Acknowledgements

Abbreviations and symbols

1	first person	COMP	complementizer
2	second person	COP	copula
3	third person	EX	affirmative existential
ABSL	absolute	F	feminine
ACC	accusative	GEN	genitive
ART	article	IMP	imperative

INF	infinitive		NIND	non-indicative
IPFV	imperfective		OBJ	object
JUS	jussive		PASS	passive
M	masculine		PFV	perfective
NEG	negative		PL	plural
NEG.EX	negative existential		REL	relative marker
			SG	singular

The stem (*binyān*) of verbal forms is not indicated; footnotes clarify the glosses where necessary.

The equals sign represents the orthographic symbol *maqqef* in the Hebrew text, which indicates cliticization of one word on another.

Square brackets are used to indicate reconstructed letter(s) in places where an epigraphic text or manuscript is fragmentary.

In the epigraphic texts cited from HAE, texts are identified by location (e.g. Jer = Jerusalem, Lak = Lakish, Arad = Arad) and century (e.g. 6 = 6th century BCE).

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Chapter 6

The negative existential cycle in Ancient Egyptian

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> Ancient Egyptian has a very long attested history, which allows us to follow the emergence and evolution of several negative patterns. In spite of the inherent obstacles in a dead language's documentation, my research – focusing on negation in Earlier Egyptian (roughly defined as the language of texts written from 3000 to 1300 BCE) but tracing the relevant forms until Coptic (the last phase of the language, written in the Greek alphabet from the 4th to 14th century CE) – sheds light on a renewal process that appears to belong to the category of the negative existential cycle. This process has long remained misunderstood, but recent progress in the field of linguistic typology regarding linguistic change in the negative domain makes it possible to propose a coherent historical analysis of the data. Starting with a transitional phase (C–A) documented in Old Egyptian, the Egyptian negative existential cycle does not illustrate Croft's model in an ideal way. However, it offers a concrete case for a better understanding of how structural and functional parameters are intertwined in explaining this type of evolution.

1 Introduction

Ancient Egyptian is a dead language whose history is generally divided into the following main phases: Old Egyptian (mid- to late 3rd millennium BCE), Middle Egyptian (ca. 2200–1700 BCE), Late Egyptian (14th–7th century BCE), Demotic (7th century BCE–5th century CE) and Coptic (ca. 4th century–ca. 14th century CE).[1] My contribution involves data coming from the whole history of the language, but focuses on Old and Middle Egyptian (known as Earlier Egyptian in

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[1]See Loprieno (1995), Loprieno & Müller (2012), and Grossman & Richter (2014) for a general overview.

Egyptological linguistics). Negation and negative patterns in Ancient Egyptian have long been one of the thorniest topics in Egyptological linguistics. The reasons for this are twofold. From a philological viewpoint, the very spelling of negative morphemes appears to be problematic. Due to the functional characteristics of hieroglyphic writing, not only the functions but also the forms of negation have been subject to debate. On the other hand, the linguistic approach to Egyptian negation has suffered from a lack of precision in its diachronic dimension. The latter is perfectly understandable, given the state of the art. It is especially noteworthy that the language known as Earlier Egyptian covers a time period spanning from 3000 to 1300 BCE. Such a period may obviously appear to historical linguists as long enough to allow for substantial changes in the language, but for grammarians exploring the enduring history of Egyptian, it has long been considered as a more or less homogeneous unit. A better understanding of the changes happening in the course of this history may be reached with a more fine-grained analysis of the sources. In this context, the evolution of negation represents one of the more fertile fields of investigation. More specifically, the historical attestation of the Egyptian language offers a precious chance to analyse the evolution of a negative system over the long run. Previous studies have already attempted to recognize well-known patterns of change in the Egyptian data. As shown in van der Auwera (2009), the very notion of the Jespersen cycle was formulated by Gardiner, a famous Egyptologist, as soon as 1904. An attested history of negation in Earlier Egyptian presents us with an ongoing negative existential cycle (NEC). The understanding of the way negation functions in this phase of the language can thus improve greatly, thanks to recent typological research after Croft's pioneering formulation in 1991, especially by Veselinova (2013, 2014, 2016). In a reciprocal way, analysing these historical data may bring to light an interesting case that allows an assessment of the postulated motivations for changes at each step of the cyclical model, as elaborated in previous studies.

This article's contributions thus go as follows: §2 is a general description of the Egyptian NEC, presenting new analysis of the data.[2] §3 explores the diachrony of the NEC in a more detailed way, focusing on problems bound with the nature of the documentation, and it highlights the results that can still be gained. §4 examines the interplay of functional motivations, such as analogy or emphasis with structural features in changes within the NEC. A tentative conclusion in §5 widens the perspective opened by the study of the Egyptian NEC, showing its relevance to the larger understanding of grammaticalization paths involved in the

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[2]For a general introduction of the NEC, see the introduction of this volume.

renewal of the verbal system in Older Egyptian. At the end of this contribution, a table in the Appendix (see 1) presents the main patterns involved in the NEC. It may be useful for the reader to refer to this table in order to better understand the position of each detailed step in the general history.

2 The Ancient Egyptian NEC: A general view

In this section, a descriptive analysis of the Egyptian NEC is given according to the chronological order of an ideal cycle, without taking into account the problems raised by transitional phases and their possible overlap. These difficulties are presented in more detail in §3. However, the following idealized sketch of the general evolution may be useful for the reader:

1. The earliest documented stages show a C–A transition. The negator transliterated as *ni* can be shown to have been an earlier negative existential.[3]

2. In Old Egyptian, this negator can occur with verbal nominalizations, leading to its reanalysis as a clausal negation.

3. The same negator also extends to clauses with different types of stative predicates, showing a convergence with the positive existential predication pattern extending to stative predicates.

4. This negator *ni* begins to occur with various forms of the verb *wnn* 'to exist' used as an existential copula.

5. The collocation *ni wn* [neg. 'exist'] fuses into a new negative existential marker, written *nn*.

6. In several stages, this new negator *nn* spreads again to other contexts, such as those with originally locative adjuncts, leading to reanalysis as a negator plus locative predicate, and to other stative predicates.

7. The new negator *nn* comes to be used with verbal predicates, in particular modal ones.

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[3]The transliteration of Ancient Egyptian used here, as in Egyptological linguistics, represents written signs (be they hieroglyphics, signs in the various cursive writings, or Greek letters in the case of Coptic) and not the sounds of the language. In some cases, the phonemic reality is still a matter of discussion.

8. A new stage of the cycle involves the new negator, itself a fusion of the oldest negation plus an existential verb, and a form of the very same verb *wnn*, leading to the collocation *nn wn*. For reasons that are still unclear, *nn* also began to be written *bn*.

9. The collocation *nn wn* fuses into *mn*, which also extends from existential constructions to constructions with stative predicates and some verbal predicates.

2.1 A reconstructed Type C and a transitional type C–A: The negation *ni* in Proto-Egyptian

Egyptian documentation begins at a point when a transition between a type C and a type A is already happening in the language. However, it is possible to at least partially reconstruct the phase immediately preceding the most ancient historical data. In Proto-Egyptian, as one may call it, "there is a special negative existential predicate, which is identical to the verbal negator" (Croft 1991: 6). The form of the negator is generally transliterated as *ni*.[4] Its use as a negative existential left traces in the oldest documentation, although *ni* is not limited to this construction in historical times:

(1) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
ni   md̠ꜣw   d̠ꜣi   sw   m wꜣt ppy pn
NEG.EX opponent oppose\PTCP M.3SG in way PN DEM
'There is no opponent who would oppose himself in the way of this Pepi.'
(Pyramid Text § 1237bP)[5]

(2) Early Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
ni   jr-t-n=j   r=f
NEG.EX do\REL-F.SG-ANT=1SG against=M.3SG
'There is nothing that I did against him.' (Letter to the Dead, Hu bowl 3)

The origin of the negation *ni* is likely to be a verb expressing absence or non-existence in a stative construction (sometimes termed 'Old Perfect' in grammars).

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[4]Alternative proposals for the transliteration of the form exist but are not crucial for the historical reconstitution of the Egyptian NEC.

[5]Pyramid Texts are a corpus of ritual texts relating to the survival of the dead king in the hereafter. They are inscribed in royal graves from the end of the Old Kingdom but may represent older stages of the language. The extent of the preservation of archaic features in this corpus is still a matter of debate.

This is shown by its location at the beginning of the sentence, the very place of the verbal predicate in the construction of the Old Egyptian stative perfect gram that follows VSO order. The use of the form *ni* alone as a predicate appears to be attested in one example belonging to the most ancient documentation in Old Egyptian. It thus occurs in a non-literary papyrus:

(3) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
zwnw 1 ʿwt 1 mndm 1 ni   wʿr 2
zunu   1 aut 1 nedjem 1 none/absent war 2

‘zunu-vessel: 1, aut-vessel 1, nedjem-basket 1: lacking, war-vessel: 2’
(Papyrus British Museum 10735)[6]

It is only speculative but not irrelevant to mention the verb *nj* ‘to rebuff’ as a possibly more specific lexical meaning in some proto-stage of the Egyptian language. Graphically, the writing known for this lexeme is interesting, as it shows an arm as a graphemic classifier, possibly a gesture symbolizing refusal, as does the sign of the two open arms that serves to write the negation *ni* itself.[7]

Already in Old Egyptian, the negation *ni* may be followed by various verbal forms whose common feature is to have their origin in nominalizations, while the primary participant is encoded as a possessor, with no distinction between the S, A, P semantic roles. Verbal paradigms known as recent suffixal conjugations generally share a common origin as former nominalizations. Still under discussion are the criteria allowing consideration of the various relevant constructions as involving grammaticalized verbal forms. I shall focus in the present chapter on negative constructions.[8] Distinct nominal marks are the source for the resulting verbal morphology, as far as it is possible to reconstruct it. The source construction is of the following type:

(i) Negative existential *ni* + Action nominalization + Suffix pronoun

Semantically, the path of change belongs to a well-known type that is attested in many distinct language families:

(ii) There is not my V-ᴵᴺɢ > I did/do not Verb

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[6]This translation reflects the fact that Egyptologists do not know the precise equivalents for these substantives, except that they must refer to a kind of vessel.

[7]See Loprieno (1995: 125) for the interpretation of this logogram as symbolizing a gesture of negation. On the function of unpronounced graphemic classifiers, see Goldwasser & Grinevald (2012).

[8]In a further stage of the renewal of the verbal system, a nominalization showing a <−t> specializes for a passive reading in constructions where the possessor thus appears as P.

Depending on the nominalization involved in these constructions, different TAM readings arise. When the action nominal is unmarked in the source construction, it is mainly past, but it can also be non-past and generic:

(4)   Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
      ni   mȝ=j   mjtj n zrw   pn
      NEG see\NMLZ=1SG like of goose this
      'I haven't seen the like of this goose ever.' (lit. 'There is not my seeing the like of this goose') (Meir III)

With an ending *<-w>*, whose function and meaning have been heavily discussed[9], the same action nominal follows the negation *ni* to form a construction with a modal reading:

(iii) Negative Existential + Action nominal with *<-w>* ending + Suffix pronoun

   Semantically, the path of change may be assumed to be as follows:

(iv) There is not any V-ING of me > I shall not Verb

It should be noted that the nominalization involved in the source construction is unmarked for voice, so that both an active and a passive reading may arise:

(5)   Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
      ni   hȝi-w   nṯr-w r=k   m rn=k   pw n(j) jȝt
      NEG go_down\NMLZ-INDF god-PL to=2SG.M in name=2SG.M DEM of   Iat
      'The gods shall not go down to you in this your name of Iat.' (lit. 'There is not any going down to you') (Pyramid Text § 1537bP)

(6)   Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
      ni   rḏi-w   wnjs n nsr=ṯn   nṯr-w
      NEG give\NMLZ-INDF Wenis to flame-2PL god-PL
      'Wenis shall not be given to your flame, gods!' (lit. 'There is not any giving of Wenis to your flame') (Pyramid Text § 323bW)

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   [9]Working on nominalizations as a source for the renewal of the Earlier Egyptian verbal system, I suggest that the Action nominalization marked by this ending *<-w>* in the same way as other non-finite forms of the verbal root (most notably participles) has other uses whose reading can be related to indefinite semantics, the ending *<-w>* prototypically indicating class membership. See Oréal (2017).

There remain uncertainties in glossing some examples in Earlier Egyptian. They are connected to a larger question regarding the grammaticalization pathway of verbal paradigms known as recent suffixal conjugation or *sḏm=f*. How long should these forms be considered as still being nominalizations in various constructions? In other words, what are the criteria defining a verbal form having a nominalization as a source? This problem is the subject of an ongoing discussion in the field of Egyptological language studies and it cannot be solved in the present contribution. However, the historical mechanisms involved in the grammaticalization of such constructions belong to a typologically well-known phenomenon.[10] More peculiar is the notion of indefinite marking on an action nominal giving rise to modality after grammaticalization of the form in a construction.[11]

The extension of the negation *ni* is not restricted to the negation of verbal predicates according to the asymmetry just described. It also extends to stative predicates, such as locative predication, as shown in the following example:

(7) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
    ni   ṯw   jm=sn
    NEG M.2SG among=3PL
    'You are not among them.' (Pyramid Text 251dW)

Such an evolution involves the relaxing of the referential constraint on the subject/topic present in the former locative-presentative when turning into locative predication:[12]

(v) *ni* + non referential subject ('there is no man')
    > *ni* + non referential subject + locative predicate ('there is no man in the house')
    > *ni* + referential subject + locative predicate ('the man is not in the house')

This path of change is parallel to the grammaticalization of the initial particle *jw* from locative copula to auxiliary in stative and verbal constructions, as will be illustrated in the next section. The spread of the pattern to a referential subject may indeed not be explained without supposing a convergence with the evolution of the positive existential predication.

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[10]See, for example, Malchukov (2013) on similar problems raised by the process of verbalization in Siberian languages.

[11]See Oréal (2017) on the pathways that allow such a transfer from nominal to verbal morphology.

[12]See Veselinova (2013: 108) on the typologically frequent structural similarity between these constructions and mere existential constructions.

2.2 Towards a type A: The verb of existence *wnn* combined with the negation *ni*

In its most ancient attestation, the existential predication assumes the following form, preserved as an archaizing pattern:

(vi) locative particle *jw* + subject

This construction is extremely rare in the documentation and not widely recognized as such in grammars.[13] Loprieno (1995: 122) cites two occurrences in the Coffin Texts and in a literary text written in Middle Egyptian:

(8) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
jw sšp ḏd   PN jw knḥ   ḏd   PN
LOC light say\IPFV PN LOC darkness say\IPFV PN
'There is light, says PN; there is darkness, says PN.' (Coffin Text IV 29e)

(9) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
jw šw m ꜥq-jb
LOC lack in confident
'There is a lack of close friends.' (Dialogue of a Man with his Ba 123–124)

The latter example is reminiscent of another possible example belonging to the much older corpus of the Pyramid Texts that Allen (2017: 333) translates with an existential reading:[14]

(10) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
jw šw m mtrw
LOC lack in testimony
'There was a lack of testimony.' (Pyramid Text § 317b)

One can perhaps add the following example from a caption in a daily life scene in an Old Kingdom tomb. It might also attest the construction in Old Egyptian, but its meaning is not completely assured:

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[13]See, however, the analysis along similar lines proposed by Helmut Satzinger at a workshop in 2001: https://homepage.univie.ac.at/helmut.satzinger/Texte/Aspectsjw.pdf.

[14]Although convincing, this analysis cannot exclude a construction involving a zero subject and a stative as predicate (*jw Ø Sw m*, 'It is deprived of'). In the latter case, there would be no existential construction here but rather a stative predication introduced by *jw*, which in synchrony represents a prototypical use of Earlier Egyptian *jw*.

(11) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
      jw ꜣpd sꜣi-w   ḥr=f
      LOC bird satiate\PTCP-PRED on=M.3SG
      'There is a bird with which one may be satiated.' (Tomb of Ti, pl. 116)

However, the role of *jw* in constructions with a 'locative-presentative' function, in the sense of Hengeveld (1992), fully confirms its role in the most ancient form of existential predication:

(12) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
      jw jt   jm=f
      LOC barley in=M.3SG
      'There is barley in it.' (Sinuhe B 84)

Already in Old Egyptian, the '*jw* + Subject + Predicate' constructions are also used as plain intransitive sentences:

(13) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
      jw ꜣpd pn ḏdꜣ   wrt
      LOC bird this fat\PTCP very
      'This bird is very fat.' (Tomb of Ibi)

This reading generalizes in Earlier Egyptian. In parallel to this evolution, the existential construction itself is renewed by a construction using a form of the verb of existence *wnn*:

(14) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
      jn   jw wn   rm
      INTER LOC exist\PTCP.STAT fish
      'Is there some fish?' (Tomb of Djau)

The same phenomenon occurs in negative existential statements, where the existential verb *wnn* is introduced in new patterns. Already in Old Egyptian, one thus finds the negation *ni* associated with the same existential verb *wnn* in two distinct constructions:

 (i) The construction *ni wnt*

(ii) The construction *ni wn*

Both involve the same form *ni* but with a different status in each case, showing that construction (i) must have emerged before construction (ii), as we shall see now.

(i) The construction *ni wnt*

This construction involves the negation of existence *ni* followed by a nominalization of the verb *wnn* marked by a *-t* ending:[15]

(15) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)

šwȝ	*jwꜥw*	*ni*	*wnt*	*ḥr=f*	*zš*
be_poor\PTCP	heir	NEG	exist\NMLZ	with=M.3SG	writing

'Poor is the heir who has no writing.' (lit. 'when there exists not a writing with him') (Pyramid Text § 475aWN)

(16) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)

ni	*wnt*	*zȝb*	*ṯȝtj*	*nb*	*sr*	*nb*	*jm*	*wp-r=j*
NEG	exist\NMLZ	senior	vizir	any	magistrate	any	there	except=1SG

wꜥ=k
be_alonePTCP.RES=1SG

'(His majesty let me enter in order to audition alone) no senior vizier or any magistrate being there besides me alone.' (Inscription of Weni, 10–11)

This construction must have emerged at a time when the negation *ni* still had its stative meaning of non-existence. It is thus prior to construction (ii), which is derived from an intransitive construction where *ni* functions as Standard Negation and no longer as a stative predicate, as will be shown in (ii).

(ii) The construction *ni wn*

The alternative construction *ni wn* is also already attested in an Old Kingdom inscription. It takes the following form:

(17) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)

sṯ	*ni*	*wn*	*mw*	*ḥr*	*ṯsw*
CONJ	NEG	exist\PTCP.STAT	water	on	banks

'When there is no water on the banks' (Inscription of Weni 44–45)

There has been some discussion around the nature of the form taken by the

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[15]The precise semantics of this ending common to the source of passive forms, infinitives of certain classes of verbs and a 'not…yet' construction is still under discussion, but one can safely assume that it is a morphological feature characterizing a nominal form of the verb.

existential verb *wnn* in this construction.[16] In order to understand it better, one needs to look at the positive existential construction:

(18) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
      jw   wn   nḏs   ḏdj   rn=f
      LOC exist\PTCP.STAT man Djedi name=M.3SG
      'There is a man named Djedi.' (Tale of pWestcar 6, 26)

In locative predication, usually the subject directly follows the initial particle, be it *jw* or another one, like the subordinator *sk* in the following example:

(19) Old Egyptian (Egyptian [Afro-Asiatic], Egypt)
      nḥm-w   šb(w)=f   m-ꜥ=f   sk sw   wn
      take\PTCP-PL food=M.3SG from=M.3SG as M.3SG exist\PTCP.PRED
      'Those who wanted to take his food away from him as it was there'
      (Pyramid Text § 290d–291aT)

What happens in the existential construction is an inversion of the order subject-predicate triggered by information structure. In the existential predication, the subject is not thematic but falls rather under the scope of focus/rheme. In that case, it has to follow the predicate, rather than preceding it. Example (20) makes this contrast in constituent order obvious:

(20) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
      jst   wn   ḥmt=f   mrt   rn=s
      now exist\PTCP.STAT wife=3SG.M Meret name=3SG.F
      'Now there was his wife named Meret.' (Tale of the Eloquent Peasant R 1, 2)

2.3 The emergence and extension of the negation *nn*: A type B in Middle Egyptian

The negation *nn* is the form traditionally acknowledged in grammars as the existential negation in Classical Egyptian, be it literary or documentary:

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[16]See Meltzer (1990). Although *wn* is often analysed as a *sḏm-f* form from the verb *wnn*, no such form is ever attested with an actual suffix pronoun (*ni wn-f). When the meaning is 'there is none', the reference to an item that can be deduced from the context is in fact assumed by a zero.

(21) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
    nn   *ḥrw-jb*
    NEG.EX peaceful
    'There is no peaceful one.' (Dialogue of a Man with his Ba 125–126)

(22) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
    nn   *ḥm-t*
    NEG.EX servant-F.SG
    'There is no servant.' (Letter UC 32092C r 11)

The very fact that *nn* functions as existential negation, a role formerly played by *ni*, has sometimes been interpreted by philologists as resulting from a graphic confusion in older sources. Such an analysis is prompted by the absence of a diachronic perspective of Earlier Egyptian, instead conceived of as a homogeneous block. The more recent form *nn* is indeed the successor of *ni* as a form dedicated to existential negation, with *ni wn* and *ni wnt* being intermediary, in accordance with the NEC. Its formal relationship with the general negation *ni* prompted several hypotheses, among them a process of morphological fusion between *ni* and a following particle *jn*. According to Loprieno (1995: 127), following a suggestion by Osing (1979), this postulated collocation would attest a kind of Jespersen cycle. However, the attested use of the particle *jn* does not support this historical reconstruction, neither semantically nor syntactically. This particle remains difficult to gloss due to its polyfunctionality, but the crucial point from a historical point of view is that the hypothesized collocation *ni jn is not attested except for very rare occurrences, which are not likely to represent a source construction for a morphological fusion. On the contrary, the following proposal is based on a well-attested combination. Vergote (1965: 359) already suggested the hypothesis advocated here, namely, that *nn* is the result of the fusion of the negative *ni* with the following existential verb *wnn*:

(23) *nn*   < *ni* *wn*
    NEG.EX   NEG exist\PTCP
    'there is no' 'there exists not'

This note remained mainly unnoticed. However, in the perspective of a NEC, it makes perfect sense.[17] In Croft's (1991) terms, the process of phonological fusion that gives rise towards the end of the Old Kingdom to the form *nn* dedicated to

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[17]Osing (1979: 311) rejects it on the basis of its poor attestation. However, the collocation of the particle *jn* with the older negation *ni* proposed as a source for *nn* is even much more elusive.

the negative existential function is characteristic of the transition between a type A and a type B.

The form *nn* does not remain specialized in this function for long. Indeed, the documentation shows a stage where *nn* is already extended to express the meaning 'without' when followed by an infinitive. According to Loprieno et al. (2017: 256–257), the first examples of the negation *nn* where it does not function as a negative existential but as the negation in locative predication date to the late First Intermediate Period and early Middle Kingdom. It is well established in literary Middle Egyptian:

(24)   Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
       nn   sj   m jb-j
       NEG F.3SG in heart-1SG
       'It was not in my heart.' (Sinuhe 223–224)

As Loprieno et al. (2017: 257) put it, "the underlying reason for the change from *n* to *nn*-negations in adverbial sentences is unknown".[18] However, a path of change similar to what happened already in Old Egyptian with the negation *ni* can be postulated within a diachronic perspective. It involves again the relaxing of the referential constraint on the subject/topic from locative-presentative[19] to locative predication:

Step (1): *nn* + non referential subject ('there is no man')

Step (2): *nn* + non referential subject + locative predicate ('there is no man in the house')

(25)   Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
       nn   ḥn   jm   n ꜥbꜥ   pri   m rꜣ=j
       NEG.EX word there of exaggeration come_out\PTCP in mouth-1sg
       'There is no word of exaggeration in what came out of my mouth.' (Stela of Sesostris III at Semnah = Berlin ÄM 1157 l. 16–17)

Step (3): *nn* + referential subject + locative predicate ('the man is not in the house')

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[18]An analysis based on pragmatic factors was proposed in Loprieno (1991), but Uljas (2013) points out several aspects that cannot be accounted for according to it.

[19]See Veselinova (2013: 108) on the typologically frequent structural similarity between these constructions and mere existential constructions.

The use of *nn* also extends to all kinds of stative predicates (e.g. property predicates) in Middle Egyptian, thus replacing the older *ni* in this function as well:

(26) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
      nn   nn   šri-w
      NEG this be_small\PTCP.PFV-PRED
      'This is not small.' (Sinuhe, Ashmolean Ostracon 47)

Tenses known as 'pseudo-verbal' constructions are also concerned, but the spread of *nn* to these followed a different chronology.

It is also to be noted that already in its early attestation *nn* is used with the meaning 'without' before an infinitive:[20]

(27) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
      jri-kw   m ꜥq   nn   ḏd=f
      do\PTCP-PRED.1SG as enter\PTCP neg.ex say\INF-3SG.M
      'I was made one who enters without being called.' (Stela of Wepwawetaa
      = Münich Gl. WAF 35 line 16)

2.4 Towards a new type C?: The use of *nn* with a verb

As stated in Loprieno et al. (2017: 258), "the use of *nn* seems to have begun in utterances expressing strong denials and refusals by the speaker. […] However, the spread of *nn* in verbal sentences may also have been motivated by the morphological collapse of specific Prospective form(s) within the so-called *sDm-f* formation." The following example from the Middle Kingdom may illustrate such an emphatic use:

(28) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
      nn   šnꜥ-tw=ṯn   m st   qsnt
      NEG.EX detain\SBJV-PASS-2PL in place dire
      'You shall not be detained in a dire place.' (Stela of Nebipusenwosret =
      BM EA 101 line 14–15)

As is often the case, the use of the negative existential first extends only to part of the verbal system. Within Middle Egyptian (2200–1700 BCE), *nn* in fact does not become the Standard Negation, but comes to be used in a verbal construction with modal semantics. I will focus here on the beginning of this process of

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[20]Veselinova (2013: 118) shows that in various languages, this use is a frequent extension of the negative existential.

extension to the verbal system that is never fully completed, with part of the verbal system remaining untouched until Coptic. Two historical scenarios appear to compete in the explanation of this process:

(i) one involves only the transfer of a whole inherited construction, where *nn* stems out of *ni wn*, as is the case in negative existential constructions, and

(ii) the other involves a proper expansion of the negative existential *nn* to negate a modal form.

In both cases, there are good reasons to assume that the special paradigm of forms attested in the construction had acquired its modal semantics as a complement of manipulative verbs such as *rDi* 'to let/allow'.[21]

The first scenario (i) involves the transfer of an inherited construction. One may postulate an evolution according to which the collocation *ni wn* that lies at the source of *nn* by fusion was used before a verbal form functioning as its subject:

(29) **ni wn jwt-f*   > *nn jwt-f*
       NEG exist come\SBJV-3SG.M   NEG come\SBJV-3SG.M
       'There is no (possibility) that he shall come > 'he shall not come

However, there is no trace of a construction **ni wn sḏm-f* in the documentation. On the contrary, the *nn sḏm-f* construction seems to gradually replace the construction *ni* + Verbal nominalization marked for indefiniteness (mentioned in 2.1) It appears semantically likely that the need for emphasis prompted a functional renewal, according to which the negative existential as such came to be used with a subjunctive form as subject:

(30) *nn   jwt-f*   > *nn jwt-f*
       NEG.EX come\SBJV-3SG.M   NEG come\SBJV-3SG.M
       'There is not that he shall come' > 'he shall not come'

This second scenario (ii) thus involves the expansion of the negative existential *nn* to replace the older *ni* in negating a modal form that is also distinct from the older one.[22] It remains difficult to decide which of these potential paths of

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[21]On the use in main clauses of verb forms whose modal semantics emerge from their primary use in completive clauses, see Evans (2007) and the notion of insubordination, whose applicability to the Egyptian tense sometimes called 'subjunctive' still needs further research.

[22]See Vernus (1990) on this process.

change was followed in the Egyptian case. Less systematically, one also finds the negation *nn* in constructions involving other verbal forms, such as the Anterior *sDm-n-f*, but the reality behind the graphic reading is a matter of debate and this use in any case remains non-standard. It is also important to state that a large part of the Egyptian negative system involves neither locative nor verbal predicates but nominal predication, be it with classifying or identifying semantics.[23] Only towards the end of the period known as Middle Egyptian does the form *nn* also extend to negate nominal predication in the strict sense, taking over another part of the former domain of the negation *ni*.[24] In Late Egyptian, *nn* takes the graphic form *bn*. As such, it is attested more largely, while the domain of use of *ni*, which becomes graphically *bw*, is drastically reduced. Thus, *bn* can be said to become the standard negation in Later Egyptian, in association with the morph *jwnꜣ* > Coptic *in.* However, at this point in time, *bn* had long ceased to function as a negative existential; thus, no new stage C can be observed. The history of the combination *bn…jwn#* represents another kind of linguistic cycle typical of the renewal of negation that lies beyond the scope of the present contribution.[25]

2.5 Re-starting a cycle: The rise of *nn wn* and the new type A

As stated by Veselinova (2016: 174), in various languages a NEC can be observed to re-start many times without being completed. In Earlier Egyptian, the same process seems to happen when the verb *wnn* appears again in a new construction after the negation *nn*, which used to express the existential negation alone:[26]

(31) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  nn   wn   ꜥq-w   jm
  NEG exist\PTCP.PRED.M.SG ration-PL there
  '(Can I be confident that I did give rations to my household while one writes to me saying) there are no rations there?' (pBM 10549, vso1-2)

The very same relationship as the one between *ni* and *ni wn* obtains between this negative existential construction and the predication involving a thematic subject. The latter respects the usual 'Subject-Predicate' order in locative predications:

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[23]On non-verbal predication in Ancient Egyptian, see the rich study by Loprieno et al. (2017), which includes all known stages of its long history.

[24]See Uljas (2013) on this evolution.

[25]On this Jespersen cycle, see Winand (1997).

[26]Previous Egyptological analysis sometimes considers *nn* as a shortened version of *nn wn*, a view that diachronic data do not support without mentioning the neglected possibility of a NEC happening in Earlier Egyptian.

(32) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  pfꜣ   *šm*   *ḥnꜥ=f*   *nn* *sw* *wn*
  DEM\M.SG go\PTCP.M.SG with=M.3SG NEG M.3SG exist\PTCP.PRED.M.SG
  'That one with whom one used to go, he does not exist.' (Dialogue of a
  Man with his Ba 126-127)

With a rhematic subject, the existential verb comes before the subject:[27]

(33) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  nn *wn*   *mꜣjr*   *n* *hꜣw=j*   *nn* *ḥqr* *n*
  NEG exist\PTCP.PRED.M.SG miserable of surroundings=1SG NEG hungry of
  rk=j
  time=1SG
  'There was no miserable in my surroundings, no hungry (person) in my
  time.' (Imeny, Beni Hassan I, 8, 18-19)

In this example, the older dedicated negative existential *nn* also occurs in parallel with *nn wn*. The coexistence of older and newer forms is not surprising, and it is found in other languages as well.[28] The construction also occurs with no subject at all:

(34) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  ḥr *nb* *ḥr* *nn* *wn*
  face every QUOT NEG exist\PTCP.PRED.M.SG
  'Everyone is saying: there is nothing.' (Admonitions 6, 3)

The existential negation *nn wn* began to extend to constructions involving a verbal form without ever moving into the domain of standard negation. Already at the beginning of the 12th Dynasty (20th century BCE), one finds the negative existential *nn wn* used in a construction before the Anterior, a verb form marked for anteriority by a suffix *-n*:

(35) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  jw *rḏi-n=j*   *mw* *n* *jb*   *ḥbsw* *n* *ḥꜣjj* *nn* *wn*
  LOC give-ANT=1SG water to thirsty clothes to naked NEG EX\PTCP.M.SG
  jr-n=j   *r*   *rmṯ*
  do-ANT=1SG against people
  'I gave water to the thirsty one, clothes to the naked one, on no occasion
  did I act against people.' (Stela Louvre C 196)

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[27]For an alternative analysis of the form *wn* as a *sDm-f* form, see, for example, Uljas (2013).
[28]See Veselinova (2014).

It is also attested before a nominalization with modal prospective semantics:

(36) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
      nn   wn   mwt-k   ḥr ḫꜣst
      NEG.EX EX\PTCP.M.SG die\NMLZ-2SG.M on desert
      'You shall not die in the desert.' (Sinuhe B 197)

(37) Classical Egyptian (Egyptian [Afro-Asiatic], Egypt)
      nn   wn   ḥḥ-j-k   r   nḥḥ
      NEG.EX EX\PTCP.M.SG seek\NMLZ-PASS-2SG.M for eternity
      'You shall not be sought in eternity.' (Harpist song, Theban Tomb 50, Text J)

However, this kind of use is rarely attested and did not generalize. It seems to have remained bound to an emphatic context of utterance. Thus, the renewal of the negative existential by way of the existential copula does not necessarily give an impulse to a new NEC, when other structural conditions that favour this evolution are lacking.

The maximal extension of *nn > bn* as quasi-Standard Negation and the use of *nn/bn wn* as a usual negative existential construction are likely to have coincided at a point in the history of Ancient Egyptian that is not well documented in the preserved sources (see §3.3). However, the consecutive situation in Late Egyptian attests that this stage, corresponding to a new type A in an ideal NEC, was indeed realized as a concrete step in its development.[29]

2.6 The emergence of *mn*: From A to B in Later Egyptian

Phonological fusion happens again in Later Egyptian, the second typologically defined phase in the history of the Egyptian language. It thus characterizes a further transition from a type A to a type B, as was already the case in Earlier Egyptian with the reconstructed emergence of *nn* out of *ni wn*:

(38)   Middle Egyptian *nn wn* > Late Egyptian and Demotic *mn* > Coptic *mn*

The following example comes from a documentary source in Late Egyptian, dating approximately from the 12th century BCE:

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[29]On the transition between Earlier and Later Egyptian and the discontinuity of sources attesting the various stages in Ancient Egyptian history, see Zöller-Engelhardt (2016).

(39) Late Egyptian (Egyptian [Afro-Asiatic], Egypt)

ḥr jnn mn   bḥz jmi   jni-tw   pȝ-ḥʿtj   ḥnʿ pȝ-wt
PRT if   NEG.EX calf let\IMP bring-PASS DEF-bed and DEF-coffin

'If there is no calf, let the bed and the coffin be brought.' (Ostracon Berlin
12630, verso 1)

The coexistence of *bn* and *mn* in two patterns sharing the function of express-
ing sentential possession within the same phase of the language has been studied
in Depuydt (2008). According to this study, the construction involving *mn* is an
existential sentence while the one involving *bn* is not. Within Late Egyptian syn-
chrony, this is certainly true. However, it does not imply that *bn* never had the
function of a negative existential. It seems more relevant to say that the latter was
no longer an existential construction. In the diachronic perspective presented in
here, the change in the status of the older construction is only natural and easy
to explain, as was already the case in the preceding transition from the recon-
structed types B to C in Older Egyptian. One needs only to recognize that twice
in the history of Ancient Egyptian, the negative existential (first *ni*, then *nn*) ex-
tended its use to negating locative predication, and thus to possessive predication,
which follows a well-known locative strategy in this language.

Unlike the former fusion from *ni wn* to *nn*, the fusion from *nn wn* into *mn*
has long been recognized as such in the Egyptological literature. The same form
remains in use as the negative existential until Coptic, with some variations in
form according to the dialect that are not relevant to the general evolution:

(40) Coptic (Egyptian [Afro-Asiatic], Egypt)

mn-nute nsa-ntok   Apollôn
NEG-god except-M.2SG Apollo

'There is no god but you, Apollo.' (Till, KHML II 33, 16-17)

One can assume that the Egyptian NEC stops at this point, since the negation
mn does not seem to extend to cover the domain of standard negation in Cop-
tic, although it does also spread to some modal constructions, including the pro-
hibitive/vetitive and the negative jussive.[30] However, as will be seen in the next
section, the whole history of its development from Middle Egyptian onwards is
more complex than the presentation of its steps as distinct stages may suggest,
and there are reasons to assume than the NEC lost its full force even before its
last effects in Late Egyptian and Coptic.

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[30]On this topic, see Grossman & Polis (forthcoming).

3 The complex diachrony of the Egyptian NEC

This section presents a historical analysis of the Egyptian NEC that focuses on data that make the general picture more complicated than what may seem at first sight. As in other language families, synchronic variation plays a key role at different points in this history, thus making transitional stages more important than stable types. However, the nature of the Egyptian documentation needs to be taken into account in order to assess the meaning of variation within the distinct corpuses that constitute it. A methodological preamble in §3.1 thus anticipates a presentation of the particular problems connected to the chronology of the attestation of forms and constructions. §3.2 sheds light on the fact that the existential negation may not be dedicated to one use, even in the first phase of its emergence. §3.3 is devoted to showing some atypical features of the Egyptian NEC.

3.1 Layering and the problem of diglossia in Ancient Egyptian

Before turning to facts regarding the precise chronology of the Egyptian NEC, an analysis of various factors that make it difficult to establish is in order. It is a well-known fact that prolonged variation between older and emergent forms in a given phase of a language may obscure the historical reconstruction of its evolution. The phenomenon of layering plays the same role in Egyptian as in other languages. Beyond negation, it is observed in many domains of the language. In this respect, there is nothing particular to Ancient Egyptian. However, the nature of the documentation makes the situation of the linguist even more difficult. First, it is not always possible to date a document with the precision needed to reconstruct a historical path. Moreover, even in texts that can be dated with some accuracy and belong to the same historical moment, layering plays different roles and can have different effects, according to its register, genre or discourse category. From the end of Middle Kingdom on, the use of the classical language in texts showing various degrees of formality prompted Egyptologists to create the notion of *Egyptien de tradition*.[31] This label designates a multifaceted reality. Middle Egyptian becomes a literary language of communication in formal register, used much like Latin in the Medieval Period. However, the concrete reality bound with this general definition can vary a lot from one text to another, depending on time but also on various contexts of use. Beyond the extension of the well-known phenomenon of layering, the Egyptian documentation thus shows a preservation of ancient forms in texts dating from times much later than their

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[31]On this situation of diglossia, see Vernus (1996).

living use in the spoken language. As for negative existential constructions, the conservatism in formal and literary registers may be illustrated through the use of the construction *ni wn*. It is indeed maintained in texts written in *Egyptien de tradition* during the New Kingdom, such as seen in the following example, which shows its use for expressing sentential possession:

(41)   Classical Egyptian (Egyptian [Afro-Asiatic], Egypt)
       ni   wn   st=sn
       NEG exist\PTCP.M.SG place=3PL
       'Their place does not exist' > 'They have no place' (Theban Tomb 50, Harpist song B 11)

Diglossia is a complex phenomenon, and the Egyptian case for linguistic variation according to discourse registers or contexts of use is still in need of further research, although promising steps have already been taken.[32] However, one may assume that there is no progressive transition between the use of two successive written registers in the larger sense, so that the whole history of Ancient Egyptian as a spoken language remains undocumented. As a consequence, there may be a gap in the attestation of linguistic change between Middle Egyptian, in the strict sense, and Late Egyptian texts. This gap affects different linguistic phenomena in various ways, and its impact on the history of existential negation will be examined in §3.3.

3.2 When existential negations take over discourse functions in the negative domain

As mentioned in §2.2, the verb of existence *wnn* is combined in two distinct constructions with the negation *ni* in order to renew the existential construction. However, only one of these follows a typical path of change towards a new type B (*ni wn > nn*). The construction *ni wnt* follows another path of evolution, taking over a pragmatically marked function in the negative domain. Already in Old Egyptian, the form *wnt* is grammaticalized as a conjunction in a variety of completive constructions.[33] As a consequence, in the attested documentation, the former existential verb *wnt* is probably also reanalysed as such in the former negative existential construction (within which I propose that it emerged).

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[32]In particular, see works such as Stauder (2013), Werning (2013) and Polis (2017).

[33]See Uljas (2007) on the use of *wnt* as a complementizer in Old Egyptian. The usual hypothesis concerning its etymology sees it as a perfective feminine/neuter singular participle from the verb *wnn* 'to exist'.

Semantically, this reanalysis prompted the use of the construction as a denial operator, as is astutely observed by Uljas (2007: 192–193). Later on, in order to express the negation of existence, a new form of the existential verb *wnn* is even reintroduced as an existential predicate after *ni wnt*:

(42) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  ḏr-ntt ni wnt   wn   q3i ḥrw r=ṯnj   ʿ3
  for   NEG COMPL exist\PTCP.PRED.M.SG high voice against=2DU here
  'For it is not the case that there is/was someone who raises/raised his voice against both of you here.' (Letter to the Dead, Naga ed Deir 3500 K4-5)

(43) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  ni   wnt   wn   sḫ3   st
  NEG COMPL exist\PTCP.PRED.M.SG remember F.3SG
  'There was no one who would remember it.' (Berlin 13272)

In a syntactic context of dependence, the older construction may also be used as an alternative to the use of *nn*, new negative existential having taken over the meaning 'without' in such position. The use of *ni wnt* as a negative existential still appears in a medical treaty from the First Intermediate Period:

(44) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  ni   wnt srf nb   jm-s
  NEG-EX heat any in-F.3SG
  'There being no heat at all within it.' (Papyrus Edwin Smith, plate 15, l. 12)

In this subordinate clause, the use of *nn* would have yielded a meaning 'without'. In the very same text, *nn* is indeed attested with this meaning before an infinitive:

(45) Middle Egyptian (Egyptian [Afro-Asiatic], Egypt)
  pḥ-wj wgjjt=f   pw nn   jṯ-t   jn-t
  end-DU ramus-M.3SG COP without fetch-INF bring-INF
  'It means that the ends of his ramus are without movement back and forth.' (Papyrus Edwin Smith, plate 3, l. 17)

The difference in meaning is slight: while the use of *ni wnt* does not imply anything regarding the expected state of the patient (no heat is a neutral description of what the practitioner might happen to find in his exploration), '*nn* + Infinitive' indicates that the absence of movement is an atypical state.

3.3 Atypical features in the Egyptian NEC and its chronology

Despite the inherent limitations presented in §2.1, it remains possible to retrace a somewhat imprecise path of change along steps with a plausible, if partly speculative, chronology. If one considers the *Pyramid Texts* as a corpus preserving at least partially a phase of the language history anterior to other Old Egyptian sources, the Egyptian attested documentation begins at a point of the cycle where it reaches completion: negation of action and negation of existence are the same (type C). Unfortunately but not unexpectedly, the first attested stage in the history of the Egyptian language is already a layered one. But even this transitional phase seems to be typologically precious, since Croft (1991: 18) states that 'types A and B are far more common than type C' and that type C–A will be extremely rare. It is thus interesting to be able to observe a transitional phase C–A in Old Egyptian. However, this phase and the consecutive phase A are not prototypical in the sense that they do not fit with the original hypothesis. First, as seen in §2.2, two constructions (*ni wn* and *ni wnt*) are successively created, both using the same existential verb. Only one of these (*ni wn*) follows a path of change predicted in the ideal NEC, giving rise to a new negator (*nn*) that is at first dedicated to the existential negation. There is thus a dead end in the development of the transition from type C to type A.

In Later Egyptian, as stated in the preceding section, no new stage C ever happened, for the negation *bn* had ceased to function as an existential negation long before it reached the status of (quasi-)Standard Negation. Even the actual existence of a new stage A cannot definitively be assumed to have taken place. The use of *bn wn* as existential negation is in fact almost not attested in the documentation.[34] The following example is one of the very rare instances:

(46) Late Egyptian (Egyptian [Afro-Asiatic], Egypt)

is	*bn*	*wn*	*m-di=k*	*sšw*	*qnw*
INTER	NEG	exist\NMLZ	PREP=2SG.M	scribes	many

'Don't you have many scribes at your disposal?' (Papyrus Anastasi 5, 11, 4)

The expected existential negation should here be the form *mn* resulting from the fusion of *bn wn* in a text from this stage in the history of the language. However, it belongs to a corpus of texts traditionally called the Late Egyptian Miscellanies, which may show archaizing features. The same phenomenon may occur

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[34]Many thanks are due to Stéphane Polis, who kindly searched the Ramses database for attestations of *bn wn* in Late Egyptian.

in the following literary text, where the graphical alternation between Middle Egyptian *nn* and Late Egyptian *bn wn* witnesses a deliberate play of graphical conventions by the scribe who composed the text:

(47) Late Egyptian (Egyptian [Afro-Asiatic], Egypt)
    nn   *sꜣ*   *n imj-rꜣ-pr-ḥḏ*   *bn*   *wn*   *[lacuna] imj-rꜣ*
    NEG.EX son to director_of_the_treasury NEG exist\NMLZ [heir]   director
    'There is no son for the director of the treasury, there exists [no heir] for the director.' (Wisdom of Ani 20, 5–7, O. Gardiner 357)

Thus, it remains possible that the second stage A, which is poorly attested in the preserved documentation, was indeed an actual step in the historical development but remains obscured by the gap in written data between Classical Egyptian and Late Egyptian, as explained in §2.1.

4 What motivates type changes within the NEC?

Croft (1991) proposes distinct characterizations for the change from one type to another, according to the transitional phase considered. This is schematically summarized as follows:

(i) from type A to type B: fusion

(ii) from type B to type C: emphasis

(iii) from type C to type A: syntactic analogy

Thus, each kind of transition would appear to be motivated by a phenomenon belonging to a distinct domain: pragmatics, syntax and morphology. The process of phonological fusion as it is analysed in Croft (1991) appears rather less problematic than the precise role of emphasis and analogy in other transitional phases postulated in the ideal model of the cycle. It only raises a question as to the chronological relationship between the morphological process, according to which the former Standard Negation fuses with the existential verb and the 'spread' of the dedicated existential copula to other verbal and non-verbal predications, as seen in §2. In the next sections, I shall try to reconsider the qualification of changes (i) and (ii) in light of the Ancient Egyptian data.

4.1 Re-assessing the role of syntactic analogy

Syntactic analogy is supposed to characterize transitions from type C to type A. In the history of Earlier Egyptian, this process seems to happen three times:

Phase 1: From *ni* to *ni wnt*

Phase 2: From *ni* to *ni wn*

Phase 3: From *nn* to *nn wn*

Each time, a form of the existential verb *wnn* is added to the former existential construction. In each case, however, there is no precise analogy to a standard verbal pattern. In phases 2 and 3, it is the stative predication that gives rise to the negative existential construction via a word order change that befits its information structure features. The only syntactic analogy that may be invoked is the one with the positive existential statement, which is itself renewed by adding the existential copula:

(48) a. *jw S > jw wn   S*
         LOC S > LOC exist\PTCP.PRED S
         'There is S.'

     b. *ni   S > ni   wn   S*
         NEG.EX S > NEG exist\PTCP.PRED S
         'There is no S.'

     c. *nn   S > nn   wn   S*
         NEG.EX S > NEG exist\PTCP.PRED S
         'There is no S.'

One may now ask whether the evolution in the positive existential construction is itself motivated by some kind of syntactic analogy. This is not the case, for this construction was shown in §2.2 to derive from the stative pattern according to a word order change whereby the indefinite subject, being rhematic, comes to be placed after the existential copula. Its emergence is likely linked to the fact that the former existential pattern had been extended to the stative predication in general, according to a path that can be schematized as follows:

(49) a. *jw* + indefinite S
         'There is bread.'

b. *jw* + indefinite S + locative predicate
   'There is bread in the house.'

This pattern is extended to referential subjects via a bridging use involving a change of scope: the presentative reading is interpreted by the listener as concerning the locative predication as a whole with a thetic information structure, much like the scope of French *il y a* can extend over an existential subject or a whole presentative clause:

(50) *jw* + referential S + locative predicate
      'There is your bread in the house.'

One step beyond, the particle *jw* loses its locative semantics and becomes an auxiliary with a grounding discourse function as a textual marker:

(51) *jw* + referential S + stative predicate
      'Your bread is in the house.'

By the same token, a need arises for a renewed expressive means. The new existential predication introduces the existential verb as a stative predicate, thus making existential semantics explicit again, while displacing the subject to the rhematic position, befitting its informational status:

(52) *jw* + referential S + *wn* ≠ *jw* + *wn* + indefinite S
      'The bread is existing.' 'there is bread.'

Only in phase 1 is there a possible (though not directly attested) source construction common to Standard Negation and the new negative existential. The choice of the nominalization marked with an ending *-t* would parallel the grammaticalization of the so-called *t*-passive form from an action nominal marked for completive aspect following the former negative verb *ni*:[35]

(53) a. *ni   jri-t   P*
         NEG do\NMLZ-COMPL P
         'There is no action of P' > 'P was not done.'

      b. *ni   wn-t   š*
         NEG exist\NMLZ-COMPL S
         'There is no completed existence of S' > 'there is no S.'

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[35]For data concerning the evolution of passive forms and constructions in Earlier Egyptian, see Stauder (2014). However, his analysis and the diachronic path of change proposed in this paper differ in more than one respect.

Even in this case, however, the analogy appears to be a superficial description of what happens in the language. From a functional point of view, the introduction of the verb of existence *wnn* in each of the patterns under consideration can be explained as arising from the need for the renewed expression of existence. After the relaxation of the conditions of use bearing on the former existential construction, which has now become a stative construction, existential semantics would otherwise be absent. Thus, it is only from a partial point of view that this change may be qualified as formal and motivated by analogy as such. It cannot be demonstrated based on the preserved documentation, but one can even consider that this functional need for a renewal of expressive means has more to do with pragmatics than with syntax. Along this line of analysis, emphasis thus does not seem to be characteristic only of the transition from a type B to a type C, an evolution that is the subject of the next section.

4.2 Emphasis as a functional motivation for change: NEC as another kind of Jespersen cycle

According to Croft (1991), the communicative need for more emphasis would be the functional input for the change from type B to type C, when the existential negation is extended to negate verbal clauses. Let us look back to the Egyptian case and what the documentation allows us to observe in this regard. This transition is potentially relevant to two distinct phases in the history of the Egyptian language:

(i) The reconstructed phase C with *ni* serving both as Standard Negation and as existential negation.

(ii) The transitional phase B' to C' (incomplete), during which *nn*/ʙɴ gradually extends to negate almost every kind of predication.

These can be further explained as follows:

(i) As seen in the preceding section, it is not clear whether the use of the existential negation *ni* with nominalizations according to an asymmetric negative strategy correlates with a pragmatic need for more emphasis. Since this extension is already completed in the most ancient documented stage of the language, one can only assume that such a need was an input towards change. In a way, the very fact that nominalizations in general play a crucial role in the renewal of the verbal system in the stage prior to Old Egyptian represents an argument against such a pragmatic motivation in

the negative domain. However, there is also the possibility that a change in the negative domain, motivated in its incipient stage by a pragmatic need, might have been later extended to the rest of the verbal system. Along this line of historical explanation, the NEC would indeed help us to understand what prompted a more general evolution in the structure of the Egyptian verbal system.

(ii) As was already mentioned in the preceding §2, a new type C never obtains in Middle Egyptian or in Late Egyptian, for *bn* no longer functions as a negative existential when its development as a negator reaches its maximal extension and becomes something close to the Standard Negation in the language. Moreover, its pathway of change was even shown to be the same as was the case for *ni* in the preceding evolution from type C to type A: the relaxing of the constraint of indefinite reference on the subject made *nn* capable of expressing the negation in all sorts of stative predications. From there, its spread to the nominal predication appears to fall within the scope of analogy more than anything else. On the other hand, its use with a modal verbal form (sometimes called subjunctive *sḏm-f*) also used in positive modal main clauses by insubordination may indeed be considered to derive from a need for emphasis. Such an explanation would account for its gradual replacing of the more ancient modal construction based on the negation *ni* and a nominalization. However, as seen in §2, there is a gap in the attestation of the spoken register in Earlier Egyptian that allows for an unattested intermediary step *ni wn* subjunctive *sDm-f*. In that case, the construction using the dedicated negative existential *nn* would be inherited, deriving from a former construction involving the existential verb and the Standard Negation. As a consequence, it would seem questionable to speak of the negative existential extending to Standard Negation.[36] However, such a situation does not exclude emphasis as a motivation for the emergent construction in its incipient stage. An especially interesting point for a better understanding of the NEC might lie in the similar development attested in a modern language, such as Kannada:

> Kannada is a good example of diglossia as there are substantive differences between the literary and the spoken language on many levels. With regard to negation, it has to be said that one and the same strategy seems to be used to negate verbs with past time reference in both Literary and Spoken Kannada. Clear differences for the expressions

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[36]In such cases, Veselinova (2014) states that the cycle is not operational.

of SN are observed for verbs/simple verbal sentences with present/
future time reference. (Veselinova 2016: 168)

In Late Egyptian, the negation for verbs with past time reference, *bw*, is
the direct successor of the negation *ni*. But constructions used to negate
sentences with future/modal reference differ in more than one aspect from
earlier patterns. It thus confirms that the expansion of the negative exis-
tential into the verbal domain may obtain preferably both in the spoken
register and in non-past contexts.

5 Conclusion and avenues for further research

From the point of view of Ancient Egyptian grammatical studies, it thus appears
that the reconstruction of a NEC allows a solution to problems about negation
that had remained pending for a long time. In particular, the coexistence of dis-
tinct forms expressing existential negation in Earlier Egyptian can be better un-
derstood as the result of layering in documentation that contains more diachro-
nic change than has been generally assessed in philological studies. On the flip
side, the Ancient Egyptian data bring to linguistic research on negation an in-
teresting case for an evolution attested over a long period of time. The study of
these data confirms that transitional stages tend to be stable, as was already es-
tablished in Veselinova's pioneering studies on other language families. It also
shows ideal stages that are not strictly consecutive: Ancient Egyptian illustrates
the fact that overlaps are likely to occur between stages. As for the diachronic di-
mension, the attested history of Ancient Egyptian would appear to provide a case
for the study of a potential NEC without reconstruction. Somewhat disappoint-
ingly, Middle Egyptian itself shows just another case of a long period of time
where the negative existential is used for a specific sub-domain (modal/future
negation, as in Bulgarian and Macedonian, with an inherited construction rather
than an actual instantiation of the NEC, according to Veselinova 2014). However,
the very notion of Standard Negation in a language such as Ancient Egyptian is
obscured by the presence of other types of predication as prominent as verbal
predication. Taking into account this specific structural feature, it appears that
the NEC is almost completed in Late Egyptian (with *bn* serving as quasi-Standard
Negation), even if it does not reach a new stage C. Since the negative existential
itself had been re-created long before (emergence of *mn*), the ideal type C pos-
tulated in Croft (1991) never happened to exist as such. A new cycle was thus
re-started before the previous one completed, much in line with other situations
studied in Veselinova (2016). As seen in the preceding sections, establishing the

precise chronology in the Egyptian case is not easy. However, the extant data appear to suggest a period stretching from 1000 years as the time from a phase A to the next transitional phase C~A.[37]

Regarding the path of change involving nominalizations and negative existentials, the Egyptian data bring to light a further question as to the historical intricacies of the NEC and the grammaticalization process of new verbal constructions based on nominalizations. Veselinova (2013: 139) argues that 'negative existentials state the absence of an entity rather than negating its presence'. Consequently, the action, when negated by a negative existential in a given language, is conceptualized and encoded as an entity. This approach requires particular consideration in the Egyptian case. In the phase of its history just before Old Egyptian, it appears most likely that the entire verbal system was renewed according to a process that involved the grammaticalization of constructions with nominalizations. This phenomenon is not restricted to the negative polarity, but extends to positive constructions as well. Thus, a question may be asked as to the relevance of the renewal of negative patterns for the evolution of the whole verbal system. Following Veselinova (2016), the encoding of actions in nominalizations appears functionally correlated with the use of the negative existential as a more emphatic construction in its incipient stage.[38] Such a process would suggest that the impetus for the global renewal of verbal predication in pre-Old Egyptian may have come from the new negative pattern using the negative existential in combination with verbal nominalizations.

Abbreviations

ANT	Anterior	INDF	indefinite	PREP	preposition
C	common gender	INF	infinitive	PRT	particle
COMPL	completive	INTER	interrogative	PTCP	participle
CONJ	conjunction	LOC	locative particle	QUOT	quotative
COP	copula	M	masculine	REL	relative
DEF	definite	NEG	negation	RES	restative
DEM	demonstrative	NEG.EX	negative	SBJV	subjunctive
DU	dual		existential	SG	singular
F	feminine	NMLZ	nominalization	STAT	stative
IMP	imperative	PASS	passive		
IPFV	imperfective	PL	plural		

[37] As for the time dimension of the NEC in general, Veselinova (2014: 1327) states that 'modeling this cycle, as its completion, i.e. the negative existential turning into a full-fledged marker of standard negation, appears to take longer than 2000 years'.

[38] See Veselinova (2016: 160) on Turkish.

Acknowledgements

Appendix

The following table lists the various patterns and stages of the NEC. It is to be understood as a postulated reconstruction based on documentation that does not allow us to establish a precise chronology of changes (for reasons discussed in §3.1). Thus, while the order of succession and the approximate time of emergence of the relevant forms and constructions can be assumed with relative confidence, a strict dating remains out of reach and the proposed dates remain suggestive and hypothetical. The asterisk before a type indicates a historical phase that may be assumed to have happened when the gap between the written register and the spoken language was maximal, so that the documentation does not attest its realization. Such periods occur in particular during the transition between two language norms and are designated here as Proto-Middle Egyptian and Proto-Late Egyptian.

Table 1: Patterns and stages of the NEC

Type	Reconstructed chronology	Incipient use as NegEx	Standard NegEx	Standard or c lose-to-standard Negation
*C	Proto-Egyptian (unattested)		*ni*	*ni*
A	Old Egyptian (ca. 2500–2200 BCE)		*ni wn(t)*	*ni*
*A-B	Proto-Middle Egyptian (unattested)	*nn*	*ni wn(t)*	*ni*
B-C	Early Middle Egyptian (ca. 2200–2000 BCE)		*nn*	*ni* *nn* + Verb (modal)
C-A	Middle Egyptian (ca. 2200–1700 BCE)	*nn wn*	*nn*	*ni* *nn* + Verb (modal)
*A-B	Proto-Late Egyptian (unattested)	*mn*	*bn wn* (= *nn wn*)	*bn (= nn)* *bw (= ni)*
B	Late Egyptian (ca. 1400–700 BCE)		*mn bn wn* (rare)	*bn* *bw*

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Part II

Eurasia

Chapter 7

Negative existentials in Indo-European: A typological and diachronic overview

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The investigation of the Negative Existential Cycle (Croft 1991) has focused thus far on individual languages and small language (sub)families. The current paper serves as a starting point to analyze change in negative existentials and to establish the stability of the various attested construction types in a larger language family, Indo-European. Our ultimate objective is to conduct a quantitative phylogenetic study and this is only possible by consulting a large sample of related languages. Our first step is to present a typological and diachronic overview of negative existentials in 42 languages including Romance, Celtic, Germanic, Baltic, and the Indo-Iranian languages as well as Albanian, Modern Armenian and Greek. We find that the Romance languages in our sample are consistently Type A, while the Germanic languages are consistently Type A~B. Indo-Iranian is far more varied and the most promising branch of Indo-European in terms of providing evidence for relevant diachronic pathways. We speculate on the reasons for the stability of Romance's Type A and Germanic's Type A~B and conclude that further phylogenetic analysis of additional languages is needed from these branches as well as from Indo-Iranian. We present evidence for the coexistence of two distinct negative existential constructions in several Indo-Iranian languages and discuss how the interaction of two or more constructions may contribute to further change within the Negative Existential Cycle.

1 Introduction

This paper is an examination of the Negative Existential Cycle (NEC, Croft 1991) in a broad sample of 42 Indo-European languages. The NEC is a typological hypothesis on how special existential negators may arise and ultimately be used

as standard verbal negators. Recent studies by Veselinova (2013, 2014, 2015, 2016) who has studied both a large sample of languages from around the world as well as a wide range of language (sub)families, show that when considering the actual processes through which the negators evolve, the NEC often does not take the form of a cycle. The six stages of the NEC are not necessarily consecutive, as languages can be split (that is, have different constructions for (existential) negation belonging to different types), and there is considerable variation in the stability of these stages. The NEC also interacts with other cycles and pathways through which negators arise, including Jespersen's Cycle (see van Gelderen 2022 [this volume]). Existentials are closely related to locatives (Clark 1978, Creissels 2013), both conceptually and concerning the constructions used to encode them (see the introduction to this volume).

Cross-linguistic work on the NEC has been mostly limited to Croft's (1991) original study, to the articles by Veselinova (2013, 2014, 2015, 2016) and to more general work on negation (Kahrel & van den Berg 1994, Cyffer et al. 2009, Budd 2010, Willis et al. 2013). The current volume addresses this gap by gathering information on the NEC in a wealth of different languages and families. Our contribution focuses on the Indo-European language family, with the aim to first provide an overview of the constructions that are used for negative existentials in the various sub-branches of the family, and second, to analyze the stability of some of these construction types. We hope that this article contributes to a comparative phylogenetic analysis in which we can more explicitly test the stability and direction of change.

§2 of this paper begins with a brief introduction to the NEC itself, using Indo-European illustrations from the current language sample, especially from languages that have not been considered in the literature thus far. In §3, we present and specify the motivation for the different methods that we used to collect our data as well as the definitions used in our operationalization of negative existential clauses. The fourth section is a detailed report on the different construction types that express a negative existential function across different branches of Indo-European. This is followed in §5 by some of the diachronic and theoretical considerations that the data analyzed here raises, and there we argue for also using evidence from phylogenies when testing pathways of morphosyntactic change. Finally, we present our conclusions and suggest several possible directions for future studies.

2 The Negative Existential Cycle in Indo-European

The Negative Existential Cycle (Croft 1991) is a hypothesis on how special existential negators may arise and may subsequently evolve into standard verbal negators. This cycle has six stages (Veselinova 2014) or language types (Croft 1991),[1] each with a different relationship between the expression of verbal negation and the expression of negative existentials:

- Type A: The negative existential construction is the affirmative existential predicate accompanied by the ordinary verbal negator.

- Type A~B: As Type A, but additionally one finds a special negative existential form, often a fusion of the regularly negated existential construction.

- Type B: Only a special negative existential form exists.

- Type B~C: The special negative existential form begins to be used for ordinary verbal negation.

- Type C: The negative existential form is the same as the ordinary verbal negator

- Type C~A: The negative existential form + verbal negator begins to be reanalyzed as only a negator, and is used as such in combination with an affirmative existential verb to form a negative existential

After the negative existential form + verbal negator in Type C~A is analyzed solely as a verbal negator, Type A is reached again and the cycle is complete. The cycle, then, is an attempt to make the typology of negative existential constructions more dynamic, providing a diachronic context for each construction type.

We now illustrate each of these types, beginning with Type A, where standard negation is used for both verbal and existential predicates. We illustrate this stage by citing data from Catalan (cat, Romance). Sentential negation in Catalan is expressed by *no* in the preverbal position:

(1) Catalan (Hualde 1992: 154)
     En Joan no viu   a Barcelona.
     ART John NEG live.3SG in Barcelona
     'John does not live in Barcelona.'

---

[1]We adopt the term "stage" when discussing the diachronic interpretation of the NEC, and "type" when referring to the synchronic characterization of a language.

Existential clauses in Catalan are expressed by a special construction that uses *haver-hi* 'there is', literally 'there has,' where *hi* is a locative adverbial clitic. This construction is similar to other clauses in Catalan and is negated by a preverbal *no*:

(2) Catalan (Wheeler et al. 1999: 460)
Hi   ha   tres possibilitats.
there have.PRS.3SG three possibility.PL
'There are three possibilities.'

(3) Catalan (Wheeler et al. 1999: 422)
No hi   ha   cap examen on   no enxampin   algú
NEG there have.PRS.3SG any exam   where NEG catch.SBJV.3PL somebody
copiant.
copy.GER
'There is no exam where they don't catch somebody copying.'

In the second stage (Type A~B), a special negator is used for existential sentences that only occur in specific contexts (see the discussion below on details regarding the variation allowed in the usage of the special negator). An example of this type is Sivandi (siy, Central Iranian). The Sivandi standard negation marker is a *na(y)*- or *ne(y)*- prefix (Lecoq 1979: 69). Sivandi negative existentials can be formed by *dār*- 'be located, be at, have' or the past tense copula *bi* as illustrated in (4). The existential markers can be negated by the standard preverbal negator *na-*, *ne-*, *ney-* as in (5):

(4) Sivandi (Lecoq 1979: 85)
Ye   pīrežen=i   bi.
one old.woman=INDF be.PST.3SG
'There was an old woman.'

(5) Sivandi (Lecoq 1979: 89)
albatte   barqa=m   na=bi,
evidently electricity=TOP NEG=be.PST.3SG
'(Someone lit a candle), evidently there was no electricity,'

Sivandi also has a special negative copula form, *nūnd*, which is historically composed of the negation marker *ne-* added to another element, the exact identity of which is still unclear. This is a negative copula form that is used as the negative counterpart of the Present tense copula:

(6) Sivandi (Lecoq 1979: 150)

Vāllāh, me či   tū das=em   nūnd.
by.god 1sg what in hand=1sg neg.cop

'By God, there's nothing in my hand.'

The existential predicates in the next construction type, Type B, are not negated by the standard negator, but only through a special strategy. One example of a Type B language is Kurmanji Kurdish [kmr]. In Kurmanji, a preverbal marker *na-*, *ne-*, considered to be either a prefix or clitic, is used for standard negation:

(7) Kurmanji (Thackston 2006: 35–36)

Ez na=tʃ-im   doctor.
1sg neg=go.prs-1sg doctor

'I am not going to the doctor.'

The affirmative existential construction consists of a single-figure constituent followed by the regular copula:

(8) Kurmanji (Thackston 2006: 31)

Got-in-eke   pêʂiy-ên me   heye.
say-nmzl-cnst.indf ancestor-pl 1pl.obl be.prs.3sg

'There is a saying of our ancestors.'

The negative existential does not take the form of a negated affirmative existential construction, but is formed by using the special verb *tun-*:

(9) Kurmanji (Thackston 2006: 32)

Di vî   warî da otorîtey-eke   resmî tune.
in dem regard in authority–cnst.indf official cop.neg.prs.3sg

'In this regard, there is no official authority.'

For Type B~C, the special existential negator is also used under certain conditions to negate some verbal predicates. In the current sample, Type B~C is attested in Oriya ([ory], Eastern Indo-Aryan), but its description is slightly complicated. We will discuss this further in §4.1. Veselinova (2014) has described two other Type B~C Indo-European languages, Bulgarian [bul] and Macedonian [mkd]. Veselinova (2014: 1332–1333) offers the following examples and analysis for Bulgarian. The standard negator generally found in Slavic and specifically in Bulgarian is the pre-verbal particle *ne* (ex. 10a–b). The existential negator, however, is *njama*, which is a reduction of the third person singular of the verb *imam* 'to have' (ex. 10c–d). The form *njama* is used in the future tense as a standard negator (ex. 10e–f), that is, only under specific conditions. That is, *njama* is not restricted to negative existentials.

(10) Bulgarian (Veselinova 2014: 1332–1333)

 a. *Maria pee.*
  Maria sing.3SG.PRS
  'Maria sings.'

 b. *Maria ne pee.*
  Maria NEG sing.3SG.PRS
  'Maria does not sing.'

 c. *Ima   div-i kotk-i*
  have.3SG.PRS wild-PL cat-PL
  'There are wild cats.'

 d. *Njama   div-i kotk-i.*
  not.have.3SG.PRS wild-PL cat-PL
  'There aren't any wild cats.'

 e. *Dovečera shte xodja na kino.*
  tonight FUT go.1SG.PRS to cinema
  'I will go to the movies tonight.'

 f. *Dovečera njama   da xodja na kino.*
  tonight not.have.3SG.PRS sub go.1SG.PRS to cinema
  'I will not go to the movies tonight.'

In the following stage, Type C, the special existential negator is commonly used for negative verbal predicates but replaces the affirmative existential marker rather than combining with it. There are several Type C negative existential constructions in Indo-European languages, particularly in Indo-Iranian languages, and this is illustrated more thoroughly in §4.1. Here, we demonstrate this pattern by citing examples from Kupia ([key], Eastern Indo-Aryan), spoken in Northern Andhra Pradesh. In (11a) *nay* is used as the verbal negation marker. In (11b) *nay* is used as the negative existential copula:

(11) a. Kupia (Christmas & Christmas 1973b: 38)
  anne nig-e nay.
  and run-3SG NEG
  '(The tiger stood up) and didn't run.'

 b. Kupia (Christmas & Christmas 1973b: 23)
  i:ndʒa santa-yi ne dorku ja-t-i   wastuwu nay.
  DEM market-LOC NEG available become-PRS-F goods NEG
  'There are no goods that aren't available at the market.'

The final stage, Type C~A, represents a further step in that the special existential negator combines with the affirmative existential construction to form the negative existential construction, however the result is emphatically or pragmatically marked. Croft's (1991) example of a Type C~A language is an Indo-Aryan language, Marathi [mar], where the negative existential form *nāhi* can function as the negative existential, but it also can combine with the positive existential *āhe*:

(12) Marathi (Croft 1991: 12, Madhav Deshpande, p.c., Croft's glosses)

 a. *tithə koṇi   āhe*
     there anyone EX
     'Is anyone there?'

 b. *koṇi   tithə dzāt* [*əts*]   *nāhi*
     anyone there goes [EMPH] NEG
     'Nobody goes there.'

 c. *tithə koṇi   nāhi* [*āhe*]
     there anyone NEG [EX]
     'There isn't anyone there.'

Croft (1991: 12) states that the negative existential construction that contains both *nāhi* and *āhe* is more emphatic than the construction with only *nāhi*, suggesting that the construction that combines the two is more recent. The Negative Existential Cycle is complete once the emphatic or pragmatic markedness of the combination of the former special existential negator and the affirmative existential wears off. We then return to Type A, where a standard negator is used for both verbal and existential predicates.

Croft (1991) analyzed a sample of 23 unrelated languages and drew on general diachronic processes to infer the directionality of change and to propose the Negative Existential Cycle (Croft 1991: 3–4, 13ff). This has since been investigated more directly by Veselinova (2013, 2014, 2015, 2016), who has analyzed a large sample of languages throughout the world as well as a large range of language (sub)families to determine the historical processes therein. The analyses by Croft and Veselinova of some negative existential construction types differ. For example, to describe stage A~B, Croft (1991: 6–12) emphasizes the existence of a construction with a special negative existential form in addition to a construction with the standard verbal negative marker. In contrast, Veselinova (2014: 1328) emphasizes that the special form is limited to specific contexts, depending on factors such as tense or aspect. Furthermore, Veselinova (2013: 136–138) argues that special negative existential markers (that is, those implicated in Type

B constructions), can arise through multiple processes and only some of them are directly connected to Croft's cycle. These points highlight the differences between the three transitional construction types. While Type A~B requires the co-existence of two constructions, one of Type A and one of Type B, Types B~C and C~A are defined by the distinct uses of the negative existential marker, and therefore do not require the existence of two negative existential constructions.

The most important conclusions of Veselinova's investigations are summarized in Veselinova (2016: 170ff). First, the types identified in the Negative Existential Cycle are construction types rather than language types because we find that these types co-occur within the same language. Veselinova (2014: 1372–1373, 1343ff) first identifies these split languages in the Polynesian subfamily, and later notes that the most common split type is A~B/B~C (Veselinova 2016: 154). Below, we further identify such co-occurrences in Indo-European, offering additional support for Veselinova's findings.

Second, the six types of the Negative Existential Cycle do not necessarily present a diachronic sequence. Veselinova (2014: 1336–1337; see also Croft 1991: 22) demonstrates that while Bulgarian (see ex. 10 above) and Macedonian are excellent examples of the transitional Type B~C, whereas all other Slavic languages are either Type A or Type A~B, Bulgarian and Macedonian are not examples of the Negative Existential Cycle at work, as they have not gone through stage B. A similar story can explain changes in the distribution of the Russian special negator *net* (Veselinova 2014: 1335, 1337–1338). Aside from these "gaps" in the Cycle, Veselinova (2013: 127) first observes that as an alternative route to the Negative Existential Cycle, special negative existential forms can change into standard negation markers when they are used as pro-sentences ('Are you at home?' 'No [, I am not at home]') and later on as general words for 'no' see also Veselinova 2014: 1339. Subsequent analysis in Veselinova (2016: 155ff) reveals at least three other attested diachronic processes. This means that the Negative Existential Cycle is not the only diachronic process through which special negative existential forms can enter the domain of standard negation.

The third and last point is that an analysis of the Negative Existential Cycle that is based on a language family from a historical-comparative perspective has consequences for our understanding of the stability of the various construction types and the rate of change between them (Veselinova 2015: 577, 2016: 170). Through the course of her investigation, Veselinova (2016: 150) finds that the "transitional" stages A~B and B~C are cross-linguistically more common than the "non-transitional" stages of C and A. These "transitional" stages can be maintained for extended periods of time, which also accounts for their synchronic

dominance. Veselinova (2016) reports on an accumulation of findings on the Negative Existential Cycle in six language (sub)families, but only one of these (Polynesian) features all six types. The Polynesian subfamily has diverged only relatively recently (approximately 2,000 years ago). Veselinova (2016: 155) suggests that the type of subordination construction that several Polynesian languages used for negation has been conducive to frequent renewal and rapid change in this family. This stands in contrast to several other, older families – Berber, Dravidian, Uralic – where only a few types of the Negative Existential Cycle are attested (see Veselinova 2016: 147–149). Hence, changes that occur within the Negative Existential Cycle as well as through other processes that result in special negative existential forms expressing standard verbal negation, depend on the language or language family-specific characteristics (Veselinova 2016: 154, 2014: 1373). This position is in line with current research in typology that demonstrates that language families have their own lineage-specific trends, both regarding features that tend to be stable and correlated with each other (Dunn et al. 2011, Dediu & Levinson 2012, Bickel 2013).

The aim of the current paper is to present a first preliminary overview of the constructions that are used for negative existentials in the various sub-branches of the Indo-European language family. In the future, we intend to expand the dataset to conduct an analysis using phylogenetic comparative methods. As Veselinova (2013) has demonstrated in a worldwide sample of 95 languages, Western Europe is not a particularly exciting place to investigate negative existential constructions, as the Western-European branches of Indo-European are relatively uniform in terms of the construction types that express the negative existential domain.[2] Nevertheless, our objective is to contribute to the current set of family-based historical-comparative studies. We decided to investigate Indo-European languages despite the limited variation in Western Europe for three, specific reasons. First, this is a large family that has been widely and extensively documented, which unlocks the potential to discover the entire cycle. Additionally, while the Indo-European languages of Western Europe are not especially varied, the Indo-Iranian languages do display interesting variation. Finally, there is also potential for an analysis of the interactions between some Indo-European branches and Uralic and Dravidian language families, which have already been studied by Veselinova (2015, 2016) as well as the Semitic and Tibeto-Burman families.

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[2]This is not an exceptional pattern, considering for instance clause alignment patterns, where Western European languages are uniformly accusative (Siewierska 2013), while the Indo-Iranian languages display considerable variation (Haig 2008, Verbeke 2013).

3 Methodology

The negative existential, like other domains of nominal predication, tends to be under-reported in published grammatical descriptions, either in the form of full reference grammars or grammar sketches. To overcome this, this study uses a combination of data sources to increase the coverage in terms of languages and branches. We included languages from each major branch of Indo-European, based on the likelihood of materials and experts being available in an attempt to establish a wide genealogical and geographical coverage. For example, we include Indo-Aryan languages from the Eastern, Northern, and Southern Zones, as well as Central and Western Iranian languages. To obtain the broadest language sample possible at this time, our sources include reference and sketch grammars as well as data from an analysis of published textual material and data from a translation questionnaire.

The translation questionnaire was slightly adjusted from (Veselinova 2014, Appendix C) and is included in Appendix A. Those experts and colleagues who have completed the translation questionnaire for their native language or their language of expertise are mentioned by name unless they preferred to remain anonymous. The questionnaire elicits translations of many different types of clauses, both affirmative and negative. Besides existential clauses, the questionnaire includes clauses that are expected to be completely verbal, such as "Marie sang." or "Marie didn't sing." and clauses which belong in the domain of nominal predication (as defined, for example, in Payne 1997: 111–127) such as "Tom is tall." or "Tom isn't tall.". This allowed us to evaluate the similarities in the expression of negation across different functional and grammatical domains. We then typically asked follow-up questions and elicited further grammatical patterns that express negative existence. For example, having identified a specific pattern in the expression of negative existential in one language (such as an A~B split that is based on tense), we can probe whether similar patterns exist in other closely related languages.

The third data source we consulted consists of published naturalistic texts. We find that the direct use of texts aids us in analyzing many similarly "minor" functions (such as other specific subdomains of nominal predication) or even "major" functions such as discourse functions, which tend to not make their way to reference grammars. This is not a critique of grammar writing practices – good grammars are often long and sufficiently detailed. They cannot and should not be expected to cover all functional domains that future linguists may potentially inquire about. The fact that many reference grammars are sufficiently detailed

to enable linguists to directly consult primary texts testifies to the superb quality of these grammatical descriptions.

The analysis of primary textual data from a variety of languages is rather the reality of researching constructions or functions that have not been thoroughly analyzed either in a typological or a descriptive sense. This is a labor-intensive task, but it is aided here by the fact that negative existence is often expressed by similar, even cognate, grammatical means, and that the grammatical patterns are similar to a large degree. The textual analysis also allows us to discern the common discourse situations that the negative existential constructions occur in, which often involve a change of location or a shift in the deictic center.

We do not see an *a priori* advantage to any of the three types of data sources used here. Yet the reality is that grammatical descriptions tend to not mention grammatical patterns that express the negative existential domain and negative existential clauses have a very low frequency in naturalistic texts. Thus, even when information from different sources was (at least potentially) available, we gave precedence to information from native speakers or language experts.

As demonstrated by Veselinova (2013: 112ff) and by her subsequent work, the type of negative existential construction is identified by comparing the negation strategies of existential constructions to that of standard verbal predicates. Of special importance here are locative sentences which are often encoded by very similar constructions but must be conceptually distinguished. This difference is found in the information status of the subject and the perspective on the figure-ground relationship between figure and the ground (Ljuba Veselinova, p.c.Creissels 2013):

(13)   predicate location: The book is on the table.
        existence: There is a book (on the table).

The figure entity of a locative predicate tends to be given information or be identifiable in context, while the comparable entity of an existential predicate is indefinite, potentially indicating new information that is not usually mentioned or referred to in the text immediately preceding the clause. The locative predicate establishes the location of an entity while the existential predicate is used to predicate the existence of an entity relative to a specific, often identifiable, location (Creissels 2013). Creissels' (2013) conceptualization of existentials avoids positing their semantics, that is, the notion that existential predicates assert or deny the existence of something, as their main defining property (Creissels 2013: 6ff). Nevertheless, in our search for existential predicates, we attempted to find and elicit as many examples as possible, both with and without an explicit location present ('on the table'), in an attempt to ensure that the two are considered

separately in our analysis. When their encoding diverges, we are interested in existentials only and do not include details on locatives.

4 Typological overview

In this section, we survey negative existentials that occur in the major Indo-European branches, moving from East to West. We begin with Indo-Iranian and end with Celtic. This section does not feature all the languages we collected data on. In Appendix B, we present a full overview of all 42 languages we investigated and provide examples and source information in the same order of branches. For ease of presentation, given the large number of scripts involved, we use transcriptions or transliterations into the Latin script in all examples.

4.1 Indo-Iranian

This section surveys the different negative existential construction types attested in a sample of Indo-Iranian languages. The survey reveals that across Indo-Iranian, all six types of negative existential constructions in Croft's (1991) cycle occur and that different construction types co-exist in some languages: most notably A and B (essentially instances of Croft's Type A~B) or C and A (essentially instances of Croft's Type C~A), but also A & B~C or B & C. These results are summarized in Table 1 below. Considering the attested combinations of states, together with the combinations found in Polynesian languages (Veselinova 2014), we argue in §5 below that at least some of the unattested combinations thus far might be the result of the definitions of the different construction types.

Many Indo-Iranian languages express the affirmative existential domain by a combination of a copular verb and a NP expressing the existing entity. This is illustrated by the clauses in examples (14) and (15), which are from Middle Persian ([pal], Western Iranian, circa 3rd century CE – 9th century CE) and Assamese ([asm], Eastern Indo-Aryan). The functional range of the copular verbs in these two clauses is not limited to clauses that express the existential domain but also includes other nominal predication domains.

(14) Middle Persian (AWN 9.2)
      ud   mardōm bud   hēnd
      and people   be.PST be.PRS.3PL
      'And there were people (who were as bright as the sun).'

Table 1: Overview of classification of Indo-Iranian languages

Language	Genealogical affiliation	ISO-code	Glottolog code	Classification	Source(s)
Old Persian	Old Iranian	peo	oldp1254	A	Primary texts (inscriptions)
Middle Persian	Western Middle Iranian	pal	pahl1241	A~B	Primary texts (Zoroastrian MP)
Tajik	Western Iranian	tgk	taji1245	A~B	Own data, Perry 2005
New Persian	Western Iranian	pes	west2369	A~B	Own data
Sivandi	Central Iranian	siy	siva1239	A~B	Lecoq 1979
Gorani	Central Iranian	hac	gora1267	A~B	Mahmoudveysi et al. 2012
Gilaki	Central Iranian	glk	gila1241	A	Rastorgueva et al. 2012
Ziyarati	Central Iranian	mzn	maza1291	A	Shokri et al. 2013
Kurmanji	Central Iranian	kmr	nort2641	B	Thackston 2006
Taleshi	Central Iranian	tly	taly1247	C~A	Paul 2011
Koroshi	Central Iranian	ktl	koro1296	A~B	Nourzaei et al. 2015
Hindi	Central Zone Indo-Aryan	hin	hind1269	C~A	Bashir 2006, *godaan* by Munshi Premchand
Odia	Eastern Zone Indo-Aryan	ory	oriy1255	A & B~C	Neukom & Patnaik 2003
Assamese	Eastern Zone Indo-Aryan	asm	assa1263	A~B	Nihankara Dutta, Krishna Boro (p.c.)
Kupia	Eastern Zone Indo-Aryan	key	kupi1238	B & C	Christmas & Christmas 1973a,b
Marathi	Southern Zone Indo Aryan	mar	mara1378	C~A	Croft 1991
Nepali	Northern Zone Indo-Aryan	npi	nepa1254	A	Sugam Singh, Marie-Caroline Pons (p.c.)

(15) Assamese (Nihankara Dutta, Krishna Boro, p.c.)
      bonoria mekuri as-e
      wild   cat   COP-3SG.PRS
      'There are wild cats (in the world).'

Much of the variation in the expression of the negative existential in Indo-Iranian is the result of different types of interaction between some form of the verbal copula and a standard verbal negation marker. In many constructions across the Indo-Iranian languages, the standard verbal negation marker simply accompanies the copular verb. In other constructions, morphological reduction of the two leads to univerbation and to the emergence of innovative negative copulas or innovative verbal negation markers. Other factors that increase the crosslinguistic variation in this domain are the rise of innovative locative copulas, usually labeled as 'stay,' 'exist (in)' or 'be at', and innovative negation markers. Rather than describing the different construction types attested in each language, the focus of this section is on examples that illustrate instances of each different construction type across the family.

In Old Persian [peo], the standard negation marker *naiy* is deployed in a preverbal position. The Old Persian affirmative existential is expressed by a copula accompanied by a NP expressing the existing entity, similar to the two clauses in examples (14) and (15) above. Clauses that express the negative existential in Old Persian, while apparently rare, are composed of a combination of the standard verbal negation marker *naiy* followed by the verbal copula. These two are accompanied by a NP that conveys the existing entity, as illustrated by example (16). Negative existential clauses in Old Persian are therefore an instance of Croft's Type A construction.

(16) Old Persian (DB1:48–49)
      naiy āha   *martiya naiy pārsa*   *naiy māda*   ...
      NEG COP.PST.3SG man   NEG persian NEG median
      'there was no man, not Persian, not Median, (...)'

This situation is common across the Indo-Iranian languages, and it is responsible for many occurrences of Type A constructions. In the (a–b) pairs in examples (17–19) below, the clauses in (a) illustrate the standard verbal negation marker as it occurs in Middle Persian [peo], Sivandi [siv], and Ziyarati [maz] (Sivandi was also discussed in §2). The clauses in (b) illustrate a negative existential construction in each language. Across these pairs, the verbal negation marker in (a) is the same negation marker deployed in (b). The straightforward difference between the Middle Persian affirmative existential in example (14) above, and the nega-

tive existential in example (17b) below, is the presence of the standard negation marker that occurs in a preverbal position.

(17) a. Middle Persian (DK6:50)
          wināh nē   kun-ēd.
          sin   NEG do.PRS-3SG
          'He will not sin.'

      b. Middle Persian (PRDD:18a)
          agar ātaxš ī   wahrām nē   būd.
          if   fire   LNK Wahram NEG be.PST.3SG
          'If the fire of Wahram did not exist. (lit. if there was no fire of Wahram)'

(18) a. Sivandi (Lecoq 1979: 90)
          ū   bāγ-gar-i   mardem na=šu.
          3SG garden-PL-LNK people   NEG=go.PST.3SG
          'He did not go into the gardens of those people.'

      b. Sivandi (Lecoq 1979: 89)
          albatta   barqa=m   na=bi.
          evidently electricity=TOP NEG=be.PST.3SG
          '(someone lit a candle), Evidently there was no electricity.'

(19) a. Ziyarati Mazandarani (Shokri et al. 2013: 26)
          te   harf=am   na-it-i.
          2SG word=1SG NEG-get.PST-2SG
          'You did not understand my words.'

      b. Ziyarati Mazandarani (Shokri et al. 2013: 84)
          ʃupā   da-ni-bu-in   …
          watchman PRV-NEG-be.PST-3PL
          '(if there are no watchmen)'

Locative verbs, often understood to mean something like 'stay,' 'exist (in)', or 'be at', are usually negated by the standard negation marker. The (a) clauses in examples (20) and (21) illustrate the standard verbal negation markers that occur in Assamese [asm] and Gilaki [glk], and their (b) counterparts show that this marker is used to negate locative verbs in the negative existential pattern. The Sivandi standard negation marker, a preverbal *na=*, as illustrated by (18a) above, also occurs in (22) in a negative existential clause, with an innovative locative verb.

(20)   a. Assamese (Nihankara Dutta, Krishna Boro (p.c.))
        mohila-goraki(-e) gan na-ga-j
        woman-CLF-(NOM) song NEG-sing-3SG
        'The woman didn't sing.'

      b. Assamese (Nihankara Dutta, Krishna Boro (p.c.))
        bonoria mekuri na-tʰak-e
        wild   cat   NEG-stay-3SG.PRS
        'There are no wild cats.'

(21)   a. Gilaki (Rastorgueva et al. 2012: 125)
        nə-kun-əm
        NEG-do.PRS-1SG
        'I do not make'

      b. Gilaki (Rastorgueva et al. 2012: 326; their glosses and parsing)
        mašin nə-ø-na-ø
        car   NEG-PRF-exist.PST-3SG.PST
        'There are no cars.'

(22)   Sivandi (Lecoq 1979: 150)
      ke   bār na=dār-e
      COMP grain NEG=be.at-3SG
      '(He closed his windmill down) because there was no grain.'

So far, the examples for Croft's Type A constructions all involve preverbal negation markers, which are commonly found in the Indo-Iranian language family. However, many Indo-Aryan languages underwent different historical processes that resulted in changes in the relative order of the negation marker and the negated verb. This is illustrated by example (23a) below from Nepali [npi], where the post-verbal negation marker is essentially suffixed to the verb.[3] The predicates in the negative existential clauses in examples (23b–c) differ in the type of copular verbs, but both are negated by the same marker used with finite verbs, as in example (23a):

(23)   Nepali (Sugam Singh, Marie-Caroline Pons (p.c.))
      a. *yini mahilā-le jhyāl phoɖ-inan*
        DEM woman-ERG window break-NEG.PST.3SG
        'The woman didn't break the window.'

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[3]This is a rather simplified picture of polarity in the Nepali verb, but other negation markers behave similarly with respect to the variables analyzed here.

b. *bāri-mã*   *birālo-haru chha-inan*
garden-LOC cat-PL   be-NEG.PST.3SG
'(He is looking outside.) There are no cats in the garden.'

c. *jãgali* *birālo-haru thi-enan*
jungle cat-PL   be.PST-NEG.PST.3SG
'There were no wild cats (back in the day, before they were brought here).'

The negative existential clauses presented thus far differ in a number of variables that include the type of copula used and the syntax of the negation marker. Despite these dissimilarities, however, all of these constructions are instances of Croft's Type A construction: The negation marker used to negate existential predicates is the standard negation marker, and the relative order of the negation marker and the existential predicate is identical to that of the negation marker and a finite verb. In some of the languages analyzed here, including Old Persian, Nepali, Gilaki, and Ziyarati, negative existential constructions of this type are the only ones attested in the analyzed material. In other languages, such as Middle Persian, Sivandi, and Assamese, constructions of this type co-exist with other types. The interaction between the standard verbal negation marker and the copula used in existential constructions sometimes results in a re-analysis of the two as a single entity, and this occasionally leads to a morpho-phonological reduction and the rise of an innovative negative copula.[4]

In Middle Persian, the Present tense 3SG copula, *ast*, is not attested with *nē*, the Middle Persian standard negation marker, preceding it.[5] Instead, the two have been reanalyzed as an innovative negative copula, *nēst* (also transcribed as *nest*). This reduction is essentially limited to the copula, and the negation marker *nē* does not reduce before other *a*-initial (or vowel-initial) verbs. The negative copula *nēst*, in turn, is often treated as a lexical stem. For example, the abstract noun marker *-īh*, can follow it to form the word *nēstīh* 'non-existence, nothing(ness)' as opposed to *astīh* 'existence'. The clause in (24) illustrates the use of this copula in a negative existential clause. The use of the Middle Persian negative copula is not limited to existential contexts, and it is also found negating clauses that express other nominal predication domains such as predicate adjective or proper inclusion.

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[4]As these copulas occur in clauses that express other nominal predication domains, such as the predicate adjective or proper inclusion, this reduction is likely to also be motivated by these more frequent domains.

[5]In Parthian, another Middle Iranian language (circa 3rd century BCE – 3rd century CE), sequences of *nē* and *ast* do occur (see Skjærvø 2009a: 216).

(24)   Middle Persian (DK6:50)
       az   padīdīgīh   rāh   ī   ō   dušaxw nēst
       from repentance road LNK to hell   NEG.COP.PRS
       'From repentance, there is no road to Hell.'

A similar situation is attested in Sivandi and Assamese, where the innovative negative copulas *nund* and *nai* are deployed by speakers in many types of clause constructions, including the negative existential. It seems safe to assume that the first phonological segment of both *nai* and *nund* is related to the synchronically standard verb negation marker in each of these languages, but the evolution of the remaining markers is difficult to ascertain.

(25)   Sivandi (Lecoq 1979: 150)
       vāllāh, me či   tū das=em   nūnd
       by.god 1SG what in hand=1SG NEG.COP
       'God, there's nothing in my hand.'

(26)   Assamese (Nihankara Dutta, Krishna Boro (p.c.))
       sotal-ot   (eta-u)   mekuri nai
       yard-LOC (one-ADD) cat   NEG.EX
       '(He's looking into the yard.) There are no cats in the yard.'

In Middle Persian, Sivandi, and Assamese, a special negative form of the copula occurs, which is used in many domains of negative nominal predication. This copula is also used in negative existential clauses, which leads to a construction of Croft's Type B. In these three languages, these negative existential constructions co-exist together with constructions of Type A, as illustrated above. Thus, since these languages have constructions of Type A alongside constructions of Type B, they belong to Croft's stage A~B.

Constructions of Type B are the only type of negative existential forms attested in some of the languages analyzed here. For example, in Kurmanji Kurdish [kmr], the standard verbal negation marker is a preverbal *na=*, and is illustrated in example (27a) (Kurmanji was also discussed in §2). The affirmative existential domain is expressed in Kurmanji by combining the affirmative copula *hene* with a single NP that expresses the existing entity. The negative existential is nonetheless expressed by the negative (locative) copula, *tune*, which is accompanied by a single NP that expresses the non-existing entity, as illustrated in (27c).

(27)   Kurmanji (Thackston 2006: 35–36, our glosses and parsing)
       a. *ez   na=tʃ-im   doctor.*
          1SG NEG=go.PRS-1SG doctor
          'I am not going to the doctor.'

b. *sedem-ê   wê   hene.*
reason-CNST.MSG 3FSG.OBL COP.3SG
'There are reasons for it.'

c. *madem.ku zimannivîs tune*
as.long.as writer   NEG.COP
'as long as there are no writers'

Another language that has a special negative form of the copula in clauses that express the negative existential is Kupia [key], an Eastern Indo-Aryan language spoken in Andhra Pradesh (Kupia was also discussed in §2). The standard verbal negation marker in this language is a post-verbal *nay*, illustrated by example (28a). The affirmative existential in Kupia is expressed by a combination of the affirmative copula *as* with a single NP, much like example (15) above from Assamese. The negative counterpart of the Kupia copular verb *as-* is *nenj-*. This is found in many clauses that express different types of nominal predication, including the negative existential. Example (28b) illustrates this instance of Croft's Type B. In Kupia, however, the negative existential is also expressed by another construction, illustrated in (28c). The Kupia standard negation marker *nay* functions in this construction as the negative existential predicate.[6] Thus, this is an instance of Croft's Type C construction: the standard negation marker is identical to the negative existential marker.

(28)   a. Kupia (Christmas & Christmas 1973a: 309)
        geeru band-i   nay.
        house build-1SG NEG
        'I am not building / won't build a house.'

    b. Kupia (Christmas & Christmas 1973b: 31)
        am-ci   e:jansi-te   saraiyayina da:kṭar-lu nenj-ili.
        1SG-GEN agency-LOC fitting   doctor-PL NEG.COP-PRF
        'There weren't any fitting doctors in our agency.'

    c. Kupia (Christmas & Christmas 1973b: 63)
        gerr-i   ay-ile   kicco nay.
        house-LOC come-TMP what NEG
        'And when they came into the house, there was nothing in it.'

In Kupia, then, we find two distinct negative existential constructions. They are presented above in examples (28b) and (28c), which represent Type B and

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[6]This use of *nay* as a copula is not limited to negative existential constructions and is also attested in other domains of nominal predication.

Type C, respectively. It is important to note, however, that Kupia cannot be considered to be an example of Croft's Type B~C. This type is defined as a situation in which the negative existential is identical to the standard negation marker in some constructions but not in others. That is, it occurs when finite verbs are negated by several negation markers. Some of these markers are identical to the negative existential marker, while others are not. Kupia has one major negation marker that is used with finite verbs, a post-verbal *nay*. Some remnants of other negation markers exist, such as a preverbal *ne-*, which has been found to be fossilized in some negative verbs, such as the negative copula *nenj-*, *netr-* 'be unable', or *neen-* 'be ignorant of, not know' (Christmas & Christmas 1973a: 310). Thus, Kupia is an example of a language with both Type B and Type C negative existential constructions.

The analysis of some negative existential constructions as an instance of Croft's Type B~C requires the co-existence of several distinct standard verbal negation markers, as Veselinova (2014: 1329) observes. This situation is attested in Standard Oriya [ory], a language that is closely related to Kupia and that has both a preverbal negation marker *nɔ* and a post-verbal negation marker *nahĩ*. The use of these markers is presented in examples (29a) and (29b).

(29)   Oriya (Neukom & Patnaik 2003: 340–341)

    a.   *se   gɔl-a   nahĩ.*
       3sg go.PST-3sg NEG
       'He did not go.'

    b.   *kintu bɔrttɔman se   nɔ-j-ib-ɔ   kahĩki?*
       but   now   3sg NEG-go-FUT-3sg why
       'But why shouldn't she go now?'

The affirmative existential in Standard Oriya is expressed by a combination of the verbal copulas *ɔch-* or *th-* and a NP expressing the (non-)existing entity. The negative existential is expressed by two different types of constructions. In example (30), *nahĩ* follows the single NP of the clause. The parsing and glossing of *nahĩ* that Neukom and Patnaik provide in their grammar reflects their understanding of the origin of this form as a negative verbal copula. Note, however, that it is identical to the verbal negation marker in example (29a) above, which Neukom and Patnaik do not analyze. The form *nahĩ* is therefore used as the predicate in negative existential clauses, without any further expression of negation or any another existential copula. It is also used as the negation marker in verbal clauses such as example (29a) above. Since there are other verbal negation markers, such as the preverbal *nɔ*, the clause in (30) illustrates Croft's Type B~C.

(30) Oriya (Neukom & Patnaik 2003: 72)
      bɔʈɔ nah-ĩ.   −choʈɔ di-ɔ.
      big NEG.be-3SG small give-2PL.IMP
      'There are no big ones – (costumer:) Give (me) a small one.'

In Standard Oriya, the existential domain can also be expressed by the preverbal negation marker *nɔ-* followed by the copular verb *th-*. This strategy is illustrated in example (31), where the first two clauses represent this type of negative existential clause. In other words, in Standard Oriya we find both Type A and Type B~C negative existential constructions.

(31) Oriya (Neukom & Patnaik 2003: 195)
      premika nɔ-th-ile   birɔhɔ   jɔntrɔŋo nɔ-tha-nt-a   ki
      mistress NEG-be-COND.CVB separation pain   NEG-be-COND-3SG or
      kehi   mɔdɔ pi-u-nɔ-tha-nt-e.
      anybody wine drink-IP-NEG-AUX-COND-3PL
      'If there were no girls, there would be no pain of separation nor would anybody drink alcohol.'

In conclusion, Kupia and Standard Oriya represent two closely related stages of Croft's cycle. Both languages use the verbal negation markers *nahĩ* or *nay* as negative existential predicates. However, Standard Oriya has also retained a second verbal negation marker, which introduces some variation to the negation patterns of finite verbs. A similar second marker was lost in Kupia (but was fossilized in a number of verbs). The loss of this second verbal negation marker in Kupia resulted in Kupia having Type C constructions instead of Type B~C constructions, as in standard Oriya.

Further, the co-existence of a Type B and a Type C negative existential constructions in one language creates a curious situation. According to Croft (1991), the next step in the cycle for Type B construction would be that the specialized negative existential would begin to act as a negation marker for verbs. Since another Type C construction already exists in the language, there would be two negative existential markers that are also used as standard negation markers. At this stage, then, there would be two distinct standard negation markers, and this development shifts the classification of the old Type C construction into Type B~C, in the reverse direction from the one Croft's cycle predicts. This suggests that two distinct Type C constructions, then, cannot co-exist in one language.

Finally, some Indo-Iranian languages have examples of the C~A stage of Croft's cycle. These languages include Hindi (hin, Bashir 2006) and Marathi (mar, Croft 1991), but this stage is illustrated here by data from Taleshi (tly, Paul 2011). In

Taleshi, the standard verbal negation marker is a preverbal *ni-* or *nə-*, as shown in example (32a). The affirmative existential in Taleshi is expressed by a combination of a verbal copula and a NP, which is similar to the examples from other Indo-Iranian languages presented above. One type of negative existential that Taleshi has involves using the negation marker *ni* alone, which is shown in example (32b). In this example, *ni* is preceded by a NP and is not followed by a copula. In contrast, example (32c) shows that *ni* can be followed by a copula.

(32) a. Taleshi (Paul 2011: 255)
          hic   kas   ni-a-š
          none somebody NEG-PRS-go
          'No one is going.'

      b. Taleshi (Paul 2011: 214)
          câra=i   ni magam əm ki   bə-š-am
          solution=INDF NEG except DEMP COMP SUBJ-go-1PL
          'There is no solution but that we go.'

      c. Taleshi (Paul 2011: 422)
          vin-ə   sas=i   ni=a
          see-3SG voice=INDF NEG=COP.3SG
          'She sees that there is no answer.'

The two constructions in examples (32b–c) above may be instances of Croft's Type C~A constructions. The standard verbal negation marker can function as the negative existential predicate, as shown in (32c), but can also accompany a verbal copula, as it does in (32b). It is difficult to determine, however, whether combining the copula and the negative marker *ni* results in some pragmatic or emphatic effect as Croft (1991) and Veselinova (2014) seem to suggest.[7]

This section provided a rather brief overview of the different types of negative existential constructions attested in the Indo-Iranian languages surveyed for this paper. This overview provides evidence that all six stages of Croft's cycle are present in the Indo-Iranian family. This section also showed that at least in some instances, two distinct negative existential construction types co-exist in the same language. The section did not cover the different language-specific historical processes of reanalysis and actualization that occurred in each of the languages. Indeed, the origins of some special negative existential markers, such as those in Sivandi and Kurmanji, remain unclear. The forms of other markers,

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[7]It is somewhat unclear, at least to us, whether the Talishi negative existential *ni* was ever a component in a Type B negative existential construction, and if it was, what form did the standard verbal negation take at that time.

such as the Hindi or the Standard Oriya *nahĩ*, have been the subject of debate in the literature (for Hindi, see the references in Bashir 2006).

4.2 Armenian, Albanian, Greek

This section offers a short overview of the negative existential constructions that occur in Modern Armenian [hye], Albanian [sqi], and Modern Greek [ell]. Even though these languages do not form a genealogical subgroup, they are discussed here for the sake of simplicity.

First, in Modern Eastern Armenian [hye], standard negation is expressed by the negative prefix *č'-* that attaches to most verb forms, except for imperatives (Dum-Tragut 2009: 522):

(33) Armenian (Dum-Tragut 2009: 51)

    a. *Vardan-ĕ*   *gnec'*   *gírk'-ĕ.*
       Vardan.NOM-DEF buy.AOR.3SG book.NOM-DEF
       'Vardan bought the book.'

    b. *Vardan-ĕ*   *č'-gnec'*   *gírk'-ĕ.*
       Vardan.NOM-DEF NEG-buy.AOR.3SG book.NOM-DEF
       'Vardan did not buy the book.'

The verb *em* 'to be' functions both as a copula and as an auxiliary (Dum-Tragut 2009: 215) but is not used for existentials. However, one verb is frequently used for both locatives and existentials: the defective verb *kam* 'exist' (Dum-Tragut 2009: 282). The following are examples of a locative existential and a 'true' existential, respectively:

(34) Armenian (Dum-Tragut 2009: 104–105)
    Hamaynk'-i   * łekavar-i*   *t-an-ĕ*   *heřaxos*
    community-DAT leader-DAT house-DAT-DEF telephone.NOM
    č'-k-a.
    NEG-exist-PRS.3SG
    'There is no telephone in the house of the leader of the community.'

(35) Armenian (Dum-Tragut 2009: 693)
    Inč'u č'-k-an   *barjrakarg* *ēk'skursavar-ner?*
    why NEG-exist-PRS.3PL high.quality tourist.guide-PL.NOM
    'Why there are no high-quality tourist guides?' (headline)

Both *kam* 'to exist' and the copula *em* are used for locatives, while only *kam* can be used to predicate existence without overtly referring to a specific situation or

location. Both *kam* and *em* are negated with the negative prefix *č'-*, similar to protypical verbs, which classifies Modern Armenian as a Type A language.

Modern Greek [ell] exhibits similar characteristics.[8] This language negates predicates by placing the negative morpheme *δεν, ðen* 'not' before the verb (Holton et al. 2012: 510). Another negator also exists and is used for sentences in the subjunctive mood, but that does not concern us here.

(36) Modern Greek (Holton et al. 2012: 510)

Οι	*συγγενείς του*	*δεν θα του*	*δώσουν καμιά βοήθεια*
oi	*syngeneís tou*	*ðen θa tou*	*ðósoun kamiá voíθeia*
DEF.PL	relative.PL POSS.3SG	NEG FUT 3SG.ACC	give any aid

'His relatives are not going to give him any help.'

Modern Greek is similar to Armenian in that it does not permit the use of the copula *είμαι* (*eímai* 'to be') in existential predicates. Instead, either *υπάρχω* (*ypárcho* 'to exist') or *έχω* (*écho* 'to have') are used:

(37) Modern Greek (Holton et al. 2012: 493)

Δεν υπάρχει	*φάρμακο σ'αυτή*	*την*	*αρρώστια*
ðen ypárchei	*fármako s'-aftí*	*tin*	*arróstia*
NEG exist	medicine of-DEM.F.SG	DEF.F.ACC	illness

'There is no cure [lit. 'medicine'] for this illness.'

(38) Modern Greek (Eirini Skourtanioti, p.c.)

Δεν έχει	*αδέσποτες γάτες*
ðen éχei	*aðéspotes gátes*
NEG have.PRS.3SG	stray cat.PL

'There are no stray cats.'

Modern Greek uses the standard negator to negate existential sentences and we can therefore classify it as Type A.

Standard (Tosk) Albanian [sqi] has four negative morphemes, *nuk*, *s'*, *mos*, and *jo* (Turano 2000: 82; for another negative morpheme, *as*, see Buchholz & Fiedler 1987: 172). *mos* is used to negate subjunctive, imperative and optative clauses as well as gerunds and infinitives (Turano 2000: 85), *jo* is referred to as a 'constituent negator' and its usage is restricted to nominals, adjectives, prepositional phrases, and adverbials (Turano 2000: 86). This means that only *nuk* and *s'* are relevant to

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[8]The history of negation in Greek is rife with innovations and renewals, especially when different dialectal varieties are considered (for example, see Kiparsky & Condoravdi 2006). We have only included data from one formal variety of Modern Greek here, and aim to include additional varieties in future research that uses phylogenetic methods to analyze Croft's cycle.

the present discussion. Both *nuk* and *s'* are predominantly used in standard verbal negation and are interchangeable, although there are differences pertaining to stylistics and usage (Buchholz & Fiedler 1987: 172).

(39) Albanian (Turano 2000: 82)

a. *Nuk vajta   (më)   në bibliotekë.*
    NEG go.PST.1SG (anymore) in library
    'I didn't go to the library (anymore).'

b. *S'-vajta   (më)   në bibliotekë.*
    NEG-go.PST.1SG (anymore) in library
    'I didn't go to the library (anymore).'

The verb used for existential predicates is *ka* 'to have', as Camaj (1984: 12), who explicitly glosses the third person singular form of the verb, *ka*, to mean 'he, she has' and 'there is', and its negated forms *nuk ka*, *s'ka* to mean 'there is no'. Camaj's (1984) grammar includes several examples of existential predicates and we have listed a negated one below:

(40) Albanian (Camaj 1984: 12/257)
      Në mulli ka   drithë e   miell.
      in mill   have.3SG grain and flour
      'In the mill there is grain and flour.'

(41) Albanian (Camaj 1984: 70)
      Ndër   ne   s'-ka   kundërshtime.
      among 1PL.ACC NEG-have.3SG objection.PL
      'There are no conflicts among us.'

As *ka* 'to have' is negated in the same manner as any other verb, Albanian is classified as a Type A language.

4.3 Balto-Slavic

The standard negator in both Latvian [lav] and Lithuanian [lit] is the marker *ne*:

(42) Latvian (Mathiassen 1997: 164)
      Viņš   ne-runā   latviski.
      3SG.M NEG-speak.PRS.3SG Latvian
      'He doesn't speak Latvian.'

(43)   Lithuanian (Mathiassen 1996: 185)
       Aš ne-nusipirkau   naujo   dviračio
       1SG NEG-buy.PST.1SG new.GEN bicycle.GEN
       'I have not bought a new bicycle.'

The copula is used in both languages (Latvian *ir* 'to be' and Lithuanian *būti* 'to be') for a range of nonverbal predicate domains, including existentials. In Latvian, the negative present tense form of the copula has a special negated form, *nav*, as is evident in example (44b). In Lithuanian, the present tense negative form of the copula is a contraction of the negator *ne* and the non-negative form of the copula *yra*, which is written *nėra*, as example (45b) illustrates (Mathiassen 1996: 1976). In the past tense, both languages use the standard negator *ne* (examples 44d, 46).

(44)   Latvian (Sandra Grinberga (p.c.))

       a. *Ir   savvaļas kaķi.*
           PRS.COP wild   cat.PL.NOM
           'There are wild cats.'

       b. *Nav   savvaļas kaķu.*
           NEG.PRS.COP wild   cat.PL.GEN
           'There are no wild cats.'

       c. *Bija   savvaļas kaķi.*
           PST.COP wild   cat.PL.NOM
           'There were wild cats.'

       d. *Ne-bija   savvaļas kaķu.*
           NEG-PST.COP wild   cat.PL.GEN
           'There were no wild cats.'

(45)   Lithuanian (Algirdas Sabaliauskas (p.c.))

       a. *Čia yra   laukinių   kačių.*
           here be.PRS.3SG wild.GEN.M.PL cat.GEN.M.PL
           'There are wild cats.'

       b. *Čia laukinių   kačių   nėra.*
           here wild.GEN.M.PL cat.GEN.M.PL NEG.be.PRS.3SG
           'There are no wild cats.'

(46)   Lithuanian (Kalėdaitė 2008: 134)
       Protestuoti dėl   to   ne-buvo   kam.
       protest.INF because.of that NEG-be.PST.3SG who.DAT
       'There was no one who would protest about that.'

Both Latvian and Lithuanian have a special negative existential form that is restricted to the present tense and standard negation of the affirmative existential in the past tense, which classifies them both as Type A~B languages.

Veselinova (2014) has analyzed Slavic languages in detail. Table 2 below is her Table 2 from Appendix B and is reproduced to provide an overview of the characteristics of the Slavic languages.

4.4 Romance

The Romance languages that we have investigated thus far are identical in their treatment of negative existentials in that they are all Type A (see Table 3 below). This can be illustrated by citing data from Romanian [ron]. The standard negator in Romanian is the preverbal particle *nu* 'not':

(47) Romanian (Gönczöl-Davies 2008: 56)
O   fată face   sport, cealaltă   fată nu   face.
INDF.F.SG girl make.PRS.3SG sport other.F.SG girl NEG make.PRS.3SG
'One girl does sports, the other girl doesn't.'

This same negator is used in negative existentials, which may be formed by using different verbs: *a se gasi* 'to find themselves', *a exista* 'to exist', and the copula *a fi* 'to be'. The latter is not preferred and only occurs when the negated sentence is absolutely and universally true:

(48) Romanian (Andreea Calude (p.c.))

    a. *Se   găsesc pisici sălbatice.*
       MID.3SG find   cat.PL wild.PL
       'There are wild cats.'

    b. *Nu   se   găsesc pisici sălbatice.*
       NEG MID.3SG find   cat.PL wild.PL
       'There are no wild cats.'

    c. *Nu   există pisici sălbatice.*
       NEG exist   cat.PL wild.PL
       'There are no wild cats.'

    d. *Nu   este   viață eternă.*
       NEG be.PRS.3SG life   eternal
       'There is no eternal life.'

Table 2: Overview of the standard and special negators in Slavic as reported in Veselinova (2014: 1378), see also Veselinova (2016: 176)

Group Language	ISO-code	Glotto-code	Standard negator	Existential negator	Classification
East					
Byelorussian	bel	bela1254	ne	*njama* 'not exist, not.have'	A~B
Russian	rus	russ1263	ne	*net* 'not exist, not.have'	A~B
Ukranian	ukr	ukra1253	ne	*nema*/*nemae* 'not exist, not.have'	A~B
South					
Bulgarian	bul	bulg1262	ne	*njama* 'not exist, not.have'	B~C
Macedonian	mkd	mace1250	ne	*nema* 'not exist, not.have'	B~C
Serbian/ Croatian	srp/ hrv	serb1264/ croa1245	ne	*nema* 'not exist, not.have'	A~B
Slovene	slv	slov1268	ne	*ne obstaja* 'NEG exist'	A
West					
Czech	ces	czec1258	ne-	*ne-existujou* 'NEG-exist.PL.PRS	A
Slovak	slk	slov1269	ne-	*ne-jestvujú*/*existujú* 'NEG-exist.PL.PRS' (*nieto* 'not exist')	?A~B →A
Kashubian	csb	kash1274	nie	*ni ma* 'not.have'	A~B
Polish	pol	poli1260	nie	*nie ma* 'NEG have'	A~B
Upper Sorbian	hsb	uppe1395	nie-	*nie-dawa* 'NEG-give' *nie-eksistuja* 'NEG-exist.PL.PRS'	A
Lower Sorbian	dsb	lowe1385	nie-	*nje-dajo* 'NEG-give' *nje-eksistěruju* 'NEG-exist.PL.PRS'	A

The other Romance languages we have investigated thus far share this dispreference for the copula in existential sentences. Italian [ita] uses *esistere* 'to exist', Spanish [spa] uses the present indicative form *hay* of the verb *haber*, which means 'there is, there are', Catalan [cat] uses *haver-hi* 'there is (lit. there has)', and French [fra] uses *exister* 'to exist'. In addition, French uses the verb *avoir* 'to have' in a set phrase *il y a* [3SG.M LOC have.3SG.PRS], 'lit. he has to him'. This phrase is also negated by using the standard negator *ne … pas*, as in the following example:

(49) French (Offord 2006: 87)

Il	*a*		*voulu*	*trouver*	*un*	*poste, mais il*		*n-'y*
3SG.M	have.3SG.PRS		try.PTCP	find.INF	INDF	job	but 3SG.M	NEG-LOC

en   avait   pas.
of.PL have.3SG.IP NEG

'He tried to find a job, but there weren't any.'

Table 3: Overview of the standard and special negators in the Romance dataset

Language	ISO-code	Glotto-code	Standard negator	Classifi-cation	Source(s)
Latin	lat	lati1261	non	A	Paul Hulsenboom (p.c.), Greenough et al. (1903), Roby (1862)
Romanian	ron	roma1327	nu	A	Andreea Calude (p.c.), Gönczöl-Davies (2008)
Spanish	spa	stan1288	no	A	Butt & Benjamin (1994)
Catalan	cat	stan1289	no	A	Hualde (1992), Wheeler et al. (1999)
French	fra	stan1290	(ne) pas	A	Raphaël Domange (p.c.), Lang & Perez (2004), Offord (2006)
Italian	ita	ital1282	non	A	Francesca Di Garbo (p.c.), Peyronel & Higgins (2006)

4.5 Germanic

As Veselinova (2013: 114–115) noted in her discussion of Swedish [swe], Swedish, and to differing extents, all modern Germanic languages, have two strategies to form negative existentials. The pattern can be illustrated by data from Western Frisian [fry]. The most common sentential negator in Western Frisian is *net* 'not':

(50) Western Frisian (Tiersma 1999: 91)
    ik wit   net oftsto   wol   taliten   wurdst
    1SG know NEG whether indeed admit.INF become
    'I don't know whether you will be admitted.'

The determiner *gjin* 'no', however, occurs in many non-verbal predicates, including existentials and possessives:

(51) Western Frisian (Eric Hoekstra, p.c.)
    Der   binne gjin wylde katten.
    there be   no   wild   cat.PL
    'There are no wild cats.'

(52) Western Frisian (Tiersma 1999: 102)
    Hy   hat   gjin fyts.
    3SG.M have no   bike
    'He has no bicycle.'

Using *gjin* 'no' implies a categorical denial that wild cats exist, as in example (51). Furthermore, the standard negator *net* 'not' is used when the figure is quantified:

(53) Western Frisian ((Eric Hoekstra, p.c.))
    Der   binne net folle   wylde katten.
    there be   NEG many wild   cat.PL
    'There are not many wild cats.'

This situation is paralleled in English [eng], where we find two strategies, one with the standard negator *not* and the other with the negative quantifier *no*:

(54) English (own knowledge)
    a. *There are no tame zebras.*
    b. *There aren't any tame zebras. (There are not any tame zebras.)*

    All Germanic languages included in our data use a negative quantifier to some extent (see Table 4 and Appendix B). The North Germanic languages – Swedish

[swe], Norwegian [nob], Danish [dan], and Icelandic [isl] – allow greater varia-
tion in their use of the standard negator than the Western Germanic languages
(English, Western Frisian, Dutch [ned], German [deu], and Eastern Frisian [frs, a
Low German variety]). Bordal (2017) demonstrates that the two Swedish negative
existential constructions do not vary freely, but their use correlates with condi-
tional versus unconditional absence. However, it is currently unclear whether
similar principles apply to the other North Germanic languages. In English, the
negative quantifier can be used for other nominal predicates ('Alice is no teacher.'),
locatives ('There is no cheese in the fridge.'), and predicative possession ('Lisa has
no bike.'), although the usage depends on cross-dialectal variation and pragmatic
functions. The range seems similar for the Western Frisian *gjin* 'no', the Dutch
geen 'no', and the German *kein* 'no', while for Eastern Frisian, comparable clauses
allow the usage of both *kien* 'no' and the standard negator *neet* 'not'.

The widespread usage of negative quantifiers next to or instead of standard
negation marking for negative existentials in the Germanic languages suggests
that this is a rather old strategy. In addition, several of these negative quantifiers
are etymologically related: The negative quantifiers in Swedish, Norwegian, Dan-
ish, and Icelandic have a common origin in the Old Norse form [non] *engi* 'none,
no one, no', while the origin of the Dutch and German markers can be traced
back to a formation that means 'not one'. Given that the Germanic subfamily is
approximately 2,500 years old (Henriksen & van der Auwera 1994: 1), this partic-
ular construction may be both ancient and stable. Work by Jäger (2007) on Old
High German and Middle German suggests that the origin of negative quanti-
fier usage for the negation of nominal predicates may have its origin in so-called
negative concord that also appeared in Old English. That said, additional Ger-
manic languages, perhaps most importantly the Gothic language [got], should
be investigated to determine whether there are any languages that deviate from
the described pattern.

It is possible to conduct more extensive, in-depth research on the conditions
for the use of the standard negation marker and the negative quantifier in each
of these languages, as Bordal (2017) did for Swedish. Nonetheless, we restrict
ourselves to stating that we classify these languages as Type A~B. The reason
for this is that these languages form negative existentials by using both the stan-
dard negator (Type A) and using the negative quantifier (Type B). It has also
been demonstrated that some of the Germanic languages use the two construc-
tion types to express different types of negative existential semantics. Since the
deployment of one construction type and not the other in other Germanic lan-
guages might be motivated by similar semantic considerations, we classify all
Germanic languages as Type A~B.

Table 4: Overview of the standard and special negators in the Germanic dataset

Language	ISO-code	Glottocode	Standard negator	Negative quantifier	Classifi-cation	Source(s)
English	eng	stan1293	not	no	A~B	own knowledge
Western Frisian	fry	west2354	net	gjin	A~B	Eric Hoekstra (p.c.), Tiersma (1999)
Dutch	nld	dutc1256	niet	geen	A~B	own knowledge
German	deu	stan1295	nicht	kein	A~B	Anne-Maria Fehn (p.c.)
Eastern Frisian	frs	east2288	neet	kien	A~B	Temmo Bosse (p.c.)
Swedish	swe	swed1254	inte	ingen	A~B	Bordal (2017), Ljuba Veselinova (p.c.)
Norwegian	nob	norw1259	ikke	ingen	A~B	Benedicte Haraldstad Frøstad (p.c.)
Danish	dan	dani1285	ikke	ingen	A~B	Bjarne Ørnes (p.c.)
Icelandic	isl	icel1247	ekki	enginn	A~B	Elísabet Eir Cortes (p.c.) Bjarnason (1998), Einarsson (1949), Wood (2012)

Classifying the Germanic languages as Type A~B, similar to several Indo-Iranian languages, blurs the differences in the synchronic morphosyntax used to express the negative existential in those branches, and eventually the fact that the patterns emerge from rather distinct historical processes. The Germanic languages have no special existential negators. This includes negators that appear to be mergers of the standard negator as we illustrated with an example from Middle Persian in §4.1, or diachronically opaque negators. This indicates that languages may arrive at stage A~B through different historical processes.

4.6 Celtic

The Celtic languages include examples of both Type A, Type A~B, and Type B (see Table 5 below for a complete overview). The most ancient language among them, Old Irish is a straightforward example of Type A. Old Irish [sga] has a verbal negator *ni*, which is a particle that attaches to the beginning of the verb:

(55) Old Irish (Cormac Anderson (p.c.))

    a. *can-aid   máire*
       sing-PRS.3SG Mary
       'Mary sings.'

    b. *ni-cain   máire*
       NEG-sing.PRS.3SG Mary
       'Mary does not sing.'

Several Celtic languages express nonverbal predicates either through the copular verb or with what is called the substantive verb (*taat*). Old Irish uses the latter (McCone 2005: 39ff); it behaves similarly to any verb and is negated with *ni-*:

(56) Old Irish (Cormac Anderson (p.c.))

    a. *at-taat   fíad-chait   and*
       at-COP.PRS.3PL wild-cat.nom.PL in.3SG.N
       'There are wild cats.'

    b. *ni-taat   fíad-chait   and*
       NEG-COP.PRS.3SG wild-cat.NOM.PL in.3SG.N
       'There are no wild cats.'

In the examples in (56), *and* is the third person singular neuter form of the preposition *i* 'in'. As it can be specified to refer to person and number, we can therefore

analyze it as the inclusion preposition 'in', with its function roughly corresponding to English 'there'. Modern Irish [gle] and Scottish Gaelic [gla] below also feature similar inflected prepositions.

Modern Irish negative existentials cannot be classified as Type A constructions, but rather as Type B. Standard negation in Irish is expressed by placing the negative particle, *ní*, in front of a verb, which causes lenition if the initial consonant of the verb can be lenited (Stenson 2008: 86):

(57) Modern Irish (Stenson 2008: 86)

    a. *Glanann sí   a   seomra.*
        clean.PRS she POSS room
        'She cleans her room.'

    b. *Ní   ghlanann Caitríona a   seomra.*
        NEG clean   Caitríona POSS room
        'Caitríona doesn't clean her room.'

Like Old Irish, Modern Irish uses what is referred to as the substantive verb *tă* for existential predicates. However, the substantive verb appears to have a special negative form *niěl*, and cannot be considered to be a standardly negated verb. Etymologically, the negative substantive verb appears to incorporate the standard negator along with some other element.

(58) Modern Irish (Cormac Anderson (p.c.))

    a. *Tá cait   fiáin ann.*
        COP cat.PL wild in.3SG.M
        'There are wild cats.'

    b. *Níl   cait   fiáin ann.*
        COP+NEG cat.PL wild in.3SG.M
        'There are no wild cats.'

Modern Irish can be contrasted with Scottish Gaelic, which continues to use standard negation for existential predicates and hence can be classified as Type A. The negators in Scottish Gaelic are the preverbal particles *cha*(*n*) and *nach* (Lamb 2001: 61). The following example illustrates their usage in a double negative construction:

(59) Scottish Gaelic (Lamb 2001: 61)
    cha chreid   mi nach   eil   iad gu math
    NEG believe.INDF 1SG NEG.COMP be.PRS 3PL ADV good
    'I believe they are well.' [Lit. I don't believe that they are not well.]

Scottish Gaelic uses the verb *bi* 'to be' for existential predicates. This verb has two forms in the present tense, which are the independent form *tha*, and the dependent form *eil* (whose form can be *bheil*, *beil*, or *eil*, *'l*, depending on the dialect, register and the grammatical context, Lamb 2001: 54). Approximately ten irregular verbs feature this independent-dependent split including *bi*. These verbs must use their dependent form after certain pre-verbal particles, including the two negators, interrogative clause marker, complementizers, and conditional clause markers (Lamb 2001: 50). The consequence of this is that the verb *bi* 'to be' appears to be very different in affirmative and negative existential predicates. This is not due to the negation strategy, but rather to the structure of the verbal system.

(60) Scottish Gaelic (William Lamb (p.c.))

    a. *Tha   cait   fhiathaich ann.*
       COP.PRS cat.PL wild   in.3SG.M
       'There are wild cats.'

    b. *Chan eil   cait   fhiathaich* (*idir*) *ann.*
       NEG   COP.PRS.DEP cat.PL wild   (at.all) in.3SG.M
       'There are no wild cats.'

Welsh is classified as Type A (for additional information on the historical development of negation strategies in Welsh and Breton, see Willis 2013). The last Celtic language to be discussed here, Breton [bre], is classified as Type A~B. Breton has a double negator, *ne … ket*, which is located on both sides of the verb:

(61) Breton (Press 1986: 126)
    Ne ro   ket al laeron   a   laezh da zen.
    NEG give.PRS NEG DEF robber.PL PREP milk to anyone
    'The robbers give no-one any milk.'

The copula *bezañ* ('to be') (Press 1986: 144ff) is used for a variety of nonverbal predicates, including nominals, locatives, and existentials. It has a set of negative forms in the present tense: "There is considerably more freedom where the verb is negative, the only strict rule being that (*a*) *zo* must be replaced by *n'eo ket*, *n'eus ket* or *n'eman ket*, etc. as appropriate. There is no form *ne zo ket*." (Press 1986: 152). Below are two examples, one locative (62) and one existential (63). The special form of the negated copula is a Type B construction. Nevertheless, for the past tense, a regularly negated inflected form of the copula is used, which is evident in example (64). Breton thus uses both standard negation for existentials and special negative existential constructions that are both conditioned by tense, which results in it being categorized as Type A~B.

(62)   Breton (Press 1986: 154–155)

    a. *Un draonienn a   zo   du-hont.*
        ART valley   VERB.PRT COP.PRS to-there
        'There's the/a valley over there.'

    b. *An draonienn n'emañ   ket du-hont.*
        ART valley   NEG+COP NEG to-there
        'There's no valley over there.'

(63)   Breton (Marianna Donnart (p.c.))

    a. *Kizhier gouez a   zo.*
        cat.PL   wild   VERB.PRT COP.PRS
        'There are wild cats.'

    b. *N'eus   ket kizhier gouez.*
        NEG+COP NEG cat.PL   wild
        'There are no wild cats.'

(64)   Breton (Marianna Donnart (p.c.))
    Ne   oa   ket kizhier gouez.
    NEG COP.3SG.IP NEG cat.PL   wild
    'There were no wild cats.'

5 Diachronic and theoretical considerations

The overview of strategies used to express the negative existential predicate in 42 Indo-European languages presented above reveals that the subgroup that displays the most variation is Indo-Iranian, followed by the Balto-Slavic group, which was also reported by Veselinova (2014). Other major branches of the Indo-European family – Romance, Germanic, and Celtic – do not display considerable variation. Overall, we found 20 instances of Type A, 26 of Type A~B, 2 of Type B, 2 of Type B~C, and 3 of Type C~A. In addition, we found that Oriya is split between Type A and Type B~C and that Kupia is split between Type B and Type C. This is only partly consistent with the worldwide sample compiled by Veselinova (2016: 147), who reports that Type A and Type B are most common cross-linguistically, followed by Type B~C. In contrast, we only detected two examples of Type B~C. In Veselinova's (2016: 147ff) families, Types B, B~C, and A~B are most common, this is in line with the prevalence of Type A~B in our data.

However, as we are analyzing related languages, we cannot consider each instance of two constructions of the same type as diachronically independent due

Table 5: Overview of the standard negators and negative existentials in the Celtic dataset

Language	ISO-code	Glotto-code	Standard negator	Negative existential	Classifi-cation	Source(s)
Breton	bre	bret1244	ne … ket	n' + NEG.COP + ket	A~B	Marianna Donnart (p.c.), Press (1986)
Welsh	cym	wels1247	ddim	ddim + COP	A	David Willis (p.c.), King (2003)
Old Irish	sga	oldi1245	ni-	ni-COP	A	Cormac Anderson (p.c.), Stenson (1981, 2008)
Irish	gle	iris1253	ní	níl	B	Cormac Anderson (p.c.), McCone (2005)
Scottish Gaelic	gla	scot1245	cha(n), nach	cha(n) + COP	A	William Lamb (p.c.), Lamb (2001)

to common retentions. All the Romance languages investigated thus far appear to inherit their Type A negative existential construction from a common ancestor, just as all the Germanic languages seem to have retained their split Type A~B constructions. The higher frequency of some construction types in Indo-European might therefore be the result of a single innovation which ends up being very stable in daughter languages. This suggests, then, that taking phylogenetic information into consideration when analyzing a pathway or a cycle might provide important clues to the scenarios that result in the emergence of the aggregate synchronic patterns. Figure 1, presented below, maps the classifications of the different negative existential constructions onto a phylogenetic tree depicting the Indo-European languages. Additionally, the states of the negative existential constructions are reconstructed at each ancestral node. This illustrates the changes in the construction types expressing the negative existential domain that are likely to have occurred across the Indo-European family. The classifications of negative existential constructions in our sample are additionally plotted on a map in Figure 1.
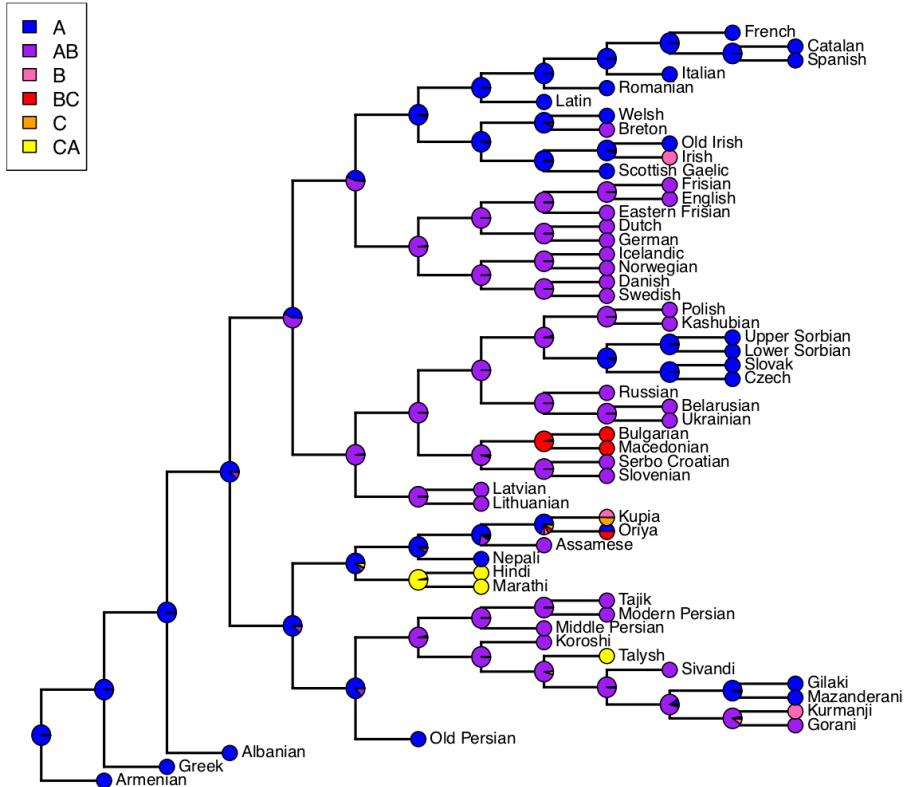
Figure 1: An overview of the current classifications of negative existential construction types overlaid on a modified Indo-European Glottolog tree (Hammarström et al. 2018). The Slavic classifications are based on Veselinova (2014). The colored circles at the end of the tree branches represent our classifications (as well as those of Veselinova 2014). The pie plots on the internal nodes represent marginal ancestral state reconstructions conducted in the R package corHHM (Beaulieu et al. 2013, R Project). The R script for this plot is available here DOI: 10.5281/zenodo.4444990. As this analysis requires a binary tree with branch lengths, the Glottolog tree was made binary by following Bouckaert et al. (2012) and a branch length of 1 was set for each branch. We do not imply that this is how the Indo-European languages actually evolved; this is simply one of many possibilities that we selected for display purposes only.
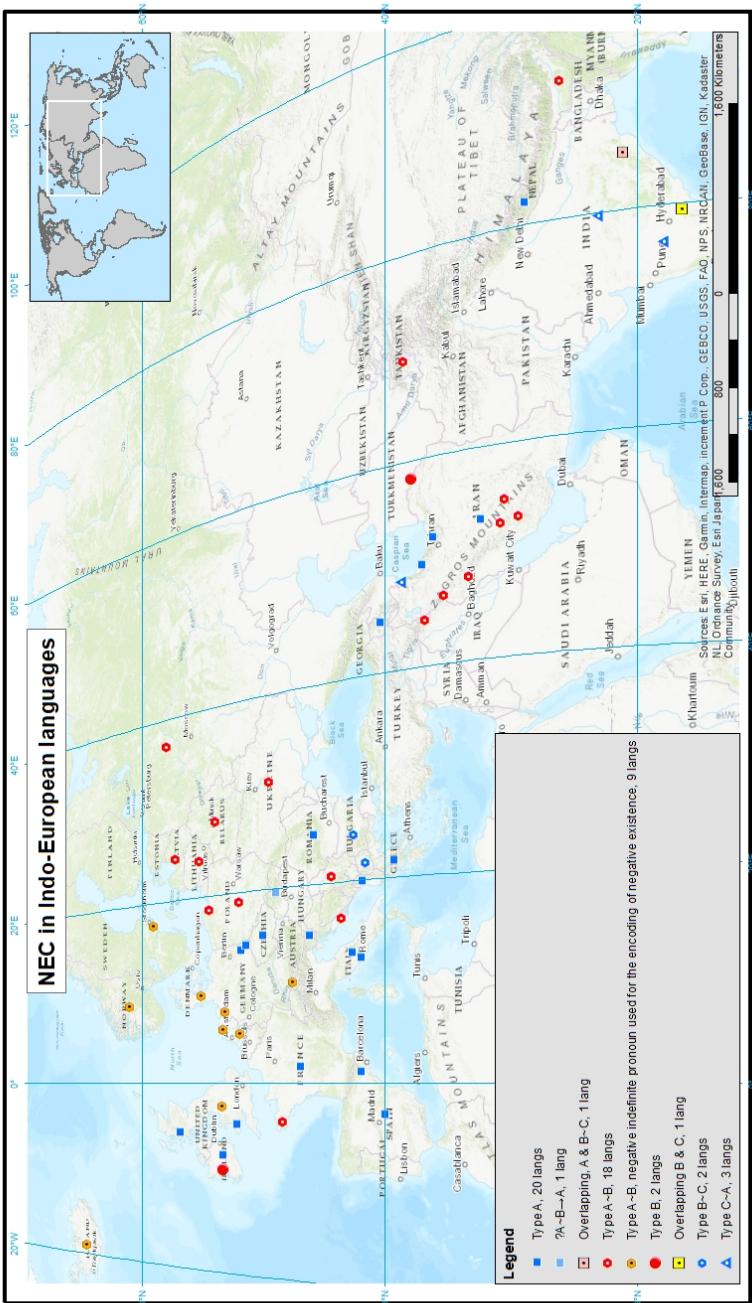
Figure 2: Geographic distribution of NEC types in Indo-European languages

There are three reasons why we choose to display the classifications of the negative existentials in our sample on a phylogenetic tree: 1) this format may provide us with an insight into the validity of the NEC; 2) it helps us to estimate the stability of certain classifications over time; and 3) it contributes to our ultimate aim of conducting a phylogenetic comparative analysis of a larger dataset.

The first point is relevant, for example, for the status of Gilaki and Mazanderani. They "return" to state A while their immediate ancestor, as most contemporary Iranian languages, was likely state A~B. This suggests an innovation and loss of type B constructions rather than a very rapid cycling through the NEC. This type of innovation can involve factors such as an emergent locative copula based on verbs such as 'stay' or 'be at'. These types of innovative copulas tend to retain verbal negation patterns, which results in a Type A negative existential construction. A loss of a Type B construction which co-exists with a Type A construction, then, might seem like a "return" to Type A from Type A~B.

As for the second point, it is easy to use the format of the phylogenetic tree to determine the stability of some types over time. All the Romance languages investigated thus far, including Latin, are of type A. If we add the time that each of these languages has been independent from its sister languages, that is, the time elapsed since two sister languages separated from their common ancestor, then Type A appears to be a stable trait of this subfamily for thousands of years of evolution. Of course, we have only investigated 6 languages out of 80 Romance varieties, so this is only a preliminary suggestion at best.

A similar logic applies to the Germanic languages. Proto-Germanic reconstructs as state A~B in the current analysis. The data from the contemporary Germanic languages also suggest that Type B constructions, where negation is expressed by a negative quantifier, are quite old and were possibly a part of the Proto-Germanic inventory. Despite the variation in the usage of negative quantifiers in Type B constructions across the Germanic languages, these Type B constructions are 1) at least in part cognate terms and 2) relevant in the description of all the Germanic languages we examined thus far.

Another example of a relatively stable pattern is the prevalence of Type A(~B) constructions across Iranian. In Iranian, the Past tense copular verbs, which are cognates of Middle Persian *būd* 'was', were often retained in negative existential clauses. The combination of these copulas and the Iranian negative particle *ne* did not undergo reduction and univerbation, which was presumably also due to phonotactic constraints (unlike the Present tense copulas, see §4.1 above). Consequently, the negative existential with the Iranian Past tense copula is negated by the same marker that is used to negate prototypical verbs. The result is a conservative Type A negative existential construction. The reduction of the Present

tense copula and the Iranian Negative particle resulted in a Type B construction, which leads to the classification of many Iranian languages as instances of Type A~B.

The third point is that we argue that phylogenetic comparative analyses are suitable to formally analyze the results of the Negative Existential Cycle within a single family. Thus far, we have conducted preliminary phylogenetic comparative analyses on the current dataset to test whether Croft's NEC more adequately explains the attested cross-linguistic distribution of negative existential patterns than alternative models. The Negative Existential Cycle makes the following highly specific claim regarding the expected direction of changes in the negative existential domain:

$$A > A{\sim}B > B > B{\sim}C > C > C{\sim}A > A$$

These directional changes can easily be contrasted with alternative models, such as the reverse pattern of change:

$$A < A{\sim}B < B < B{\sim}C < C < C{\sim}A < A$$

Comparing the likelihood of pathways of change is possible even if not all construction types are attested in the dataset. Nevertheless, our preliminary testing suggests that our dataset is too limited to answer this question. Together with Veselinova's (2014) Slavic data, we have information on the negative existential constructions in 55 Indo-European languages. Yet for at least two groups, Romance and Germanic, our data is completely void of variation, and thus from an evolutionary perspective, the data are useless to determine which paths of change are likely and which are unlikely. Given the variation we discovered in Indo-Iranian languages, we aim to collect a larger dataset that includes many more languages of this subfamily, as well as additional Romance and Germanic languages.

The lack of special negative existential markers or constructions in the language families of Western Europe that was first noted by Veselinova (2013: 117) warrants further explanation, particularly now that we have essentially replicated this finding by consulting a larger language sample. First, the current dataset suggests that Type A is ancestral to the Indo-European language family. This is a very tentative conclusion – even though Albanian, Modern Greek, and Modern Armenian represent subfamilies that split off from the Indo-European family first (at least in Bouckaert et al. 2012), each has been evolving for thousands of years and the different components attested in their negative existential constructions are not always cognate. As a consequence, despite their seeming uni-

formity, it is unclear at this point whether the ancestors of these languages were also Type A. Another focus for a larger dataset should thus be to collect data from a larger set of ancient languages. However, for the time being, we must acknowledge that when addressing the dominance of Type A in Western Europe, we are most likely discussing a stable, inherited state (see Croft 1991: 19) and not a number of independent changes towards Type A.

An explanation for the lack of special negative existential constructions in Western Europe is likely to be dependent on the inheritance or expansion of specific constructions, as noted by Veselinova (2014: 1330) for Slavic. The question is why the Romance languages, at least those featured in the current paper, do not change to Type A~B given their tentative ancestral Type A classification, while at least some Slavic and most Indo-Iranian languages do.[9] And why do negators and verbs in Germanic not merge to form special negative existential constructions? We suggest that an explanation must at least partly involve the morpho-phonology of the standard negation marker. Dryer (2013) reports that the negation in the Indo-European languages of Europe is marked by negative particles rather than negative affixes (with few exceptions in Eastern Europe, including Lithuanian, Latvian, Czech, and Sorbian). Presumably one of the most common pathways to Type A~B, merging the negator with an existential verb, is less likely due to the phonotactic, prosodic, and word order environments in the Western European languages. The morphological distance between the standard negation marker and the verb could therefore prohibit a reduction, which would have then led to the emergence of Type A~B in Western Europe. This is similar to the suggestion made above regarding the lack of reduction of the negation marker and the Past tense copula in Iranian. We do not posit the reluctance of a merger of the negation marker and the verb as the only or even the most important factor. The frequent use of the negative quantifier in Germanic may certainly likewise play a role. The central position of the Germanic and Romance languages in the Standard Average European Sprachbund (van der Auwera 2011) may also have been significant in the stability of the Romance Type A construction and the Germanic specific Type A~B constructions. Recent work by Drinka (2017) on perfect constructions also demonstrates the workings of areal influence in European languages.

Our study also supports Veselinova's finding (Veselinova 2014: 1343–1366), which was also noted by Croft, that some languages have two distinct negative

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[9]It should be noted that spoken French is moving towards stage A~B. The fixed expression *il n'y pas* 'there is/are no' is essentially a phonologically reduced, single lexical unit (Ljuba Veselinova, p.c.).

existential construction types, each potentially belonging to a different stage of Croft's cycle. Our data includes some similar scenarios in the Indo-Iranian languages and to a lesser extent in the Germanic languages. Acknowledging that multiple types of negative existential constructions may co-exist in the same language necessitates that we reconsider: 1) which types of constructions *do* co-exist, and which *cannot* co-exist, and 2) when two construction types co-exist, what effects will a change to one construction have on the classification of the other, and will these effects be in the same direction as Croft's (1991) cycle? That is, if a combination of construction types does not occur, can we therefore argue that it is because it cannot emerge during language change or is it because of how the different negative existential construction types are defined?

Veselinova (2014) demonstrates in her Polynesian data that Type B constructions can co-exist with Type B~C constructions (as in Kapingamarangi), and that constructions of Type B can co-exist with constructions of Type C (as in Tahitian). We presented above the same patterns of co-existence in Kupia and Standard Oriya, which are both Eastern Indo-Aryan languages. Furthermore, nothing appears to prohibit a language from having multiple constructions of Type A (that is, two distinct negation markers, both also used to negate existential predicates), or multiple constructions of Type B (such as two special negative existential markers).

There seems to be, however, some restrictions to the co-existence of Type C constructions and other types of constructions. First, it appears that two Type C constructions cannot co-exist. Such a situation would entail that two distinct negation markers be used both as negative existential predicates and to negate verbs (under some different conditions, presumably). By definition, in this context, some variation occurs in the expression of verbal negation. Each of the two negative existential markers, then, is used to negate verbs only under some conditions, which means that the two negative existential constructions should be classified as instances of Type B~C. Another combination which seems impossible is two non-cognate constructions of Type A and Type C. Again, this situation has two distinct (and potentially non-cognate) verbal negation markers, which means that the verbal negation marker which doubles as a negative existential marker is used to negate verbs only under some conditions, and hence should be classified as an instance of Type B~C.

The logical impossibility of some combinations of the construction types defined by Croft (1991) and Veselinova (2014) means that at least in some scenarios where a language has two distinct negative existential constructions, a change in one entails a change in the second as well. Such a possibility was mentioned in §4.1 above for languages with a Type B and a Type C construction, such as Kupia

or Tahitian. In these languages, an extension of the Type B negative existential marker to be used for verbal negation (such as Type B > Type B~C) would lead to variation in verbal negation. Thus, the status of the older Type C construction would move "backwards" on Croft's (1991) cycle to be Type B~C (i.e., Type C > Type B~C). This would lead to two B~C type constructions co-existing in the same language. In this situation, in turn, neither construction can move into the domain of Type C constructions without a loss of the other. In other words, as long as both Type B~C constructions co-exist, there is some variation in the domain of verbal negation. Thus, only a loss of this variation, that is, a loss of one of the Type B~C construction, would lead to a change in the status of the other to a Type C construction.

6 Conclusions

This paper offers an overview of the constructions that express negative existential functions in 42 Indo-European languages, which combined with Veselinova's (2014) analysis of Slavic languages, results in data for 55 Indo-European languages. While this constitutes a rather small sample, we hope to expand this number to create a larger sample that may be used to conduct a comprehensive phylogenetic comparative analysis. Thus far, we detected distinct patterns of variation, with the Romance languages uniformly classified as Type A, the Germanic languages as uniformly Type A~B, while the Indo-Iranian language family is far more varied and with further study, may resemble Polynesian in that it contains all six types of the Negative Existential Cycle. The reason for these patterns of variation may be different patterns of morphosyntax and morpho-phonology in the different sub-branches of Indo-European, a hypothesis that would need to be tested in future work. We concluded by discussing the theoretical considerations that emerge when languages need to be classified as having two distinct negative existential constructions, when each may belong to a different type of the NEC. How these distinct negative existential constructions may interact has consequences for the expected diachronic changes within the Cycle. Hence, describing how negative existentials and standard negation interact has yet again become slightly more complicated, which is a good sign for the prospective study on this topic.

Acknowledgements

Abbreviations

1,2,3	1st, 2nd, 3rd person		FUT	future
ABL	ablative		GEN	genitive
ACC	accusative		GER	gerund
ADD	additive		HAB	habitual
ADV	adverb		IMP	imperative
AOR	aorist		IND	indicative
ART	article		INF	infinitive
AUX	auxiliary		IP	imperfect
CAUS	causative		LNK	linker
CLF	classifier		LOC	locative
COMP	complementizer		M	masculine
COND	conditional		MID	middle
COP	copula		NEC	Negative Existential Cycle
CVB	converb		NEG	negative
DAT	dative		NEG.EX	negative existential
DEF	definite		N	neuter
DEM	demonstrative		NMZL	nominalization
DEMP	demonstrative proximate		NOM	nominative
			NPST	non-past
DEP	dependent		OBJ	object
EMPH	emphatic		OBL	oblique
ERG	ergative		PC	person-marking clitic
EX	affirmative existential		PFV	perfective
EXPL	expletive		PL	plural
F	feminine		POSS	possessive

PP	past participle	QUANT	quantifier
PREP	preposition	REL	relative
PROG	progressive	SBJV	subjunctive
PRS	present	SG	singular
PRF	perfect	TMP	temporal
PRT	particle	TOP	topic
PRV	preverb	TR	transitive
PST	past	VN	verbal noun
PTCP	participle		

Appendix A Negation questionnaire

The translation questionnaire that was used to elicit data for many languages in the current sample

The context descriptions are given in square brackets; further clarifications about the example sentences come in between parentheses. Neither the contexts, nor the clarifications are to be translated. Please translate only the **bold face text**.

Please provide a morpheme to morpheme translation for all of the translated examples below. Should it turn out that the English examples/situations are in any way culturally inappropriate, e.g. take up topics or objects that are taboo or simply do not exist in your culture/language, feel free to substitute them with sentences that fit better your language.

1. Language info

1.1. Language name

1.2. Genealogical affiliation

1.3. Where is it spoken? Or where did you study it?

2. Are you a native speaker? If not, how did you gain knowledge of this language?

3. Verbal sentences

(1) Example
Mary sings

(2) Example
Mary does not sing

(3) Example
Mary likes movies

(4) Example

Mary does not like movies

The answers to 3.1 below and sub-questions can be very short or just references to other sources.

3.1. Can you think of any tense-aspect categories where the negator used in 1 through 4 cannot be used? If 'yes':

3.1.1. Please name these categories. It would be helpful to give examples too if possible (a pointer would be fine too, see above);

3.1.1.1. What negator is used with them? Again, examples or references are welcome.

4. Non-verbal sentences

4.1. Equational predicates

(5) Example
[Introducing a guest to the family]: **This is my friend Tom**

(6) Example
[A family gathering plus a guest]
Your mom [looking at the guest]: Is this Tom?
Speaker B: **This is not Tom**, it's Jake.

4.2. Descriptive (property ascribing) predicates

(7) Example
[Two people who met recently are talking about a common acquaintance] Speaker A: What does Tom do?
Speaker B: **Tom is a teacher.**

(8) Example
[Same context as in (7)]
Speaker A: Is Tom a teacher?
Speaker B: **Tom is not a teacher**, **he is a doctor**.

(9) Example
[Talking about the appearance of a somebody I just met] **Tom is tall.**

(10) Example
[Same context as in (9)] **Tom is not tall.**

(11) Example
[Tom just heard some really good news] **Tom is happy.**

(12) Example
[Tom is waiting for some news that's long delayed] **Tom is not happy.**

4.3. Locative and locative-presentative predicates

(13) Example [Somebody comes to your house, looking for your brother] (Yes, wait a minute), **Tom/he is here.**

(14) Example [Same context as in (13)] (Sorry), **Tom/he is not here.**

(15) Example [Same context as in (13)] (Sorry), **Tom/he is not here, he is in town.**

(16) Example [Hearing trashing and noise, looking through the window] **There are some wild cats in the garden.**

(17) Example [Same context as in (16)] Speaker A: Do you think there are any wild cats in the garden? Speaker B: **There aren't any wild cats in the garden.**

4.4. Clauses where only existence is predicated

(18) Example [The teacher, in a zoology/natural sciences class] **There are wild cats** (in Africa or somewhere else; there is such a thing as wild cats).

(19) Example [Same context as in (18)] **There are no wild cats** (in Africa or anywhere, there is no such thing as wild cats).

(20) Example [Same context as in (18)] **Wild cats exist** (The sense is the same as for 4.15; this is basically to check whether the language has an intransitive existential verb as the English *exist*, French *exister*, Modern Greek *ipárho*, Russian *sushtestvovat'*.)

(21) Example [Same context as in (18)] **Wild cats do not exist.**

4.5 Predicative possession

(22) Example
[Talking about helping somebody to move]
(Tom can help), **Tom/he has a car.**

(23) Example
[Same context as in (22)]
(Tom cannot help), **Tom/he does not have a car.**

Appendix B Collected data

B.1 Indo-Iranian

B.1.1 Old Persian

(based on Skjærvø 2009a and Bisitun inscription, Schmitt 1991)

Verbal negation: Preverbal *naiy-*

Affirmative existential: the copular verb expresses existence (Skjærvø 2009b: 134).

Negative existential: consists of a combination of the verbal negation marker and the affirmative existential.

> (1) *naiy āha   martiya naiy pārsa   naiy māda …*
> NEG COP.PST.3SG man   NEG persian NEG median
> 'There was no man, not Persian, not Median, (… who dared to speak up).' (DB1:48–49)

Summary: **Type A**

B.1.2 Middle Persian

(Editions of primary texts used in the paper are cited above; see also Skjærvø (2009a) for overview of Western Middle Iranian).

Verbal negation: preverbal *ne- / nē-* (different philologists have different interpretations of the vowel length).

Affirmative existential: expressed by clauses with a copular verb: *būd-* for past and *ast* for present.

Negative existential: with a past tense copula and its present tense counterpart *baw-*, the standard verbal negation marker *nē-* is found.

> (2) *agar ātaxš ī   wahrām nē būd*
> if   fire   LNK Wahram NEG be.PST.3SG
> 'If the fire of Wahram did not exist (lit. if there was no fire of Wahram)'(PRDD:18)

The form *ast* is negated by *nēst* (or *nest*; depending on vowel length interpretation). This negation marker is clearly an amalgam of *nē-* and *ast*, but there are good reasons to consider it as a unique marker.

(3) *az   padīdīgīh rāh ī   ō dušaxw nest*
from repentance road LNK to hell   NEG.COP
'From repentance, there is no road to Hell.' (DK6:50)

Summary: with the past tense, the negative existential is expressed by the copula preceded by the standard verbal negation marker, **hence: Type A**. In the present tense, a specific negative form of the copula is used, *nēst*, therefore **Type B**, **hence: Type A~B**

B.1.3 Sivandi

(Data from Lecoq 1979)

Standard verbal negation: preverbal *na-*, *ne-*, *ney-*

Affirmative existential: figure + (ground) + copular verb

(4) *ye šāh-i   bi*
one king-INDF be.PST.3SG
'There was a king.' (Lecoq 1979: 107)

(5) *ye čašme-y   en*
one fountain-INDF be.PRS.3SG
'There is a fountain.' (Lecoq 1979: 127)

Negative existential: 1. The locative verb *dār-* 'be located', 'be.at', 'have' + standard verbal negation marker

(6) *ke   bār na=dār-e*
COMP grain NEG=be.at-3SG
'(He closed his windmill down) because there was no grain.'
(Lecoq 1979: 150)

2. The past tense copulas + the standard verbal negation marker:

(7) *albatta   barqa=m   na=bi*
evidently electricity=TOP NEG-be.PST.3SG
'(Someone lit a candle), evidently there was no electricity.'
(Lecoq 1979: 89)

3. *Nūnd*, a negative copula.

(8) *Kasi   dege   ba goft=eš   nūnd.*
Someone other to say=3sg neg.cop
'No one else answered his appeals.' (Lecoq 1979: 95)

(9) *vāllāh, me či   tū das=em   nūnd*
by.god 1sg what in hand=1sg neg.cop
'By God, there's nothing in my hand.' (Lecoq 1979: 150)

(10) *xolāse   hīč goftegūi az   pīrežen-e   nūnd*
and.finally neg question from old.woman-def cop.neg
'And at the end, there were no questions from the old woman.'
(Lecoq 1979: 108)

Summary: with two existential copulas, the past tense copula and the locative verb, are negated by the standard negation form. **Hence: Type A**. The present tense negative existential is expressed using a negative copula *nūnd*. **Hence: Type B.**
Hence: Type A~B.

B.1.4 New Persian / Tajik

(own knowledge; Cormac Anderson, p.c.); see also Perry 2005, Windfuhr & Perry 2009)

New Persian and Tajik exhibit remarkably similar behavior. Verbal negation in both is expressed by the preverbal *ne-*, *ni-*.

The affirmative existential is expressed by a combination of the figure (NP), optional ground (PP, NP), and a copular verb:

(11) *dar in   ōtaq do panjere hast*   (New Persian)
dar in   xona du tireza   hast   (Tajik)
in   dem room two window ex.3sg
'There are two windows in this room.' (Windfuhr & Perry 2009: 450)

Negative existentials are formed by replacing the affirmative existential copula *hast* with its negative counterpart *nest:*

(12) *Dar in   χona tireza   nest.*
in   dem house window neg.cop.prs.3sg
'There are no windows in this house.' (Tajik, Perry 2005: 202

Past tense copulas are negated by *ne-*, *ni-* in this construction. Furthermore, in New Persian, *daʃtan* 'have' is used in the negative existential as well.

(13) *gurba-ye vaʃi na-dar-ad*
      cat-LNK   wild NEG-have-3SG
      'There are no wild cats.' (Cormac Anderson, p.c.)

Summary: **Type A~B**

B.1.5 Gorani

(Data from Mahmoudveysi et al. 2012.)

Verbal negation: prefixed / procliticized *ne-* / *na-* / *niy-* (Mahmoudveysi et al. 2012: 25)

Affirmative existentials are expressed by a copular verb that is preceded by the figure argument (with an optional ground argument).

(14) *ya dāya   kaywānū ma-w-u*
      one mother old.lady   IND-be.PRS.3SG
      'There is an old lady.' (Mahmoudveysi et al. 2012: 15)

(15) *čünka   nwār-aka   hē*
      because cassette-DEF exist.3SG
      'because there are cassettes' (Mahmoudveysi et al. 2012: 34)

Negative existentials are formed by *nīya* or *naw* that Mahmoudveysi et al. interpret as a negative copula.

(16) *falā-ka-y   mwāy   ay wā nīya*
      farmer-DEF-? IND.say.PRS.3SG well wind not.exist.3SG
      'The farmer says: "Well, there's no wind."' (Mahmoudveysi et al. 2012: 61)

(17) *masan   yā barq   naw*
      for.example one electricity NEG.COP
      '(when,) For example, there is no electricity.' (Mahmoudveysi et al. 2012: 159)

Summary: **Type A~B**.

B.1.6 Gilaki

(Rastorgueva et al. 2012)

Verbal negation: expressed by a preverbal *ne-*, *na-*, *n-*. The exact form is determined by phonotactics.

Affirmative existential: (18) *ustatər   utɐɣ=ə   xɐli   nah-a*
                                    over.there room=LNK empty exist.PRS.3SG

        'Over there, there is an empty room.' (Rastorgueva et al. 2012: 310)

(19) *ita rɐ   nah-a*
      one road exist-3SG

      'There is one road.' (Rastorgueva et al. 2012: 318)

(20) *miz=ə=ru   du=ta   kitɐb dərə*
      table=LNK=on two=CLF book be.located.3SG

      'There are two books on the table.' (Rastorgueva et al. 2012: 134)

(21) *ɐxər   dín=u   məzháb=u xudɐ ki   is-ə*
      after.all religion=and faith=and god   COMP be.PRS.3SG

      'After all, there is religion, faith and God.' (Rastorgueva et al. 2012: 275)

Negative existential: expressed by the verbal negation marker that is attached to one of the copulas used in the affirmative existential forms.

(22) *u   bəlɐyə   ki dər dunyɐ nə-na   bi*
      and misfortune REL in   world NEG-exist be.PST

      'whatever misfortune that existed in the world'(Rastorgueva et al. 2012: 263)

(23) *mašin nə-ø-na-ø*
      car   NEG-PFV-exist.PST-3SG.PST

      'There are no cars.' (Rastorgueva et al. 2012: 326, their glosses and zeroes)

(24) *ame xɐnə hitʃ kəs   n-es-ə*
      1PL   house NEG somebody NEG-be.PRS.3SG

      'There is nobody at home.' (Rastorgueva et al. 2012: 133)

Summary: **Type A**

B.1.7 Ziyarati

(Shokri et al. 2013)

Verbal negation: expressed by *ne-* or *na-* prefix / proclitic.

Affirmative existential: expressed by the copular verb or by the locative copula *dār-* 'be.at' or 'be located'.

(25) *jānevar   dar-e,   xu dar-e*
wild.animals be.at.PRS-3SG boar be.at.PRS-3sg
'(Why (do) we need a night watchman?) There are wild animals; there are boars.' (Shokri et al. 2013: 84)

(26) *messe   alān ye jāmeā=i   hasse   ke   …*
for.example now one shirt=INDF be.PRS.3SG COMP
'There is a shirt that (has buttons all the way up).' (Shokri et al. 2013: 153)

(27) *esā   in rasmā   ā-bee*
nowadays DEM ceremony-PL PRV-be.PST.3PL
'Nowadays there are ceremonies …' (Shokri et al. 2013: 80)

Negative existential: expressed by one of the copulas above preceded by a verbal negation marker.

(28) *ʃupā   da-ni-bu-in   …*
watchman PRV-NEG-be.PST.3PL
'(if) there are no watchmen' (Shokri et al. 2013: 84)

(29) *ammā dige age na=bu   ke   …*
but   PRT if NEG=be.PST.3SG COMP …
'but if there is no one who (want to buy our goods)' (Shokri et al. 2013: 82)

(30) *zemestān o bāhār o payiz o tābestān ne=dāʃt-e*
winter   and spring and autumn and summer NEG-be.at.PST-3SG
'There was no winter, spring, autumn, and summer (i.e., where we live there is no difference between the seasons).' (Shokri et al. 2013: 65)

Summary: **Type A**

B.1.8 Kurmanji

(Thackston 2006, our glosses and parsing)

Verbal negation: *na*, *ne*.

Affirmative existential: formed with the usual copulas preceded by a single figure constituent.

(31) *Got-in-eke   pêşiy-ên   me   heye.*
say-NMZL-INDF ancestor-PL 1PL.OBL be.PRS.3SG
'There is a saying of our ancestors.' (Thackston 2006: 31)

Negative existential: expressed by *tun-*

(32) *Di vî   warî   da otorîtey-eke   resmî tune.*
in DEM regard in authority-INDF official COP.NEG.PRS.3SG
'In this regard, there is no official authority.' (Thackston 2006: 32)

(33) *madem   ku   zimannivîs tune*
as.long.as COMP writer   COP.NEG.PRS.3SG
'as long as there are no writers' (Thackston 2006: 32)

(34) *ger xwendevan-ên kurdî   tunebin*
if   reader-PL   Kurdish COP.NEG.PST
'if there are no readers of Kurdish' (Thackston 2006: 31)

Summary: **Type B**

B.1.9 Taleshi

(Paul 2011).

Verbal negation: The standard verbal negation is a *nə-*, *ni-*.

Affirmative existential: (35) *vind=əš=e   də   gəla əmsafa hest-e.*
see=3SG=TR two CLF then   exist-3SG
'He saw that there are two baskets.' (Paul 2011: 358)

(36) *vin-ən kə   bale, vâš   b-a.*
see-3PL COMP yes   grass be-3SG
'They see that yes, there's grass.' (Paul 2011: 210)

(37) *iâ   rama=i   dari=a.*
     here flock=INDF exist=COP.3SG
     'There is a flock here.' (Paul 2011: 243)

Negative existential: The standard verbal negation is often used:

(38) *ğeir az   xudâ hikas   ne-bu.*
     apart from god   nobody NEG-be.3SG
     'Apart from God, there's nobody.' (Paul 2011: 176)

(39) *vin-ə   sas=i   ni=a.*
     see-3SG voice=INDF NEG=COP.3SG
     'She sees that there is no answer.' (Paul 2011: 422)

Rarely in the data presented in Paul 2011 *ni* is used alone in negative existentials:

(40) *câra=i   ni magam əm   ki   bə-š-am*
     solution=INDF NEG except   DEMP COMP SBJV-go-1PL
     'There is no solution but that we go.' (Paul 2011: 214)

Summary: **Type C~A**

B.1.10 Koroshi

(Nourzaei et al. 2015)

Verbal negation: expressed by a preverbal *na-*, *nā- nay-*.

Affirmative existential: expressed by the copula preceded by a single-figure constituent (and an optional ground constituent).

(41) *ye ādam=e   bīčāra=en*
     one person=LNK poor=COP.NPST.3SG
     'There is a poor fellow.' (Nourzaei et al. 2015: 31)

(42) *yek dāzan=ē   bod-a=ø*
     one woman=INDF become.PST-PP=COP.NPST.3SG
     'There is (lit. has been) a woman.' (Nourzaei et al. 2015: 92)

Negative existential: expressed by a copula preceded by the verbal negation marker:

(43) *ġayr az   xodā hīčka   nay-at-Ø*
      except from god nobody NEG-COP.PST.3SG
      'Except for God, there was no one.' (Nourzaei et al. 2015: 123;
      formula)

Occasionally found expressed by *nē*, which is not mentioned in the gram-
mar sketch by Nourzaei et al., but is glossed by them as a non-past tense
copula.

(44) *bāk=ē   nē*
      fear=INDF NEG.be.NPST.3SG
      '(And I said:) No problem!' (Nourzaei et al. 2015: 149)

(45) *be.xātere.ke ay   dar=ī   fāyeda nē*
      because   from in=PC.3SG use   NEG.be.NPST.3SG
      'because there was nothing to gain (lit. there is no use)' (Nourzaei
      et al. 2015: 144)

Summary: **Type A~B**

B.1.11 Hindi

(see Bashir 2006)

B.1.12 Odia

(Neukom & Patnaik 2003)

Verbal negation: The most common verbal negation marker is a post-verbal *nahĩ*.
    The copula *th-* (often referred to as a locative but used for other functions as
    well) is negated by a preverbal *nɔ-* and this negative marker is occasionally
    also found on other, lexically heavy verbs. This occurs when an old *th-*
    auxiliary is involved in the creation of the form, but it is also found in
    other circumstances.

(46) *se gɔl-a   nahĩ.*
      3SG go.PST-3SG NEG
      'He did not go.' (Neukom & Patnaik 2003: 340)

(47) *se muɳɖɔ hɔla-i   nahĩ kɔr-iba-ru ɔnyɔ jɔɳɔ-kɔ kɔh-il-a*
      3SG head shake-CVB NEG do-INF-ABL other CLF-DEF say-PST-3SG
      'since she shook her head and said no, the other one
      said...'(Neukom & Patnaik 2003: 43)

(48) *kheɭ-u-nɔ-th-il-a*
play-IPFV-NEG-AUX-PST-1SG
'I was not playing.' (Neukom & Patnaik 2003: 340)

(49) *kintu bɔrttɔman se nɔ-j-ib-ɔ kahĩki?*
but now 3SG NEG-go-FUT-3SG why
'But why shouldn't she go now?' (Neukom & Patnaik 2003: 341)

(50) *ta-ku sɔtɔrkɔ kɔr-a-i-de-b-e puɔ jemiti istri*
3MSG-DAT careful do-CAUS-CVB-give-FUT-2PL boy in.order iron
nɔ-chũ-ẽ.
NEG-touch-3SG.HAB
'Warn her that the boy should not touch the iron.' (Neukom &
Patnaik 2003: 155)

Affirmative existential: The usual verbal copulas *ɔch-* and *th-* are used here.

(51) *eʈhi kete-guɽie saikel ɔch-i.*
here some-PL bicycle be-3SG
'There are some bicycles here.' (Neukom & Patnaik 2003: 47)

(52) *tumɔ laibreri-re bɔngɔɭa bɔhi ɔch-i? hỹ kete-khɔɳɖɔ ɔch-i.*
2SG library-LOC Bangla book be-3SG yes some-CLF be-3SG
'Are there Bengali books in your library? Yes, there are some.'
(Neukom & Patnaik 2003: 118)

(53) *e bɔs-re purusɔ o stri-manɔ-nkɔ-rɔ bɔs-iba jaga ɔch-i .*
DEM bus-LOC man and woman-PL-OBL-GEN sit-INF place be-3SG
'In this bus there are seats for gentlemen and (seats) for ladies.'
(Neukom & Patnaik 2003: 38)

Negative existential: The post-verbal negation marker *nahĩ* is used without a cop-
ula (B~C, because there is another SN). Neukom and Patnaik parse this mar-
ker as a negative copula and a third person singular bound person marker.
As *th-* is negated with a preverbal *nɔ-*, it is also negated in this manner
when it functions as the existential copula. This negation marker is also
used with prototypical action verbs (not only when *th-* is an auxiliary).

(54) *deuɭɔ bhitɔr-e kie ɔch-i ki? na, kehi nah-ĩ.*
temple inside-LOC someone be-3SG INT no anyone NEG.be-3SG
'Is there someone in the temple? No, there isn't anyone.' (Neukom
& Patnaik 2003: 100)

(55) *bɔɽɔ nah-ĩ   choʈɔ di-ɔ.*
big NEG.be-3SG small give-2PL.IMP
'There are no big (ones); give me small (ones).' (Neukom & Patnaik 2003: 72)

(56) *premika nɔ-th-ile   birɔhɔ   jɔntrɔɳo nɔ-tha-nt-a*
mistress NEG-be-COND.CVB separation pain   NEG-be-COND-3SG
ki kehi   mɔdɔ pi-u-nɔ-tha-nt-e.
or anybody wine drink-IPFV-NEG-AUX-COND-3PL
'If there were no girls, there would be no pain of separation nor would anybody drink alcohol.' (Neukom & Patnaik 2003: 195)

Summary: **Type A & Type B~C**

B.1.13 Nepali

Sugam Singh, Marie-Caroline Pons (p.c.)

Verbal negation: *-dina* and *-in(a)n* verbal suffixes; both can be further parsed, but this is not essential to illustrate the point here.

(57) *yini mahilã git   gãũ-dina-n*
DEM woman song sing-NEG.PRS.3SG
'The woman doesn't sing.' Sugam Singh, Marie-Caroline Pons (p.c.)

(58) *yini mahilã-le   git gã-inan*
DEM woman-ERG song sing-NEG.PST.3SG
'The woman didn't sing.' Sugam Singh, Marie-Caroline Pons (p.c.)

(59) *yini mahilã jhyal   phoḍ-dinan*
DEM woman window break-NEG.PRS.3SG
'The woman didn't break the window.' Sugam Singh, Marie-Caroline Pons (p.c.)

(60) *yini mahilã-le   jhyãl   phoḍ-inan*
DEM woman-ERG window break-NEG.PST.3SG
'The woman didn't break the window.' Sugam Singh, Marie-Caroline Pons (p.c.)

Affirmative existential: with the usual verbal copulas.

(61) *bāri-mã   birālo-haru chha-n*
      garden-LOC cat-PL   be-3SG
      '(When he looked outside) there were cats in the garden.' Sugam
      Singh, Marie-Caroline Pons (p.c.)

(62) *bāri-mã   birālo-haru thi-e*
      garden-LOC cat-PL   be.PST-3SG
      '(When he looked) there were no cats in the garden.' Sugam Singh,
      Marie-Caroline Pons (p.c.)

Negative existential: The usual verbal negation markers are used here regardless
      of tense/aspect.

(63) *bāri-mã   birālo-haru chha-inan*
      garden-LOC cat-PL   be-NEG.PRS.3SG
      '(He is looking outside) There at no cats in the garden.' Sugam
      Singh, Marie-Caroline Pons (p.c.)

(64) *bāri-mã   birālo-haru thi-enan*
      garden-LOC cat-PL   be-NEG.PST.3SG
      '(he looked outside) There were no cats in the garden.' Sugam
      Singh, Marie-Caroline Pons (p.c.)

(65) *jãgali birālo-haru hũ-deinan*
      jungle cat-PL   be.PRS-NEG.PRS.3SG
      'There are no wild cats.' (also given for 'wild cats don't exist').
      Sugam Singh, Marie-Caroline Pons (p.c.)

(66) *jãgali birālo-haru thi-enan*
      jungle cat-PL   be.PST-NEG.PST.3SG
      'There were no wild cats (back in the day, before they were brought
      here).' Sugam Singh, Marie-Caroline Pons (p.c.)

Summary: **Type A**

B.1.14 Assamese

Krishna Boro and Nihankara Dutta (p.c.)

Verbal negation: Verbs are negated by a *ni-* prefix or by a *nasil* negative auxiliary.
      The negative auxiliary is probably historically *ni-* + *as* COP + *il* PST, and are
      parsed here in this manner. Whether this parsing is a synchronic reality

in the minds of speakers is questionable (we would like to thank Krishna Boro for this point).

(67) *Mohila-goraki(-e)   gan   na-ga-j.*
Woman-CLF(-NOM) song NEG-sing-3SG
'The woman didn't sing.' Krishna Boro and Nihankara Dutta (p.c.)
(some experts consider the optional –e an Ergative marker)

(68) *mohila-goraki(-e)   gan   go-a   n-as-il-e*
woman-CLF(-NOM) song sing-PTCP NEG-COP-PST-3SG
'The woman didn't sing.' Krishna Boro and Nihankara Dutta (p.c.)

Affirmative existential: The usual verbal copulas *as-* or *tʰak-* are used here. The later is often referred to as a "locative" existential in the (Eastern) Indo-Aryan literature, but it can be found also in other types of nominal predication domains.

(69) *sotal-ot   keitaman mekuri as-e*
yard-LOC some   cat   COP-3SG.PRS
'(Hearing noise from outside) there are some cats in the yard'
Krishna Boro and Nihankara Dutta (p.c.)

(70) *sotal-ot   keitaman mekuri as-il*
yard-LOC some   cat   COP-PST
'(When he looked to the yard) there were some cats in the yard.'
Krishna Boro and Nihankara Dutta (p.c.)

(71) *bonoria mekuri tʰak-e   / as-e*
wild   cat   stay-3SG.PRS / COP-3SG.PRS
'There are wild cats.' Krishna Boro and Nihankara Dutta (p.c.)

Negative existential: A special negative existential *nai* is used (hence: Type B), but also *na-* and *nasil* are found (hence Type A). There seems to be a tense/aspect interaction with regards to the distribution of these markers.

(72) *sotal-ot   (eta-u)   mekuri nai*
yard-LOC (one-ADD) cat   NEG.EX
'(He's looking into the yard) there are no cats in the yard.' Krishna Boro and Nihankara Dutta (p.c.)

(73) *sotal-ot (eta-u) mekuri n-as-il*
      yard-LOC one-ADD cat NEG-be-PST
      '(When he looked into the yard) there were no wild cats in the
      yard.' Krishna Boro and Nihankara Dutta (p.c.)

(74) *bonoria mekuri na-tʰak-e*
      wild cat NEG-stay-3SG
      'There are no wild cats.' Krishna Boro and Nihankara Dutta (p.c.)
      (the verb in this clause means 'stay, be at, exist')

(75) *bonoria mekuri n-as-il*
      wild cat NEG-be-PST
      'There were no wild cats (back in the day, before they were brought
      here).' Krishna Boro and Nihankara Dutta (p.c.)

Summary: **Type A~B**

B.1.15 Kupia

(Christmas & Christmas 1973a,b; we will not repeat examples from the paper
here)

Verbal negation: Is expressed by a post verbal *nay* (see the example in our article).

Affirmative existential: Copular verb + NP expressing the figure + optional NP /
     PP expressing the ground.

Negative existential: There are two construction types. In both, the copula is re-
     placed completely by a different marker. Construction type one is of type
     B, and a special negative form of the copula (*nenj-*) replaces the copular
     verb used in the affirmative. The second is of type C and the Verbal nega-
     tion marker is used as a special negative existential marker.

Summary: **Type B and Type C**

B.2 Albanian, Armenian, Greek

B.2.1 Albanian

Standard (Tosk) Albanian has four negative morphemes, *nuk, s', mos* and *jo* (Tu-
rano 2000: 82), see Buchholz & Fiedler (1987: 172) for another negative morpheme,
as. mos is used to negate subjunctive, imperative and optative clauses as well as
gerunds and infinitives (Turano 2000: 85). *jo* often referred to as a 'constituent
negator' and is restricted to use with nominals, adjectives, prepositional phrases,

and adverbials (Turano 2000: 86). Only *nuk* and *s'* are relevant for the present discussion. They are interchangeable even though they are used differently (Buchholz & Fiedler 1987: 172). Both occur in standard negation:

(76) *Nuk vajta   (më)   në bibliotekë.*
     NEG go.PST.1SG (anymore) in library
     'I didn't go to the library (anymore).' (Turano 2000: 82)

(77) *S'-vajta   (më)   në bibliotekë.*
     NEG-go.PST.1SG (anymore) in library
     'I didn't go to the library (anymore).' (Turano 2000: 82)

The verb used for existential predicates is *ka* 'to have', as indicated by Camaj (1984: 12), who explicitly glosses the third person singular form of the verb, *ka*, to mean 'he, she has; there is', and its negated form is *nuk ka*, *s'ka* with 'there is no'.

Camaj's (1984) grammar includes several examples of existential predicates. The examples below illustrate the use of the affirmative and negated existential predicates:

(78) *Në mulli ka   drithë e   miell.*
     in mill   have.3SG grain and flour
     'In the mill there is grain and flour.' (Camaj 1984: 12/257)

(79) *ndër   ne   s'ka   kundërshtime*
     among 1PL.ACC NEG+have.3SG objection.PL
     'There are no conflicts among us.' (Camaj 1984: 70)

As *ka* 'to have' is negated as any other verb, Albanian is classified as a type A language.

B.2.2 Armenian

Modern (Eastern) Armenian has the negative prefix *č'-* for standard negation and this prefix attaches to most verb forms, except for imperatives (Dum-Tragut 2009: 522):

(80) *Vardan-ě   gnec'   gírk'-ě.*
     Vardan.NOM-DEF buy.AOR.3SG book.NOM-DEF
     'Vardan bought the book.' (Dum-Tragut 2009: 51)

(81)   *Vardan-ě*   *č'-gnec'*   *gírk'-ě.*
       Vardan.NOM-DEF NEG-buy.AOR.3SG book.NOM-DEF
       'Vardan did not buy the book.' (Dum-Tragut 2009: 51)

Modern Armenian *em* 'to be' expresses copular meaning and also functions as an auxiliary (Dum-Tragut 2009: 215):

(82)   *Anuš-ě*   *gełec'ik*   *ałjik*   *ē.*
       Anuš.NOM-DEF beautiful girl.NOM is.3SG
       'Anuš is a beautiful girl.' (Dum-Tragut 2009: 215)

(83)   *Anuš-ě*   *gełec'ik*   *ałjik*   *č'-ē.*
       Anuš.NOM-DEF beautiful girl.NOM NEG-is.3SG
       'Anuš is not a beautiful girl.' (Dum-Tragut 2009: 215)

The copula is used for locatives in the following:

(84)   *Im hayr-ě*   *Ani*   *hyuranoc'-um ē.*
       my father.NOM-DEF Ani.NOM hotel-LOC   be.3SG
       'My father is in the Hotel Ani.' (Dum-Tragut 2009: 382)

However, another verb that is frequently used for both locative and true existentials is the defective verb *kam* 'to exist' (Dum-Tragut 2009: 282). The following are examples of a locative existential and a true existential:

(85)   *Hamaynk'-i*   *łekavar-i*   *t-an-ě*   *heřaxos*
       community-DAT leader-DAT house-DAT-DEF telephone.NOM
       č'-ka.
       NEG-exist-PRS.3SG
       'There is no telephone in the house of the leader of the community.'
                                              (Dum-Tragut 2009: 104–105)

(86)   *Inč'u č'-k-an*   *barjrakarg*   *ēk'skursavar-ner?*
       why NEG-exist-PRS.3PL high.quality tourist.guide-PL.NOM
       'Why there are no high-quality tourist guides?' (headline) (Dum-Tragut 2009: 693)

It seems that both *kam* 'to exist' and the copula *em* are used for locatives, while only *kam* alone can be used to predicate existence, without reference to a specific situation or location. Both *kam* and *em* are negated with the negative prefix *č'*-, classifying Modern Armenian as a type A language.

B.2.3 Modern Greek

In Modern Greek, the negative morpheme δεν (*den*) 'not' is placed before the verb to form a negative indicative statement (Holton et al. 2012: 510). Another negator exists for sentences in the subjunctive mood, but this is not addressed here.

(87)   *Οι   συγγενείς του   δεν θα   του   δώσουν καμιά βοήθεια*
       Oi   syngeneís tou   ðen θa   tou   ðósoun kamiá voíθeia
       DEF.PL relative.PL POSS.3SG NEG FUT 3SG.ACC give   any   aid
       'His relatives are not going to give him any help.' (Holton et al. 2012: 510)

It is possible to use the δεν (*den*) 'not' in combination with the copula είμαι (*eímai*) for many non-verbal predicates, including locatives:

(88)   *Δεν είναι   καμιά αδέσποτη γάτα στον   κήπο*
       ðen eínai   kamiá aðéspoti gáta ston   kípo
       NEG be.3SG none stray   cat in.DEF garden
       'There isn't any wild cat in the garden.' (Eirini Skourtanioti, p.c.)

Nonetheless, for existential predicates, υπάρχω (*ypárcho*) 'to exist' or έχω (*écho*) 'to have' must be used rather than the copula:

(89)   *Δεν υπάρχει φάρμακο σ'αυτή   την   αρρώστια*
       ðen ypárchei fármako s'-aftí   tin   arróstia
       NEG exist   medicine of-DEM.FSG DEF.ACC illness
       'There is no cure [lit. 'medicine'] for this illness.' (Holton et al. 2012: 493)

(90)   *Στην Ολλανδια, με νόμο του 1976 απαγορεύεται να ανοίγουν τα καταστήματα τις Κυριακές, …*
       …ενώ αντιθέτως στην   Πολωνια δεν   υπάρχουν   πλέον περιορισμοί.
       …enó antiθétos stin   Polonia ðen ypárchoun pléon periorismoí.
       while instead   in.DEF Poland NEG exist   much restriction.PL
       'In the Netherlands, a 1976 law prohibited opening shops on Sundays, whereas in Poland, there are no such restrictions anymore.' (Puigdollers 2015: 483)

(91)   *Δεν εχει   φωτα   στο   σπιτι τους.*
       ðen echei   fota   sto   spiti tous.
       NEG have.PRS.3SG light.PL on.DEF house POSS.3PL
       'There are no lights in their house.' (Holton et al. 2004: 199)

(92) Δεν έχει   αδέσποτες γάτες
     ðen échei   aðéspotes gátes
     NEG have.PRS.3SG stray   cat.PL
     'There are no stray cats.' (Eirini Skourtanioti, p.c.)

While the copula cannot be used, Modern Greek is a clear instance of Type A because it uses the standard negator for negative existentials. For a similar analysis of Modern Greek, see also Veselinova (2013: 115–116). For more information regarding diachronic change in Greek negation, see Kiparsky & Condoravdi (2006).

B.3 Baltic

B.3.1 Latvian

Standard negation in Latvian is expressed through the preverbal particle *ne*:

(93) *Marija dzied.*
     Mary   sing.PRS.3SG
     'Mary sings.' (p.c. Sandra Grinberga)

(94) *Marija ne   dzied.*
     Mary   NEG sing.PRS.3SG
     'Mary does not sing.' (Sandra Grinberga, p.c.)

(95) *Viņš   ne-runā   latviski.*
     3SG.M NEG-speak.PRS.3SG Latvian
     'He doesn't speak Latvian.' (Mathiassen 1997: 164)

In negative existentials, as in many other contexts where the copula is used, the negated form of the copula *ir* 'to be' in the present tense has the form *nav*:

(96) *Afrikā ir   lauvas.*
     Africa COP lion.PL.NOM
     'In Africa there are lions.' (Mathiassen 1997: 164)

(97) *Latvijā nav   lauvu.*
     Latvia NEG.COP lion.PL.GEN
     'In Latvia there are no lions.' (Mathiassen 1997: 164)

(98) a. *Ir   savvaļas kaķi.*
        COP wild   cat.PL.NOM
        'There are wild cats.' (Sandra Grinberga, p.c.)

b. *Nav   savvaļas kaķu.*
NEG.COP wild   cat.PL.GEN
'There are no wild cats.' (Sandra Grinberga, p.c.)

In contrast, in the past tense, a regularly negated form of the copula is used:

(99) a. *Bija   savvaļas kaķi.*
PST.COP wild   cat.PL.NOM
'There were wild cats.' (Sandra Grinberga, p.c.)

b. *Ne-bija   savvaļas kaķu.*
NEG-PST.COP wild   cat.pl.gen
'There were no wild cats.' (Sandra Grinberga, p.c.)

The copula *ir* 'to be' is used in this manner for all the non-verbal sentences we investigated in our questionnaire, including equational predicates, descriptive predicates, locative predicates (see above, examples 96 and 97), and negative existentials. Hence, we classify Latvian as Type A~B, as a special negative existential construction exists but its usage is dependent on TAM.

B.3.2 Lithuanian

Mathiassen (1996: 176–177) states that the most important verbal negator in Lithuanian is *ne*, which can be a prefix for verbs and other word classes:

(100) *Aš nusipirkau naują   dviratį.*
1SG buy.PST.1SG new.ACC bicycle.ACC
'I have bought a new bicycle.' (Mathiassen 1996: 185)

(101) *Aš ne-nusipirkau   naujo   dviračio.*
1SG NEG-buy.PST.1SG new.GEN bicycle.GEN
'I have not bought a new bicycle.' (Mathiassen 1996: 185)

For non-verbal predicates, one option is to delete the copula *būti* 'to be'; these are then negated by inserting *ne*:

(102) *jis   studentas*
3SG.M.NOM student.NOM.M.SG
'He is a student.' (Mathiassen 1996: 176)

(103) *jis   ne   studentas*
      3SG.M.SG NEG student.NOM.M.SG
      'He is not a student.' (Mathiassen 1996: 176)

In most cases, however, the copula is present. For the present tense, the negative form of the copula is a contraction of the negator *ne* and the non-negative form of the copula *yra*, which is written *nėra* (Mathiassen 1996: 1976):

(104) *Čia yra   laukinių   kačių*
      here be.PRS.3SG wild.GEN.M.PL cat.GEN.M.PL
      'There are wild cats.' (Algirdas Sabaliauskas, p.c.)

(105) *Čia laukinių   kačių   nėra*
      here wild.GEN.M.PL cat.GEN.M.PL NEG.be.PRS.3SG
      'There are no wild cats.' (Algirdas Sabaliauskas, p.c.)

We analyze this contracted form as a special negative existential marker. In the past tense, a regularly negated form of the copula is used to form the negative existential:

(106) *Protestuoti dėl   to   ne-buvo   kam.*
      protest.INF because.of that NEG-be.PST.3SG who.DAT
      'There was no one who would protest about that.' (Kalėdaitė 2008: 134)

As the negative existential in Lithuanian has both a special negative existential construction (in the present tense) and the standard negation construction (in the past tense), we can classify it as Type A~B.

B.4 Romance

B.4.1 French

Negation in French is formed through the double negation *ne … pas* 'not', but the first element is often omitted in informal speech (Lang & Perez 2004: 219).

(107) *Si les   Dupont ne sont   pas là   maintenant,*
      if DEF.ART.PL Duponts NEG be.PRS.3PL NEG here now
      'If the Duponts are not here now, (it's because they won't be coming.)'
      (Lang & Perez 2004: 219)

Locatives can make use of the construction *il y a* 'there is/are' to stipulate the presence or absence of a particular entity in a specific situation or location. This construction is negated by *ne … pas* 'not' as usual.

(108) *Il   y   a   au moins dix coffrets de portables parmi lesquels*
3SG there have.PRS at least   ten case.PL of mobile.PL among which.PL
choisir.
choose.INF
'There are at least ten mobile holders to choose from.' (Offord 2006: 274)

(109) *Il   n'-y   a   pas de centre équivalent en Belgique.*
3SG NEG-there have.PRS NEG of center equivalent in Belgium
'There isn't an equivalent center in Belgium.' (Offord 2006: 208)

For negative existentials, when the existence of an entity is negated altogether, French has to make use of the verb *exister* 'to exist':

(110) *Les   chats sauvages (n'-)existent   pas.*
DEF.ART.PL cat.PL wild.PL (NEG)-exist.PRS.3PL NEG
'There are (no) wild cats.' (Raphaël Domange, p.c.)

French is therefore an example of a Type A language.

B.4.2 Italian

In Italian, sentential negation is formed by the marker *non* 'not':

(111) *Non parlo   italiano.*
NEG speak.PRS.1SG Italian
'I don't speak Italian.' (Peyronel & Higgins 2006: 41)

Similar to French *il y a* 'there is/are', Italian has a fixed construction involving *essere* 'to be' to introduce the presence or absence of an entity, *c'è* 'there is' and *ci sono* 'there are'. While no specific context or location need be mentioned, these statements are implicitly or explicitly situated in particular situations. They are negated by using *non* 'not', as any predicate is.

(112) *Nel   negozio ci   sono   molti clienti.*
in.DEF shop   there be.PRS.PL many customer.PL
'There are a lot of customers in the shop.' (Peyronel & Higgins 2006: 32)

(113) *Non ci   sono   clienti.*
       NEG there be.PRS.PL customer.PL
       'There aren't any customers.' (Peyronel & Higgins 2006: 33)

However, *c'è* 'there is' and *ci sono* 'there are' cannot be used when the existence of an entity itself is negated. Instead, the verb *esistere* 'to exist' is used:

(114) *I   gate   selvatici non esistono.*
       DEF.PL cat.PL wild.PL   NEG exist.PRS.3SG
       'There are no wild cats.' (Francesca Di Garbo, p.c.)

As the verb is negated using the standard negation marker *non* 'not', Italian can be classified as Type A.

B.4.3 Romanian

Negation in Romanian is achieved through the preverbal particle *nu* (see Gönczöl-Davies 2008):

(115) *O   fată face   sport, cealaltă fată nu face.*
       INDF.F.SG girl make.PRS.3SG sport other.F.SG girl NEG make.PRS.3SG
       'One girl does sports, the other girl doesn't.' (Gönczöl-Davies 2008: 36)

This same negator is used in negative existentials:

(116) *Se   găsesc pisici sălbatice.*
       MID.3SG find   cat.PL wild.PL
       'There are wild cats.' (Andreea Calude, p.c.)

(117) *Nu se   găsesc pisici sălbatice.*
       NEG MID.3SG find   cat.PL wild.PL
       'There are no wild cats.' (Andreea Calude, p.c.)

The sentence above has the verb *a se gasi* 'to find themelves' (middle voice). It is also possible to use *a exista* 'to exist', but the copula, which appears in many other non-verbal constructions, is disprefered without a locative:

(118) *Nu există pisici sălbatice.*
       NEG exist cat.PL wild.PL
       'There are no wild cats.' (Andreea Calude, p.c.)

(119) *El   nu   e   aici, e   în oraş.*
       3SG.M NEG be.PRS.3SG here, be.PRS.3SG in town.
       'He is not here, he is in town.' (Andreea Calude, p.c.)

(120) *Nu   e   nici o   pisică sălbatică *(acolo/aici).*
       NEG be.PRS.3SG even INDF cat.PL wild.PL   *(there/here)
       'There aren't any wild cats there/here.' (Andreea Calude, p.c.)

(121) *Nu sunt   mulți copii   la şcoală azi.*
       NEG be.PRS.3PL many child.PL at school today
       'There are not many kids at school today.' (Andreea Calude, p.c.)

When the negated sentence is absolutely and universally true, the copula can be used, but the existential verb is still the default:

(122) *Nu este   viaţă eternă.*
       NEG be.PRS.3SG life   eternal
       'There is no eternal life.' (Andreea Calude, p.c.)

(123) *Nu sunt   luni   de toate culorile.*
       NEG be.PRS.3PL moon.PL of all   color.PL
       'There are no rainbow-coloured moons.' (Andreea Calude, p.c.)

Despite this dispreference for the copula in the negative existential construction, the negator *nu* is identical in all of these sentences. The same applies when the pivot is quantified:

(124) *Nu sunt   multe pisici sălbatice.*
       NEG be.PRS.3PL many cat.PL wild.PL
       'There are not many wild cats.' (Andreea Calude, p.c.)

B.4.4 Spanish

Spanish has only one sentential negator, the preverbal *no* (Butt & Benjamin 1994: 319ff).

(125) *¿Se lo   has   dado?*
       3SG 3SG.OBJ have.PRS.2SG give.PST.PTCP
       No, no se lo   he   dado.
       NEG NEG 3SG 3SG.OBJ have.PRS.1SG give.PST.PTCP
       'Did you give it to him/her/them?
       No, I didn't give it to him/her/them.' (Butt & Benjamin 1994: 320)

Butt & Benjamin (1994: 382ff) features a chapter on existential sentences. They detail that true existentials are formed with the present indicative form *hay* of the special verb *haber*, which means 'there is, there are'. The verb *estar* is used for locatives, meaning 'to be located/there'. The different usages of *hay* and *estar* are illustrated here:

(126) *Hay un gerente en la compañía.*
HAY INDF manager in DEF company
'There's a manager in the company.' (i.e. 'a manager exists') (Butt & Benjamin 1994: 383)

(127) *Está   el gerente*
be.PRS.3SG DEF manager
'The manager is there/here/in.' (Butt & Benjamin 1994: 383)

The existential construction with *hay* is negated with *no* as is any other verb:

(128) *No hay dinero.*
NEG HAY money
'There's no money (anywhere).' (Butt & Benjamin 1994: 383)

(129) *No hay nadie   que sepa   tocar más de un violín a la*
NEG HAY nobody REL know.SBJV.3SG play more of one violin at DEF
vez.
time
'There is no one who can play more than one violin at once.' (Butt & Benjamin 1994: 269)

Spanish is therefore classified as a Type A language.

B.4.5 Catalan

Sentential negation in Catalan is expressed by *no* in preverbal position:

(130) *En Joan viu   a Barcelona.*
ART John live.3SG in Barcelona
'John lives in Barcelona.' (Hualde 1992: 154)

(131) *En Joan no viu   a Barcelona.*
ART John NEG live.3SG in Barcelona
'John does not live in Barcelona.' (Hualde 1992: 154)

Existential sentences have a special construction that consists of the verb *haver-hi* 'there is', literally 'there has', which is not one of the copulas *ser* or *estar*, as may be expected. These have received some attention as impersonal sentences (Hualde 1992: 81, Wheeler et al. 1999: 460). Hualde (1992: 81) notes that in example 132, there is optional agreement between the verb and the noun phrase, suggesting that *quatre gats* can also be analyzed as the subject (see also Wheeler et al. 1999: 460). While Hualde (1992) glosses *hi* as a locative element, Wheeler et al. (1999: 460) classify it as an adverbial clitic.

(132) *Hi   havia   / havien   quatre gats.*
       LOC have.IP.3SG   have.IP.3PL four   cat.PL
       'There were four cats.' (Hualde 1992: 81)

(133) *Hi   ha   tres possibilitats.*
       there have.PRS.3SG three possibility.PL
       'There are three possibilities.' (Wheeler et al. 1999: 460)

Similar to any other verb in Catalan, this construction is negated through a preverbal *no*:

(134) *No hi   podia   haver   hagut   cap altra manera*
       NEG there can.IP.3SG have.INF have.PTCP NEG other way
       d'-aconseguir-ho.
       of-achieve.INF-3SG
       'There could not have been any other way of achieving it.' (Wheeler et al. 1999: 460)

(135) *No hi   ha   cap examen on   no   enxampin*
       NEG there have.PRS.3SG NEG exam   where NEG catch.SUBJ.3PL
       algú   copiant.
       somebody copy.GER
       'There is no exam where they don't catch somebody copying.' (Wheeler et al. 1999: 422)

Catalan is therefore classified as a Type A language.

B.4.6 Latin

Latin has various negative particles (Greenough et al. 1903: 129) of which only *non* is relevant for the current purposes. The particle *ne* is also used for clause negation, but only in the subjunctive mood (Paul Hulsenboom p.c.).

(136) *Non recusabo quominus omnes mea scripta   legant.*
     NEG protest   that   all   my writings read
     'I will not object to all men reading my writings.' Roby (1862: 145)

The copula *sum* is used for most nonverbal predicates, including existentials, and these are negated using *non* as it is in any other clause:

(137) *Feles ferae   sunt.*
     cat.PL wild.PL be.3PL
     'There are wild cats.' (Paul Hulsenboom, p.c.)

(138) *Feles ferae   non sunt.*
     cat.PL wild.PL NEG be.3PL
     'There are no wild cats.' (Paul Hulsenboom, p.c.)

Since Latin uses the standard negation marker to negate existential predicates, we classify it as Type A.

B.5 Germanic

All Germanic languages are classified as Type A~B, see article.

B.5.1 English

In English, one of the negators that is used for existential predications is the negative quantifier *no*:

(139) *There are no tame zebras.*

The standard negator *not* can be used when the pivot is quantified:

(140)   a. *There are not many tame zebras.*
       b. *There aren't any tame zebras.*

B.5.2 German

In German, the preferred negator for existential predications is the negative quantifier *kein*, while the standard negator is *nicht*. Existential constructions are introduced by the fixed expression *es gibt*, with the neutral third person singular pronoun *es* followed by the third person form of the verb *geben* 'to give'. This is functionally equivalent to the English *there is/are*. The use of the copula *sein* 'to be' is not allowed in existential constructions, and it triggers context-bound and situational readings, most commonly locative.

(141) *Es gibt kein-e   Lehrer.*
       it give NEG.QUANT-PL teacher.PL
       'There are no teachers.' (Anne-Maria Fehn, p.c.)

(142) *Tom ist   (nicht) glücklich.*
       Tom be.PRS.3SG (NEG)   happy
       'Tom is (not) happy.' (Anne-Maria Fehn, p.c.)

However, the standard negator *nicht* can be used when the pivot is quantified:

(143) *Es gibt nicht viele   Kuchen.*
       it give NEG   many   cakes
       'There are not many cakes.' (Anne-Maria Fehn, p.c.)

The negative quantifier can also be used for certain types of non-existential negation, including the first example of truly standard negation:

(144) *Ludwig mag kein-e   Film-e.*
       Ludwig likes NEG.Q-PL movie-PL
       'Ludwig does not like movies.' (Anne-Maria Fehn, p.c.)

(145) *Ronald ist kein   Lehrer, er ist Doktor.*
       Ronald is NEG.QUANT teacher he is doctor
       'Ronald is not a teacher, he is a doctor.' (Anne-Maria Fehn, p.c.)

(146) *Klara hat kein   Auto.*
       Klara has NEG.QUANT car
       'Klara does not have a car.' (Anne-Maria Fehn, p.c.)

(147) *Da   sind kein-e   Wildkatz-en im   Garten.*
       there are NEG.QUANT-PL wild.cat-PL in.DEF garden
       'There are no wild cats in the garden.' (Anne-Maria Fehn, p.c.)

The negative quantifier seems to be used in a greater range of constructions than its counterparts in Dutch and English. We cannot further consider whether it is taking over standard negation.

B.5.3 Dutch

In Dutch, the preferred negator for existential predications is the negative quantifier *geen*:

(148)   *Er   zijn geen   taxis.*
         there are NEG.QUANT taxis
         'There are no taxis.' (own data)

However, the standard negator *niet* can be used when the pivot is quantified:

(149)   *Er   zijn niet veel   taxis.*
         there are NEG many taxis
         'There are not many taxis.' (own data)

B.5.4 Western Frisian

The most common negator in Western Frisian is *net* 'not' (Tiersma 1999: 102–103):

(150)   *ik wit   net oftsto   wol   taliten   wurdst*
         1SG know NEG whether indeed admit.INF become
         'I don't know whether you will be admitted.' (Tiersma 1999: 91)

The determiner *gjin* 'no', nevertheless, is used in many non-verbal predicates, including existentials and possessives:

(151)   *Der   binne gjin wylde katten.*
         there be   no   wild   cat.PL
         'There are no wild cats.' (Eric Hoekstra, p.c.)

(152)   *Hy   hat   gjin fyts.*
         3SG.M have no   bike
         'He has no bicycle.' (Tiersma 1999: 102)

As in many other Germanic languages, it is possible to use the standard negator when the pivot is quantified:

(153)   *Der   binne net folle   wylde katten*
         there be   NEG many wild   cat.PL
         'There are not many wild cats.' (Eric Hoekstra, p.c.)

Hence, we classify Western Frisian as Type A~B.

B.5.5 Eastern Frisian

Not to be confused as a close relative of Western Frisian, Eastern Frisian is a Low German variety. It behaves similar to Standard German and the other Germanic languages, but there appears to be a wider range of contexts in which the determiner *kien* 'no' can be used. The standard negator is *neet* 'not':

(154) *Marie singt   neet.*
       Marie sing.3SG NEG
       'Mary does not sing.' (Temmo Bosse, p.c.)

For negative existential predicates, the determiner *kien* 'no' is used in combination with *geven* 'to give' or *wesen* 'to be':

(155) *Dat gifft   kien wille Katten.*
       EXPL give.3PL no   wild cat.PL
       'There are no wild cats.' (Temmo Bosse, p.c.)

(156) *Daar bünd   kien wille Katten.*
       there be.3PL no   wild cat.PL
       'There are no wild cats.' (Temmo Bosse, p.c.)

The standard negator *neet* 'not' can be used when a quantifier is present:

(157) *Daar bünd / Dat gifft   neet mennig wille Katten.*
       there be.3PL EXPL give.3PL NEG many   wild cat.PL
       'There are not many wild cats.' (Temmo Bosse, p.c.)

Due to this split in usage, we classify Eastern Frisian as Type A~B.

B.5.6 Swedish

In Swedish, the preferred negator for existential predications is the negative quantifier *ingen* (Bordal 2017). The verb most frequently used to express existence is *finns* (Bordal 2017: 9).

(158) *Det finns ingen ost   i kylskap-et.*
       it   be.at any   cheese in fridge-DET
       'There is no cheese in the fridge.' (Veselinova 2013: 115)

However, the standard negator *inte* can also be used:

(159) *Det finns inte ost   i kylskap-et.*
       it   be.at NEG cheese in fridge-DEF
       'There isn't any cheese in the fridge.' (Veselinova 2013: 115)

Bordal (2017) is a corpus study that aims to describe the choice between the usage of the negative quantifier/negative indefinite pronoun versus standard negation. Reference grammars of Swedish recommend using the standard negator *inte*, but Bordal (2017: 15ff) demonstrates that there is a major preference for *ingen*. The reason for this preference is semantic; negation using *ingen* is absolute, and the existence of the pivot nominal is negated. In contrast, negation using *inte* and an indefinite pronoun suggests an absence of the pivot nominal rather than non-existence, and hence it is dispreferred (Bordal 2017: 21–22). See also Veselinova (2013: 114–115) for earlier comments on Swedish negative existentials.

B.5.7 Norwegian

In Norwegian, the negator for existential predications can be the standard negator *ikke*:

(160) *Anton er ikke her, han er i   byen.*
       Anton is NEG here he   is in town
       'Anton is not here, he is in town.' (Benedicte Haraldstad Frøstad, p.c.)

(161) *Det   finnes ikke ville katter.*
       there are   NEG wild cats
       'There are no wild cats.' (Benedicte Haraldstad Frøstad, p.c.)

However, the negative quantifier can also be used:

(162) *Det   fantes ingen   erstatning.*
       there was   NEG.QUANT replacement
       'There was no substitute.' (Benedicte Haraldstad Frøstad, p.c.)

It is also possible to use the negative quantifier in combination with *finnes*, but this is ambiguous with the following two interpretations:

(163) *Det   finnes ingen   ville katte.*
       there are   NEG.QUANT wild cats
       1. 'There are no wild cats. (anywhere, they don't exist)'
       2. 'There are no wild cats. (here right now/in this room/etc.)' (Benedicte Haraldstad Frøstad, p.c.)

B.5.8 Danish

In Danish, the negator for existential predications can be the standard negator
ikke:

(164) *Peter læser ikke bogen.*
Peter reads NEG book.DEF
'Peter does not read the book.' (Bjarne Ørnes, p.c.)

(165) *Der   findes ikke vilde katte.*
there are   NEG wild cats
'There are no wild cats.' (Bjarne Ørnes, p.c.)

The verb *at findes* 'to exist' is used with all the existential constructions that per-
tain to situations that are a certain way in the world at large; it can be contrasted
to the use of *være* 'to be', which is used in more specific contexts:

(166) *Der   er   vilde katte i haven   i   aften.*
there are wild cats   in garden.DEF this evening
'Tonight there are wild cats in the garden.' (Bjarne Ørnes, p.c.)

The standard negator *ikke* has to be used with any quantifier that is not *nogen*
'any':

(167) *Der   findes ikke mange vilde katte.*
there are   NEG many   wild cats
'There are not many wild cats.' (Bjarne Ørnes, p.c.)

But otherwise, the negative quantifier *ingen* is interchangable with the standard
negator *ikke + nogen* 'any'. The difference between the two is stylistic, where
the second is more frequent, especially in spoken language, and the first is more
formal and used in written language:

(168) *Der   findes ingen vilde katte.*
there are   no   wild cats
'There are no wild cats.' (Bjarne Ørnes, p.c.)

(169) *Der   findes ikke nogen vilde katte.*
there are   NEG any   wild cats
'There are no wild cats.' (Bjarne Ørnes, p.c.)

B.5.9 Icelandic

The most common negator in Icelandic is *ekki* 'not':

(170) *Þjóðin   lét **ekki** blekkjast   af þessum Bretaþægu   stjórnvöldum*
       nation.DEF let NEG   deceive.PST by this   Britain.friendly government
       okkar.
       our
       'The nation didn't let itself be deceived by this Britain-friendly
       government of ours.' (Wood 2012: 286)

However, locative, existential, and possessive clauses make use of another nega-
tor, *enginn* 'nobody, none', which inflects for number, case, and gender:

(171) *Ég hef   **enga** frétt.*
       1SG have none story
       'I have no news, I have nothing new.' (Bjarnason 1998: 62)

(172) *Það   var **enginn** maður þar.*
       INDF.SBJV be nobody man   there
       'There was nobody (no man) there.' (Einarsson 1949: 123)

(173) *Það   eru   **engir** villikettir.*
       INDF.SBJV be.PL none wild.cat.PL
       'There are no wild cats.' (Elísabet Eir Cortes, p.c.)

Other than *enginn* 'nobody, none', the standard negator *ekki* 'not' can also be
used:

(174) *Það   eru   **ekki** alltaf jólin.*
       INDF.SBJV be.PL none always Christmas
       'It's not always Christmas.' (expression)

The preferences for these negators require further investigation. At present, we
classify Icelandic as a Type A~B language.

B.6 Celtic

B.6.1 Breton

Breton has a double negator, *ne … ket*, which is located on both sides of the verb:

(175)   ***Ne*** *ro*   ***ket*** *al laeron*   *a*   *laezh da zen.*
      NEG give.PRS NEG the robber.PL PREP milk to anyone
      'The robbers give no-one any milk.' (Press 1986: 126)

When the copula *bezañ* 'to be' (Press 1986: 144) is negated, it takes one of a set of special (contracted?) forms (Press 1986: 152), as is evident in the pair of sentences below:

(176)   *Ur c'helenner eo Tom.*
      ART teacher   COP Tom
      'Tom is a teacher.' (Marianna Donnart, p.c.)

(177)   ***N'eo***   ***ket*** *ur c'helenner, ur medesin eo Tom*
      NEG+COP NEG ART teacher   ART doctor COP Tom
      'Tom is not a teacher, he is a doctor.' (Marianna Donnart, p.c.)

This special form of the copula is shared by negative locatives and negative existentials:

(178)   *Un draonienn **a***   ***zo*** *du-hont.*
      ART valley   VERB.PRT COP to-there
      'There's the/a valley over there.' (Press 1986: 154)

(179)   *An draonienn **n'emañ***   ***ket*** *du-hont.*
      ART valley   NEG+COP NEG to-there
      'There's no valley over there.' (Press 1986: 155)

(180)   *Kizhier gouez **a***   ***zo.***
      cat.PL   wild   VERB.PRT COP.PRS
      'There are wild cats.' (Marianna Donnart, p.c.)

(181)   ***N'eus***   ***ket*** *kizhier gouez.*
      NEG+COP NEG cat.PL   wild
      'There are no wild cats.' (Marianna Donnart, p.c.)

Nonetheless, in the past tense, there is no special form of the copula for negation (see paper) and we therefore classify Breton as Type A~B.

B.6.2 Welsh

Welsh uses the negator *ddim* for negation:

(182) *Ddaru   ni   °**ddim** gweld y   ffilm neithiwr.*
AUX.PST we   **NEG**   see.VN DEF.ART film last.night
'We didn't see the film last night.' (King 2003: 190)

Existential sentences are formed by using the copula *bod* 'to be' (see King 2003: 142ff):

(183) *Mae   cathod gwyllt yn   bod.*
be.PRS.3SG cats   wild   PROF be.INF
'There are wild cats.' (David Willis, p.c.)

(184) *Dydy/dyw   cathod gwyllt **ddim** yn   bod.*
NEG.be.PRS.3SG cats   wild   **NEG** PROG be.INF
'There are no wild cats.' (David Willis, p.c.)

In the negated existential sentence, the first instance of the copula *bod*, which functions as an auxiliary (see King 2003: 142ff) also has a negated form. This also occurs in other negated sentences in the same tense:

(185) *Mae-'r   cwrw 'ma-'n   °gryf.*
be.PRS.3SG-ART beer   this-PROG strong
'This beer is strong.' (King 2003: 146)

(186) *Dydy-'r   cwrw 'ma °ddim yn   °gryf.*
be.NEG.PRS.3SG-ART beer   this NEG   PROG strong
'This beer is not strong.' (King 2003: 146)

Hence, existential negation functions similar to standard negation, and Welsh belongs to type A. See Willis (2013) for more information on the historical development of these and other negation strategies in Breton and Welsh.

B.6.3 Irish

Standard negation in Irish is achieved by placing a negative particle, *ní*, in front of the verb, which causes lenition if the initial consonant of the verb can be lenited (Stenson 2008: 86):

(187) *Glanann sí a   seomra.*
clean.PRS she POSS room
'She doesn't clean her room.' Stenson (2008: 86)

(188) ***Ní gh***lanann *Caitríona a seomra.*
     NEG clean   Caitríona POSS room
     'Caitríona doesn't clean her room.' Stenson (2008: 86)

For the sake of simplicity, only the negative particle that is used with finite verb forms is mentioned here, but there are more of these types of particles, distinguishing a) polarity, b) interrogation, c) non-past vs past and d) non-relative versus relative. The same applies for the copula and substantive verb below (see Stenson 1981: 93).

For the analysis of existential negation, two verbs are relevant. Irish has both a copula, with the present form *is* (negative form *ní*), and a substantive verb with the imperative form *bí* (present punctual *tá*, negative form *níl*) (Stenson 1981: 94). The former is used for essential or inherent qualities, while the latter is used for more temporal qualities, relating to matters such as existence, location and possession. The negative form of the copula, *ní*, should be considered formally distinct from the negative particle *ní*, as the former does not cause consonant lenition.

Copula usage for "essential" predicates is as follows:

(189) *Is múinteoir é.*
     COP teacher   him
     'He's a teacher.' (Stenson 1981: 132)

(190) ***Ní*** *múintoir é.*
     NEG+COP teacher   him
     'He isn't a teacher.' (Stenson 1981: 132)

Substantive verb *taĕ* or *niĕl* usage for locative predicates:

(191) *Tá sé anseo.*
     COP he here
     'He is here.' (Cormac Anderson, p.c.)

(192) ***Níl*** *sé anseo, tá sé sa^L bhaile.*
     COP+NEG he here   COP he in.the town
     'He is not here, he is in town.' (Cormac Anderson, p.c.)

Substantive verb usage for existential predicates is the following:

(193) *Tá   cait   fiáin ann.*
       COP cat.PL wild in.3SG.M
       'There are wild cats.' (Cormac Anderson, p.c.)

(194) **Níl**   *cait   fiáin ann.*
       COP+NEG cat.PL wild in.3SG.M
       'There are no wild cats.' (Cormac Anderson, p.c.)

Whether or not existential predicates are negative, they are expressed by a particular copular form, often referred to as the substantive verb. The word *ann* in the existential predicates is the third person singular masculine form of the preposition *i* 'in', and it has a similar meaning to the English 'there' (see Stenson 2008: 11). As the locus of predication can be specified for person and number, we can refer to it as an existential preposition 'in'.

We classify Irish as Type B, despite the construction being not unique to negative existentials, but it is certainly different from standard negation.

B.6.4 Old Irish

Old Irish has a verbal negator *ni*, which is a particle that attaches to the beginning of the verb:

(195) *can-aid   máire*
       sing-PRS-3SG Mary
       'Mary sings.' (Cormac Anderson, p.c.)

(196) **ni**-*cain   máire*
       NEG-sing.PRS.3SG Mary
       'Mary does not sing.' (Cormac Anderson, p.c.)

The substantive verb *a:taat* behaves like a normal verb (McCone 2005: 40).

(197) *a:taat   da n-orpe*
       COP.PRS.3PL two inheritance.PL
       'there are/exist two inheritances' (McCone 2005: 40)

It can be used for locatives (in example (199), at- is a verbal particle meaning 'at'):

(198) **ni**-*ta   Cormac sund, at-ta   in-sind chathr-aig*
       NEG-COP.PRS.3SG Cormac here, at-COP.PRS.3SG in-ART city-DAT.SG
       'Cormac is not here, he is in town.' (Cormac Anderson, p.c.)

(199) *at-taat*   *fíad-chait*   *in-sind gurt*
at-COP.PRS.3PL wild-cat.NOM.PL in-ART garden.DAT.SG
'There are wild cats in the garden.' (Cormac Anderson, p.c.)

(200) ***ni**-taat*   *fíad-chait*   *in-sind gurt*
NEG-COP.PRS.3PL wild-cat.NOM.PL in-ART garden.DAT.SG
'There are no wild cats in the garden.' (Cormac Anderson, p.c.)

The substantive verb can also be used for existential predicates. The form *and* below is identical in composition and meaning to the Modern Irish *ann*.

(201) *at-taat*   *fíad-chait*   *and*
at-COP.PRS.3PL wild-cat.NOM.PL in.3SG.N
'There are wild cats.' (Cormac Anderson, p.c.)

(202) ***ni**-taat*   *fíad-chait*   *and*
NEG-COP.PRS.3PL wild-cat.NOM.PL in.3SG.N
'There are no wild cats.' (Cormac Anderson, p.c.)

As we can consider the substantive verb to be equivalent to any normal verb, no formal distinction is made between standard negation and existential negation. Old Irish can therefore be classified as Type A.

As an aside, the same might apply for predicates that take the copula rather than the substantive verb, including adjectives and nouns (McCone 2005: 39).

(203) *is*   *fer*   *hard Find*
COP.PRS.3SG man.NOM.SG tall   Find
'Find is tall.' (Cormac Anderson, p.c.)

(204) ***ni***   *fer*   *hard Find*
NEG.COP.PRS.POS.3SG man.NOM.3SG tall   Find
'Find is not tall.' (Cormac Anderson, p.c.)

The negative copula *ni* might be considered to be *ni-ø*, where *ni* is the standard negator, and the copula has a zero form.

B.6.5 Scottish Gaelic

The negators of Scottish Gaelic are the preverbal particles *cha(n)* and *nach*. The following example illustrates both of them in a double negative construction:

(205) *cha chreid   mi nach   eil   iad gu math*
       NEG believe.INDF 1SG NEG.COMP be.PRS 3PL well
       'I believe they are well.' (Lit. I don't believe that they are not well.)
       (Lamb 2001: 61)

As in Irish and Old Irish, Scottish Gaelic has two verbs that are relevant to construct non-verbal predicates: the "substantive" verb *tha* and the defective copula *is* (Lamb 2001: 65). The form *tha* is the independent present form of the verb *bi* 'to be', which is often used as an auxiliary with a verbal noun (Lamb 2001: 54). The sentence below illustrates both the independent present form *tha* and the dependent present form *eil* (varies according to dialect, register and grammatical context for the forms *bheil*, *beil*, *eil*, *'l*):

(206) *chan eil   Màiri cho bradach agus a   tha   Seumas*
       NEG be.PRS.DEP Mary as   thievish and REL be.PRS James
       'Mary isn't as thievish as James is.' (Lamb 2001: 42)

The dependent form of approximately 10 irregular verbs, including *bi* 'to be', is used when the verb is preceded by what are referred to as pre-verbal particles or sentence class markers, including the clausal negator *cha(n)* (*cha* appears before consonant-initial words, *chan* before vowel-initial words) (Lamb 2001: 48–50).

The copula *is* is used for predicate nominals (Lamb 2001: 66–67), while the substantive verb *tha* is used for predicate adjectives, locatives, possession and existentials (Lamb 2001: 67–69).

(207) *Tha   cait   fhiathaich anns a'   ghàradh.*
       be.PRS cat.PL wild   in   ART.DEF garden
       'There are some wild cats in the garden.' (William Lamb, p.c.)

(208) *Chan eil   cait   fhiathaich anns a'   ghàradh (ann / idir).*
       NEG be.PRS.DEP cat.PL wild   in   ART.DEF garden (at.all / at.all)
       'There aren't any wild cats in the garden.' (William Lamb, p.c.)

(209) *Tha   cait   fhiathaich ann.*
       be.PRS cat.PL wild   there
       'There are wild cats.' (William Lamb p.c.)

(210) *Chan eil   cait   fhiathaich (idir)   ann.*
       NEG be.PRS.DEP cat.PL wild   (at.all) there
       'There are no wild cats.' (William Lamb, p.c.)

The function of *idir* and *ann* in the current context is to emphasize negation. However, *ann* can be interpreted as a preposition, which is similar to the *ann* found in Irish. It is obligatory in (209) and (210) where it has the same function as English *there*, and is optional in (208). The adverb *idir* serves the same function of emphasizing (208).

While the form of the negative existential, [*chan eil …*], does not feature the non-negative form of the substantive, *tha*, this is a consequence of the special dependent forms that certain verbs take, including *bi*/*tha* but also *abair* 'say' and *rach* 'go'. Hence, negative existentials are not formed by a construction that is different from standard negation and Scottish Gaelic can be classified as Type A.

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Chapter 8

The negative existential cycle in Moksha Mordvin: From a negative existential into a negative auxiliary

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Moksha (Mordvin, Uralic) has a complex negation system with several negative markers. I examine two of these markers: the negative existential *aš* (~ *ajaš*) and the past tense negative auxiliary *aš-*. This auxiliary is generally assumed to have developed when the negative existential *aš* acquired the additional function of an auxiliary. This study demonstrates that the negative existential cycle provides a framework to understand the development of the negative existential into a negative auxiliary; the negative existential entered the verbal domain as the short answer 'no' and was fused with the older negative auxiliary *iź-*, which continues to be used as an alternative to *aš-*. This study is based on the analysis of corpus data: First, to clarify their relationship in the contemporary language, the different functions of the negative existential are introduced. Second, the competing paradigms of the two negative auxiliaries *aš-* and *iź-* are investigated.

1 Introduction

Moksha and its closest sister language, Erzya, form the Mordvin branch of the Uralic language family. The Proto-Mordvin period began in approximately 1500 BCE and this period was preceded by a protolanguage that was common to the Mordvin, Finnic, and Saami languages. The division of Proto-Mordvin into Moksha and Erzya probably began around the eighth century CE (Bartens 1999: 13–15; Keresztes 2011: 13–14).

The Mordvin languages are spoken in Russia, with less than half of Mordvins living in the autonomous Republic of Mordovia, which is situated in the middle course of the Volga. The remaining Mordvins reside in the surrounding provinces of the Russian Federation as well as in the neighboring republics of Chuvashia and Tatarstan. According to the latest census of the Russian Federation in 2010, there are approximately 806,000[1] ethnic Mordvins. Of these, 431,600 were reported to have mastered either Erzya or Moksha, although no reliable data is available on their native languages. However, it is estimated that around a third of the speakers speak Moksha, while two-thirds speak Erzya. The number of speakers of both languages are declining, as Russian is replacing them, especially among the younger generations.

The negation system of both Mordvin languages is known to be complex. Both languages have different types of negative markers and their distribution is determined by factors such as the type of clause, type of predicate, tense, and mood. The system can be explained predominantly by innovations that occurred during the Proto-Mordvin period and are therefore shared by both sister languages (Bartens 1999: 140–144; Hamari 2007, 2011, 2013, Hamari & Aasmäe 2015). However, the situation is somewhat different for the negative existentials. The Moksha and Erzya languages have a special negator for existential and possessive clauses (Moksha *aš*[2] ~ *ajaš* and Erzya *araś*), but the origin of both negators is uncertain and no common source can be reconstructed for these markers. In addition, only Moksha *aš* has further developed the function of a past tense negative auxiliary. Moksha also has an older past tense negative auxiliary *iź-* (dialectally *əź-*), which has the etymological cognate *eź-* in Erzya.

The purpose of this paper is to examine the development of the Moksha existential marker *aš* into a past tense negative auxiliary *aš-* of verbal clauses from the viewpoint of the negative existential cycle originally described by Croft (1991). I will begin the examination in §3 by providing an overview of the negative constructions reconstructed for Proto-Uralic and of what is known about the development of negative existentials in Uralic languages. In §4, I will introduce the negation system of Moksha to clarify the functions of the different negative markers. In §5, I examine the several functions of the Moksha negative existential *aš*.

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[1]According to some sources, the number is 744,237 (for example, see Hamari & Aasmäe 2015). However, this smaller figure does not include the persons who declared themselves either as Erzyas or Mokshas rather than Mordvins (cf. http://www.gks.ru/free_doc/new_site/perepis2010/croc/Documents/Vol4/pub-04-01.pdf).

[2]For purposes of this study, the negative existential is referred to as *aš*, while the negative auxiliary with the same stem is marked with a hyphen, that is, *aš-*. This is because the negative existential can appear without further inflection, whereas the negative auxiliary always has a personal ending following the stem.

In §6, in order to determine the current situation for the negative existential cycle in the language, I will analyze the contemporary uses of the negative auxiliary *aš-* and its relationship to the auxiliary *iź-*. The development of the negative existential *aš* and the auxiliary *aš-* is discussed in §7 and conclusions are presented in §8.

I previously studied the functions of the Moksha negative markers – including the existential *aš* and auxiliary *aš-* in Hamari (2007, 2013). However, this paper examines their mutual relationship in the contemporary language in the light of new data, and discusses the historical development of the functions in closer detail than in the earlier studies.

The data for the present study were gathered from an electronic corpus referred to as MokshEr. The corpus is administered by The Research Unit for Volgaic Languages at the University of Turku. This corpus includes literary texts, such as journals and newspapers from the years 2002–2005, as well as works of fiction. The size of the corpus is approximately 485,000 words. The references to MokshEr indicate the locations of the data within the corpus itself.

2 Transcription

The Uralic Phonetic Alphabet (also known as the Finno-Ugric transcription system) was adopted to transcribe Moksha (see Sovijärvi & Peltola 1977). It is important to mention that Moksha has a reduced vowel /ə/ that usually occurs in an unstressed position, predominantly in non-initial syllables but also in unstressed initial syllables. This reduced vowel has both velar and palatal allophones. The Uralic Phonetic Alphabet represents the palatal allophone as /ə/ and the velar as /ə̑/. In the transcriptions of the present study, the Moksha reduced vowel is indicated by a /ə/ but its velar and palatal allophones are not differentiated.

3 Negative markers in the Uralic languages

Two negative markers are reconstructed in the Uralic protolanguage: the negative auxiliary **e-* in standard negation, and the imperative auxiliary **elV-*, which may have been some type of extension or a supplementary form of **e-* (Janhunen 1982: 37). According to Janhunen, the negative auxiliaries probably carried the marking of the subject person, tense, and mood, while the lexical verb had a fixed form with a suffix in **-k*[3]. This suffix was most likely an original nominalizer of

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[3]In Uralic linguistics, the form of the lexical verb that occurs in a negative auxiliary is often referred to as a connegative.

verbs, and it was also used to mark the imperative of the second person singular in the affirmative. Honti (1997: 241–242) argues that as the form of the lexical verb in standard negation was originally based on a nominalized verb form, the negative constructions could have originated as copula clauses with a negative copula verb, as in *e-m mene-k* 'I am not a goer' (*-m* '1SG', *mene-* 'go') > 'I don't go, I am not going'. Most, but not all, contemporary Uralic languages have retained at least some traces of the original negative markers *e-* and/or *elV-* in their negation of verbal clauses; in many languages, these are still negative auxiliaries with conjugational properties but in others, some form of the auxiliary may have developed into a generalized negative particle (for example, see Comrie 1981).

In addition to the negators of verbal clauses, many Uralic languages have separate negative markers for non-verbal clauses. Veselinova (2015) examines the special negators in the Uralic languages that negate stative predications, that is, predications without a verbal predicate. Veselinova concludes that this language family has three types of special negators: (i) *Negative existentials* are most typically used to negate existence, location, and possession; (ii) *Ascriptive negators* are used to negate predications in identity, class inclusion, and property attribution; and (iii) *General stative negators* negate all stative predications. The special negators that most widely occur in the Uralic languages are negative existentials and while ascriptive negators are also rather common, general stative negators only occur in Udmurt and in (now extinct) Kamas. None of these negators, however, descend from Proto-Uralic but instead must be regarded as more recent innovations (see Veselinova 2015: 567–568, 570–571, 572 for references to diachronic information). As a consequence, if special negators of stative predications existed in Proto-Uralic, no evidence can be found in the daughter languages to suggest this.

The development of negative existentials that occur in contemporary Uralic languages differ. Veselinova (2015: 566–567) concludes that a negative existential can be (a) a fusion of a negative marker and a (nominalized) form of a copula or copula-like verb, (b) a specified function of a particular form of the original negative verb, (c) a reanalysis of a word with an inherently negative content, or (d) a borrowing. Furthermore, as Bartens (1996, in passim) observes, both the affirmative and negative existentials of Uralic languages typically have nominal properties. As I later demonstrate in §7.1, mechanisms that are usually suggested as explanations for the development of the Moksha negative existential are the fusion of a negative marker and a copula-like verb or reanalysis.

4 Negation in Moksha

The complexity of the Mordvin negation systems and their development have been addressed in several studies (for example, see Bartens 1999: 140–144; Keresztes 2011: 87–87; Hamari 2007, 2011, 2013), and I will therefore not provide a full account of negation in Moksha. The formation of verbal negation in Moksha is summarized in Table 1. Moksha is a pro-drop language and the person and number of the subject are expressed in the verbal suffixes. This means that the examples of both negative and affirmative constructions in Table 1 can be considered full clauses.

As can be seen in Table 1, the negation patterns of the present and second past tense indicative as well as the conditional and conditional-conjunctive moods are symmetric: The only difference between the affirmative and negative verb forms is the existence of the negative particle before the inflected predicate verb in the negative construction. The negation of all other verb forms is asymmetric: These forms are negated by negative auxiliaries followed by an invariant connegative form of the lexical verb, which means that the marking of finiteness appears in the negative marker instead of the lexical verb. (see Miestamo (2005) for a

Table 1: The negation of verbal clauses in Moksha

Tense	Negator	Example of a negative clause	Corresponding affirmative clause
Present tense Indicative	particle *af*	*af mor-an* NEG sing-PRS.1SG 'I do not sing/ I am not singing/ I will not sing'	*mor-an* sing-PRS.1SG 'I sing/ I am singing/ I will sing'
First past tense	a) auxiliary *iź-*	*iź-əń mora* NEG.PST-PST.1SG sing.CNG 'I did not sing'	*mora-ń* sing-PST.1SG 'I sang'
	b) auxiliary *aš-*	*aš-əń mora* NEG.PST-PST.1SG sing.CNG 'I did not sing'	
Second past tense	particle *af*	*af mora-ľəń* NEG sing-PST.1SG 'I didn't use to sing'	*mora-ľəń* sing-PST.1SG 'I used to sing'

	Negator	Example of a negative clause	Corresponding affirmative clause
Imperative			
	auxiliary *ťa-*	*ťa-t mora* NEG.IMP-2SG sing.CNG 'do not sing'	*mora-k* sing-IMP.2SG 'sing'
Optative			
	auxiliary *ťa*	*ťa-z-at mora* NEG.IMP-OPT-2SG sing.CNG 'may you not sing'	*mora-z-at* sing-OPT-2SG 'may you sing'
Desiderative			
	auxiliary *afəľ-*	*afəľə-ksəľəń mora* NEG-DES.1SG sing.CNG 'I didn't intend to sing'	*mora-ľəksəľəń* sing-DES.1SG 'I intended to sing'
Conjunctive			
	auxiliary *afəľ-*	*afəľəńmora* NEG.CONJ.1SG sing.CNG 'if I did not sing'	*mora-ľəń* sing-CONJ.1SG 'if I sang'
Conditional			
	particle *af*	*af mora-ńďäŕa-n* NEG sing-COND-1SG 'if I do not sing'	*mora-ńďäŕa-n* sing-COND-1SG 'if I sing'
Conditional-conjunctive			
	particle *af*	*af mora-ńďäŕaľəń* NEG sing-COND.CONJ.1SG 'if I hadn't sung'	*mora-ńďäŕaľəń* sing-COND.CONJ.1SG 'if I had sung'

detailed study on symmetric and asymmetric negation). However, the negative auxiliary *afəľ-* of the desiderative and the conjunctive moods has most likely developed from a fusion of the particle *af* and the inflected form of the verb *uľə-* 'be' (for example, see Bartens 1999: 142).

In addition to the negative markers presented in Table 1, there are two negative suffixes: *-fťäŕa-/-fťäŕä-* of the conditional and *-fťäŕaľə-/-fťäŕäľə-* of the conditional-conjunctive mood (Klemm 1934: 392–393; Paasonen 1953: 012; Pall 1957: 221; Bartens 1999: 141). These suffixes are fusions of the negative particle *af* and the following auxiliary verbs: **ťäŕa-* 'try' for the conditional and both **ťäŕa-* 'try' and *uľə-* 'be' for the conditional-conjunctive (Bartens 1999: 129–137). The auxil-

iary constructions followed the connegatives of the lexical verbs and finally agglutinated with them. However, the suffixes are extremely rare in contemporary Moksha, which prefers constructions formed on the particle *af* and the affirmative form of the lexical verb.

According to the classification proposed by Veselinova (2015), Moksha belongs to the group of the Uralic languages that have a negative existential but no other special negators for non-verbal (or stative) predications. The negative particle *af* that occurs in verbal negation is used to negate ascriptive clauses, while the negative existential *aš* (with a longer variant *ajaš*) occurs in existential and possessive clauses. In locative clauses, both are possible but with certain semantic differences (see §5.3). Table 2 illustrates the functions of the different negators of the non-verbal predications in the present tense and Table 3 lists the functions of the negators in the past tense.

Finally, the negative particle *apak* is used to negate participles and converbs. As both affirmative and negative participles can occur in the predicate position, *apak* could also be regarded as a negator of non-verbal clauses. In this analysis, however, I will exclude these clauses because they are not prototypical stative expressions as the predicates have a verbal basis.

Before moving on to the functions of *aš* and *ajaš*, it is necessary to clarify how predication is expressed in Moksha. As presented in Table 2 and Table 3, the non-verbal predicates of ascriptive and locative clauses take the verbal personal suffixes and agree with the subject person and number. In the present tense, these suffixes are the normal personal endings, except for the third persons. The third person singular of non-verbal predication has no personal ending, whereas the third person plural takes the plural suffix *-t/-ť* of nouns instead of that of verbs.[4]

The situation for the past tense is slightly more complicated. In verbal predication, there are two past tense categories. The first past tense which is unmarked (for instance, *mora-ń* 'I sang') and the second past tense which has a habitual or progressive reading (such as *mora-ľəń* 'I used to sing, I was singing'). However, non-verbal predication only takes the second past tense, and in this case, it is unmarked, that is, it is not habitual or progressive but a neutral past tense (for example, *odə-ľəń* 'I was young').[5] Table 4 presents the tense suffixes that are possible for non-verbal as compared to verbal predicates of Moksha.

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[4]However, historically, the verbal suffixes of the third person forms can be traced to participial forms with the participle ending in *-i*. So the verb forms are, in fact, original nominal predicates with no person marking in the singular, and the plural ending in *-t/-ť* in the plural.

[5]Historically, the second past tense endings are personal forms of the verb *uľə-* 'be' that were attached to the predicate; this *uľə-* 'be' was conjugated in the first past tense.

Table 2: The negation of non-verbal clauses in the present tense in Moksha.

Negator Example of a negative clause	Corresponding affirmative clause
Ascriptive	
af (mon) *af* *od-an* 1SG NEG young-PRS.1SG 'I am not young'	(mon) *od-an* 1SG young-PRS.1SG 'I am young'
Existential	
a) *aš* *pakśa-sa aš traktər* field-INE NEG tractor 'there is no tractor in the field' b) *ajaš* *pakśa-sa ajaš traktər* field-INE NEG tractor 'there is no tractor in the field'	*pakśa-sa uľ-i traktər* field-INE be-PRS.3SG tractor 'there is a tractor in the field'
Possessive	
a) *aš* *moń aš ćora-źä* 1SG.GEN NEG son-POSS.1SG.SG 'I don't have a son' b) *ajaš* *moń ajaš ćora-źä* 1SG.GEN NEG son-POSS.1SG.SG 'I don't have a son'	*moń uľ-i ćora-źä* 1SG.GEN be-PRS.3SG son-POSS.1SG.SG 'I have a son'
Locative	
a) *af* (mon) *af* *pakśa-s-an* 1SG NEG field-INE-PRS.1SG 'I am not in the field' b) *aš* (mon) *aš-an pakśa-sa* 1SG NEG-PRS.1SG field-INE 'I am not in the field'	(mon) *pakśa-s-an* 1SG field-INE-PRS.1SG 'I am in the field'

Table 3: The negation of non-verbal clauses in the past tense in Moksha.

Negator	Example of a negative clause	Corresponding affirmative clause
Ascriptive		
af	*(mon) af odə-ľəń* 1SG NEG young-PST.1SG	*(mon) odə-ľəń* 1SG young-PST.1SG
	'I was not young'	'I was young'
Existential		
aš	*pakśa-sa ašə-ľ traktər* field-INE NEG-PST.3SG tractor	*pakśa-sa uľ-ś traktər* field-INE be-PST.3SG tractor
	'there was no tractor in the field'	'there was a tractor in the field'
Possessive		
aš	*moń ašə-ľ ćora-źä* 1SG.GEN NEG-PST.3SG son-POSS.1SG.SG	*moń uľ-ś ćora-źä* 1SG.GEN be-PST.3SG son-POSS.1SG.SG
	I didn't have a son'	'I had a son'
Locative		
a) *af*	*(mon) af pakśa-sə-ľəń* 1SG NEG field-INE-PST.1SG	
	'I was not in the field'	*(mon) pakśa-sə-ľəń* 1SG field-INE-PST.1SG
b) *aš*	*(mon) ašə-ľəń pakśa-sa* 1SG NEG-PST.1SG field-INE	'I was in the field'
	'I was not in the field'	

Table 4: Non-verbal predication versus verbal predication in Moksha.

	Non-verbal predication of *od* 'young'		Verbal predication of *mora-* 'sing'		
	Present	Second past	Present	First past	Second past
1SG	*od-an*	*odə-ľəń*	*mor-an*	*mora-ń*	*mora-ľəń*
2SG	*od-at*	*odə-ľəť*	*mor-at*	*mora-ť*	*mora-ľəť*
3SG	*od*	*odə-ľ*	*mora-j*	*mora-ś*	*mora-ľ*
1PL	*od-tama*	*odə-ľəmä*	*mora-tama*	*mora-mä*	*mora-ľəmä*
2PL	*od-tada*	*odə-ľədä*	*mora-tada*	*mora-dä*	*mora-ľədä*
3PL	*od-t*	*odə-ʟt*	*mora-j*	*mora-śť*	*mora-ʟt*

5 The negative existential *aš*

5.1 The general properties of *aš*

If we adopt the definition suggested by Veselinova (2013: 118–139), we can state that Moksha *aš* behaves similarly to a prototypical negative existential. First, as will be demonstrated, it is difficult to pinpoint a specific word class that *aš* belongs to because it has different inflectional properties in different functions. Second, *aš* is used to negate existence, possession and location, which are the most common contexts for negative existentials cross-linguistically. Third, *aš* appears as a pro-sentence and a short word for 'no', which are also frequent uses of negative existentials. Fourth, in existential and possessive clauses, *aš* replaces the affirmative existential instead of negating it.

In the following, the functional and semantic properties of *aš* are considered in the order that reflects the order of frequency of functions found in the negative existentials cross-linguistically (Veselinova 2013: 118–119). In §5.2, existential and possessive clauses are examined together, as their prototypical negative constructions resemble each other, while locative clauses are analyzed separately in §5.3 due to their different predicational properties. §5.4 presents the use of *aš* as a negative pro-sentence and a negative interjection. Finally, the occurrences of *aš* as a noun are considered in §5.5.

5.2 Existential and possessive clauses

As the constructions of possessive clauses are rather similar to existential clauses, both clause types will be addressed in this section. I will first consider the affirmative constructions of these clause types and then focus on the negative forms.

In Moksha existential clauses, the subject of the sentence is in the indefinite nominative form and, being indefinite, it is necessarily in the third person (see Table 2). While the existential sentence may express the plain existence of the referent without further specifications of a location, a locative phrase can be present, as in (1). In the affirmative, the existential predicate is the third person form of the verb 'be', that is, (sg.) *uľi*, (pl.) *uľijť* (for more details, see Hamari 2007: 47–52).

(1) *Kuχńa-sa   pľita uľ-i,   no son ušńə-ma penga-sa.*
     kitchen-INE stove be-PRS.3SG but 3SG warn-INF firewood-INE
     'There is a stove in the kitchen, but it must be warmed with firewood.'
     [MokshEr-V.3/2002/16.txt]

In the possessive clauses, the possessor is often referred to by a noun or a pronoun in the genitive case.[6] Furthermore, the subject has a possessive suffix that refers to the possessor; as the possessor can be concluded from the possessive suffix, the noun or pronoun can be dropped, as in (2). In the affirmative, the forms of the verb 'be' are used as predicates. (see, for example, Hamari 2007: 52–57).

(2) *Kudo-ńkä   uľ-i,   žuvata-ńkä   uľ-iｊť.*
house-POSS.1PL be-PRS.3SG cattle-POSS.1PL be-PRS.3PL
'We have a house, we have cattle.' [MokshEr-V.3/Moksha/2005/22.txt]

Both *aš* and *ajaš* can occur in the negation of existential and possessive clauses, although *aš* is far more common than *ajaš*. Moreover, according to Nadezhda Kabaeva (p.c.), *ajaš* is regarded as a colloquial form, whereas *aš* is in general use both in the spoken and in the literary language. However, as both variants appeared in the written data of the present study, I will consider both of them.

In the present tense, *aš* and *ajaš* can be described as invariant negative predicates because neither of them agrees with a plural subject – unlike the affirmative predicate based on the verb 'be' that occurs in (1) and (2). Table 2 shows the present tense existential and possessive clauses with a singular subject, whereas in (3) and (4), a plural subject occurs.

(3) **Ajaš** *traktəʀ-t, šariｊť   aš.*
NEG   tractor-PL wheel.PL NEG
'There are no tractors, there are no wheels.' [MokshEr-V.3/Varia/C/1]

(4) a. *Moń   **aš**   ćora-ńä.*
1SG.GEN NEG son-POSS.1SG.PL
'I don't have sons.' [Nadezhda Kabaeva, p.c.]

b. *Moń   **ajaš** ćora-ńä.*
1SG.GEN NEG son-POSS.1SG.PL
'I don't have sons.' [Nadezhda Kabaeva, p.c.]

The plurality of the subject in existential clauses (such as 3) is expressed by the plural suffix *-t / -ť*, whereas plurality in possessive clauses (such as 4) is indicated by the possessive suffix, which is attached to the possessee. This only applies when the possessor is one of the singular persons, as these persons have separate possessive suffixes for a singular and a plural possessee (such as *ćora-źä*

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[6]However, the plural personal pronouns are ambiguous as to nominative and genitive case (for example, *śiń* is both 3PL.NOM and 3PL.GEN).

son-POSS.1SG.SG 'my son'; *ćora-ńä* son-POSS.1SG.PL 'my sons'), as in (4a) and (4b), respectively. When the possessor is in the plural, the number of the subject is not explicitly marked in the possessive suffixes (such as *ćora-ńkä* son-POSS.1.PL.SG/ PL 'our son; our sons'). (5) and (6) exemplify the latter instances of possessive clauses; in both clauses, the possessive suffix is ambiguous with regards to the number of the possessee and that number must be deduced from the context.

(5)   *Da   śiń   pulə-snə-vək   **aš**.*
         and 3PL.GEN tail-POSS.3PL.SG/PL-CLT NEG
         'And they do not have tails either.' [MokshEr-V.3/Moksha/2002/9]

(6)   *Lomaťť,   kaľi **ajaš** ťiń-gä   śeľmə-ńťä?*
         person.PL Q   NEG 2PL.GEN-CLT eye-POSS.2PL.SG/PL
         'People, don't either of you have eyes?' [MokshEr-V.3/Mokshen_pravda/ 2004-9/28]

The main difference between the variants *aš* and *ajaš* is that only *aš* can be used in the past tense. Moreover, unlike the present tense in which *aš* is invariant, it is inflected in the past tense; *aš* acquires the suffix of the second past tense as well as the agreement marker of the plural subject (sg. *ašə-ľ* (NEG-PST.3SG); pl. *ašə-ʟť* (NEG-PST.3PL)). Examples of past tense existential and possessive clauses with a plural subject are presented in (7) and (8).

(7)   *pakśa-sa **ašə-ʟť**   traktər-t*
         field-INE NEG-PST.3PL tractor-PL
         'there were no tractors in the field' [Nadezhda Kabaeva, p.c.]

(8)   *moń   **ašə-ʟť**   ćora-ńä*
         1SG.GEN NEG-PST.3PL son-POSS.1SG.PL
         'I didn't have sons.' [Nadezhda Kabaeva, p.c.]

It should be noted that the negative existentials *aš* and *ajaš* are remarkably different from their affirmative equivalent in terms of their inflectional properties. As was illustrated in Tables 2 and 3, as well as in examples (1) and (2), existential and possessive clauses in Moksha have an affirmative existential *uľi* that is actually the third person singular form of the verb *uľə-* 'be'. The affirmative existential agrees with the number of the subject. In the present tense, the regular verbal third person plural form *uľijť* is used with a plural subject, whereas in the past tense, the first past tense forms (sg.) *uľś*, and (pl.) *uľśť* are used – a tense

form that is neither possible with a non-verbal predicate nor with the negative existential *aš*.

Finally, a special type of modal construction occurs where *aš* appears before an interrogative pronoun. These constructions denote the impossibility to perform certain actions. These actions are expressed by verbs that usually take the infinitive, as in (9).[7]

(9) **Aš** *kosa,*   **aš** *məźarda kńiga-ńä   luvə-ms,* […]
     NEG where.INE NEG when   book-DIM read-INF
     'There is no place and time to read a book.' (Lit. "There is no where, there is no when to read a book.") [MokshEr-V.3/Moksha/2002/16]

No detailed analysis has thus far been published on these constructions, but it seems that they should be regarded as a type of a functional extension of existential clauses. This is because they have affirmative equivalents that are formed with the regular existential predicate, the verb 'be', as in (10).

(10) *T'äńi uľ-i   koda azə-ms: jumaʄksə-ńkä oćuftə-ľť.*
      now be-PRS.3SG how say-INF loss-POSS.1PL big.PL-PST.3PL
      'Now it is possible to say: Our losses were great.' (Lit. "Now there is how to say […]") [MokshEr-V.3/Moksha/2003-9-10/11]

5.3 Locative clauses

Moksha locative clauses require a locative phrase, as it is the predicate of the clause. The locative phrase acquires the endings of non-verbal predication, that is, the present or the second past tense as well as the marking of the subject person. The clause does not contain a copula or any other predicate item besides the locative phrase. Another feature that differentiates existential and locative expressions is that the subject of the locative clause is definite. This subject is either a personal pronoun or a noun with the definite nominative case suffix; nonetheless, the subject can be omitted because it is expressed in the personal ending of the locative predicate, as in (11):

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[7]It is important to emphasize that these are not cases of negative indefinite pronouns. The indefinite pronouns in Moksha are formed by attaching the suffix *-vək/-gək ~ -ga/-gä ~ -ka/-kä* to an interrogative pronoun. The resulting indefinite pronouns can be used either in an affirmative or a negative context (for example, *kosa* 'where': *kosəvək* 'somewhere, (not) anywhere, nowhere').

(11)   *Nona*   *ši-ťńəń*   *Mosku-sə-ľəń.*
       previous day-GEN.DEF.PL Moscow-INE-PST.1SG
       'During the previous days I was in Moscow.' [MokshEr-V.3/Moksha/
       2002/19]

Negative clauses take either the particle *af* or the existential *aš*. When the particle *af* occurs, the predication is the same as in the affirmative equivalent: The conjugated locative phrase is the predicate of the clause, as in (12).

(12)   *Mäľaft-k,*   *ćora-j,*   *af* *kud-s-at*   */ Ćebäŕńasta*
       remember-IMP.2SG>3SG boy-VOC NEG house-INE-PRS.2SG   nicely
       pačkəťť!
       arrive.IMP.2SG
       'Remember, my son, you are not at home / Go [to the house] nicely!'
       [MokshEr-V.3/Varia/B/9]

Tables 2 and 3 present locative clauses that may also be negated by *aš*. The semantic difference between the functions of the ascriptive negator *af* and the existential negator *aš* is identical to what appears between the functions of ascriptive and existential negators in Erzya (see Hamari 2007: 91); the ascriptive *af* implies that the referent is not at the location expressed in the clause but somewhere else, whereas *aš* negates the existence of the referent in the location without the assumption that the referent might be somewhere else (Nadezhda Kabaeva, p.c.). The difference can be captured by comparing examples (12) and (13). In (12) (retrieved from a poem), the listener is asked to approach a house respectfully because he is not at his own home but at a house that belongs to someone else. As a consequence, *af* is used in negation. By contrast, the listener in example (13) is asked whether or not he is home; the listener responds with a negative answer without implying further as to his location. For this reason, *aš* appears.

(13)   *– Vańa, ton kud-s-at?*   *– **Aš-an***   *kud-sa,*   *–*
          Vańa 2SG house-INE-PRS.2SG   NEG-PRS.1SG house-INE
       atveča-ś   *šä.*
       answer-PST.3SG it
       '–Vańa, are you at home? – I am not at home, – he answered.'
       [MokshEr-V.3/Moksha/2002/32]

In addition to the semantic difference, locative clauses that are negated with *af* and *aš* also display a morphosyntactic difference. With the ascriptive negator *af,*

the locative phrase remains the non-verbal predicate, as the negative marker is an invariant particle. Nonetheless, the existential negator *aš* acquires the personal endings of the non-verbal conjugation in locative clauses – a property that this negator does not exhibit in existential clauses. As a consequence, *aš* could be regarded as the negative copula of the locative clause. The conjugations of *aš* in the present tense and in the second past tense are presented in Table 5 and I provide examples of the uses of the forms in (13) in the present tense and in (14) in the past tense, respectively.

Table 5: The non-verbal conjugation of *aš* in locative clauses.

	Present tense	Past tense
1sg	*ašan*	*ašəľəń*
2sg	*ašat*	*ašəľəť*
3sg	*aš*	*ašəľ*
1pl	*ašətama*	*ašəľəmä*
2pl	*ašətada*	*ašəľədä*
3pl	*ašət*	*ašəʟť*

(14) *Mon Mosku-sa   vesťə-vək **ašə-ľəń**.*
      1sg Moscow-ine once-clt neg-pst.1sg
      'I have never been to Moscow.' [MokshEr-V.3/Moksha/2003-11-12/10]

It is important to note that the conjugational properties of *aš* in locative clauses are non-verbal rather than verbal: In the present tense, the third person singular has no personal ending, whereas in the third person plural, the plural suffix of nouns (instead of verbs) occurs. Resembling non-verbal predicates, the second past tense is an unmarked tense in negative locative expressions, which means that it does not have the habitual or progressive meaning that it conveys in verbal clauses.

The longer variant *ajaš* is not used in locative clauses that occur in written texts and consequently, it does not have non-verbal conjugation. When used colloquially, however, *ajaš*, sometimes acquires the same personal suffixes as *aš* (Nadezhda Kabaeva, p.c.).

5.4 Negative pro-sentences

It is typologically common for negative existentials to become negative pro-sentences and to be used as general words for 'no' (Veselinova 2013: 127). In this

respect, the Moksha *aš* is no exception. However, as I established in Hamari (2007: 270–271), the invariant Moksha negative markers, *af* and *aš* (~ *ajaš*), are in complementary distribution as negative pro-sentences or one-word answers. The particle *af* is selected for present tense verbal clauses or ascriptive clauses, whereas *aš* (~ *ajaš*) is normally used in contexts related to the existential, possessive and locative clauses. In addition, the variant *aš* is used in verbal clauses of the first past tense.

To illustrate the distribution of *af* and *aš*, (15) and (16) are cited as examples of the *af* used as a one-word answer to questions or commands involving a verbal clause in the present tense. In (17), on the other hand, *af* is used in a context of an ascriptive clause.

(15)   – *Suva-k,   požalsta, päľə-n!   Aďä!   – **Af**, **af**,*
       enter-IMP.2SG please   side-POSS.1SG come.on   NEG NEG

      suv-śə-ms   aš   məžarda, – atkaza-ś   Koročkov.
      enter-FREQ-INF NEG when   refuse-PST.3SG Koročkov

      '– Please, enter my place! Come on! – No, no, there is no time to enter, – Koročkov refused.' MokshEr-V.3/Moksha/2002/3]

(16)   – *S'kamə-t van-at?   – **Af**, tosa   taga uľ-iJ́   śťiŕ-ńa-t,*
       alone-2SG watch-PRS.2SG   NEG there yet   be-PRS.3PL girl-DIM-PL

      śiń-gä   van-iJ́...
      3PL-CLT watch-PRS.3PL

      '– Are you watching [the calves] alone? – No, there are other girls; they are also watching.' [MokshEr-V.3/Varia/A/9]

(17)   – *Toń   ťäďä-ćä-vək,   aľä-ćä-vək   Käšalə-ńńə-t?*
       2SG.GEN mother-POSS.2SG-CLT father-POSS.2SG-CLT Käšal-GEN.EXT-PL

      – ***Af**.*
      NEG

      '–Are your mother and father residents of Käšal? – No.' [MokshEr-V.3/V.1/Moksha/Moksha/2003-5-6/23.txt]

The existential *aš* (~ *ajaš*) is in turn found in existential, possessive, and locative contexts (Hamari 2007: 270), as shown in (18), (19), and (20), respectively.

(18)   – *Aš   mezevək, što-li? – **Ajaš**, ot'sä-j!*
       NEG anything Q-Q   NEG uncle-VOC

      'Isn't there anything? – No, my uncle!' [Hamari 2007: 270 < Paasonen & Ravila 1947: 888]

(19) *Uľ-ijť   ľi ťiń   kodaməvək prava-ńťä?   Śembə-ń ťiń*
be-PRS.3PL Q 2PL.GEN any.kind.of right-POSS.2PL all-GEN 2PL.GEN
*inksənt   aťveč-an: **aš.***
for.POSS.2PL answer-PRS.1SG NEG
'Do you have rights of any kind? I shall answer for all of you: no.'
[Hamari 2007: 270 < Mokša 1/1998: 126]

(20) *"– maksim·-tsä   kut-sa?"   – "**ajaš**, **ajaš**, [...]"*
    Maksim-POSS.2SG house-INESS NEG   NEG
'– Is your Maksim at home? – No, no, [...]' [Hamari 2007: 270 < Paasonen
& Ravila 1947: 894]

Finally, (21) and (22) are examples of the invariant *aš* when it is used as a negative
one-word answer to questions in the first past tense.

(21) *– Estəńbeŕä Pŕavijə-ń   ćentra-ś   lotka-ś   vano-mda*
    since.then intelligent-GEN centre-NOM.DEF.SG stop-PST.3SG look-INF
Moda-ť   meľgä? [...]
Earth-GEN.DEF.SG after

    *– **Aš**, ašəź   lotka.*
    NEG NEG.PST.3SG stop.CNG
'– Since then, the Centre of intelligence stopped watching over the Earth?
– No, it did not stop.' [MokshEr-V.3/Moksha/2002/26]

(22) *– A   toń   koj-sə-t,   meźəvək iź   ľiśə?*
    but 2SG.GEN way-INESS-POSS.2SG nothing NEG.PST.3SG go.CNG

    *– Moń   koj-sə-n,   **aš**, [...]*
    1SG.GEN way-INESS-POSS.1SG NEG
'– But in your opinion, nothing happened? – In my opinion, no, [...]'
[MokshEr-V.3/Moksha/2003-5-6/23]

It is perfectly logical to use *aš* in answers to questions in which existential,
possessive or locative clauses appear (18–20), because *aš* is the regular negator
of these clause types. In contrast, the usage of *aš* in verbal clauses in the past
tense, such as (21–22), is not as logical because in verbal clauses, *aš* is always
conjugated according to the subject (and possibly object) person of the clause. A
possible explanation for this could be that the use of *aš* as a one-word answer
preceded the development of this marker into a negative auxiliary (Hamari 2007:
272–275). The invariant existential *aš* may have developed analogically to how

the one-word negation *af* was used as a short word for 'no'. After all, the use of the invariant *af* was restricted to the present and the second past tense as well as to certain moods. This may explain why speakers began to use the invariant *aš* elsewhere – including the first past tense where other option would have been a conjugated form of the negative auxiliary *iź-*. As argued in §7, the use of the invariant *aš* in one-word negations might be the key in understanding how the negative auxiliary *aš-* developed from the negative existential.

5.5 *Aš* as a noun

The variant *aš* (but not *ajaš*) can be used as a lexical noun in its basic form or with further derivation (Hamari 2007: 268–270). Without derivation, *aš* has meanings such as 'nothingness' or 'poverty'. It can also be inflected in different cases: In (23), *aš* is followed by the inessive case suffix. However, a more extensive study would be needed to clarify the extent of its inflectional potential.

(23) […] *kodama*   ***aš-sa***   *eŕä-ijť*   *lomattńä!*
           what.kind.of poverty-ɪɴᴇss live-ᴘʀs.3ᴘʟ person.ɴᴏᴍ.ᴅᴇғ.ᴘʟ
           'what poverty people live in!' [MokshEr-V.3/Moksha/2002/29]

The derivational suffixes that can be attached to *aš* are *-ši*, which is used for abstract nouns (*ašši* 'extreme poverty, need') and the diminutive suffix *-ńä* (*ašəńä* 'non-existence, smallness') (for example, MWb: 73). Furthermore, as observed by Bartens (1996: 79), *ašu* 'poor' is derived from *aš* with the derivational suffix *-u* of adjectives (24). This adjective is used as a base for further derivations, such as *ašuši* 'poverty' and *ašusta* 'poorly; in a poor way'.

(24) […] ***ašu*** *mokšə-ń*   *śemjä-sta*   *ćora-ńä-ś*   *ara-ś*
           poor Moksha-ɢᴇɴ family-ᴇʟᴀᴛ boy-ᴅɪᴍ-ɴᴏᴍ.ᴅᴇғ.sɢ become-ᴘsᴛ.3sɢ
           soda-f   *pisaťeľ-ks,*   […]
           know-ᴘsᴛ.ᴘᴛᴄᴘ author-ᴛʀᴀ
           'the little boy from a poor Moksha family became a well-know author'
           [MokshEr-V.3/Moksha/2003-8/8]

Finally, the form *ašajka* 'not a thing, nothing' (MRV: 51) is also derived from *aš* (25); it has another diminutive suffix, *-(aj)ka*.

(25) *Čast-ška-da*   *meľä moʟ-ť*   *toza*   *i*   *muj-at*   *– **ašajka**.*
           hour-ᴄᴍᴘʀ-ᴀʙʟ after go-ᴘsᴛ.2sɢ there.ɪʟʟ and find-ᴘʀs.2sɢ   not.a.thing
           'After about an hour you went there and find – not a thing.'
           [MokshEr-V.3/Moksha/2003-11-12/3]

According to Bartens (1996: in passim), it is rather common for existentials to have nominal uses in the Uralic languages; negative existentials often convey meanings such as 'nothingness', 'smallness', and 'poverty', while affirmative existentials denote 'wealth', 'riches', and 'property'.

6 The past tense auxiliary *aš-*

6.1 Comparison of the existential *aš* and auxiliary *aš-*

The Moksha auxiliary *aš-* is synchronically separate from the negative existential *aš*, as they have different functions, semantics, and conjugational properties. The auxiliary *aš-* is used for the negation in verbal clauses in the first past tense. When *aš-* occurs in intransitive clauses as well as in transitive clauses with an indefinite object, it acquires the personal endings of the subjective conjugation. In other words, *aš-* agrees with the subject person and number as presented in Table 6. It can also take a personal ending of the objective conjugation in which case it additionally agrees with the definite object person and number (see the paradigms in Tables 9 and 10 of §6.2). The lexical verb of the negative construction in the past tense takes the connegative form. In Moksha, the connegative form is the stem of the verb.[8]

Table 6: The subjective conjugation of the first past tense negative forms of *mora-* 'sing'

1sg	*ašəń*	*mora*
2sg	*ašəť*	*mora*
3sg	*ašəź*	*mora*
1pl	*ašəmä*	*mora*
2pl	*ašəďä*	*mora*
3pl	*ašəśť*	*mora*

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[8]There is some alternation in the stem vowel of the connegative. If the stem ends in *-a* or the palatal allophone *-ə* of the reduced vowel the stem vowel is usually preserved (for example, *pala-* 'kiss': *ašəń pala* 'I did not kiss'; *peľə-* 'be afraid': *ašəń peľə* 'I was not afraid'). However, the stem-final *-ə* is sometimes omitted and the stem ends in a consonant (as in *ašəń peľ* 'I was not afraid'). On the other hand, when the stem vowel is the velar allophone *-ə̂* of the reduced vowel, it becomes *-a* (as in *udə̂-* 'sleep': *ašəń uda* 'I did not sleep'). Finally, if the stem ends in the passive-reflexive derivational suffix *-və-*, the vowel is omitted (for example, *atkazavə-* refuse, decline': *ašəń atkazav* 'I did not refuse').

Examples (26) and (27) illustrate the use of the negative auxiliary *aš-* in the first past tense. In (26), the negative auxiliary takes the personal ending of the subjective conjugation, whereas (27) has the objective conjugation.

(26) *Mes* **ašəťʼ**   *kočka*   *ľijä*   *ki?*
      why NEG.PST.2SG choose.CNG another road
      'Why didn't you choose another road?' [MokshEr-V.3/Moksha/
      2003-5-6/23]

(27) *Son* **ašəďäź**   **kada***!*
      3SG NEG.PST.3SG>2PL leave.CNG
      'He did not leave you!' [MokshEr-V.3/Moksha/2005/33]

To summarize, the auxiliary *aš-* and existential *aš* exhibit the following clausal differences in negation: (1) The auxiliary *aš-* only appears in verbal clauses in connection with the connegative form of the lexical verb, whereas the use of the existential *aš* is restricted to existential, possessive, and locative non-verbal clauses in clausal negation; (2) The auxiliary *aš-* is only used in the past tense, whereas the existential *aš* expresses tense through its conjugation; (3) The auxiliary *aš-* is conjugated according to the past tense of either the subjective or the objective conjugation of verbs, whereas the existential *aš* is invariant in existential and possessive clauses in the present tense but acquires the suffixes of non-verbal predicates in the past tense as well as both present and past tenses of the locative clauses with definite subjects. Table 7 presents the functions and inflectional properties of the auxiliary and the existential in more detail.

6.2 A comparison of the auxiliaries *iź-* and *aš-*

Before discussing how the negative element *aš* received its new function, it is necessary to examine the relationship between the negative auxiliary *aš-* and its functional synonym, *iź-*. As was noted previously in this analysis, the auxiliary *iź-* must have had this function before *aš-*. Grammatical descriptions of Moksha generally consider these two auxiliaries synonymous and completely interchangeable. Nevertheless, to my knowledge, their relationship has not been examined in detail. If *aš-* were to compete or even gradually substitute *iź-* in past tense negative clauses, this would be reflected in their contemporary uses. In this section, I explore their relationship by analyzing the frequency of their occurrence in the MokshEr corpus.

The conjugational properties of the auxiliary *iź-* are identical to those of *aš-*. Similar to *aš-*, the auxiliary *iź-* is conjugated according to both subjective and

Table 7: A comparison of the Moksha negative existential *aš* and the auxiliary *aš-*.

	Aš in existential and possessive clauses	*Aš* in locative clauses	Auxiliary *aš-*
1. Clausal function			
	Negative predicate of existential and possessive clauses.	Negative copula of locative clauses.	Negative auxiliary of a verbal clause.
2. Tense			
Present tense	Invariant: no overt tense marking.	Present tense personal suffixes of verbs, except in third person forms.	Not used in the present tense.
Past tense	Second past tense only.	Second past tense only.	First past tense only.
3. Subject encoding			
Present tense	Invariant: no encoding of the subject person or number.	Subject person and number encoded by verbal suffixes, except in the third person forms.	Not used in present tense.
Past tense	Encoding of a plural subject.	Subject person and number encoded by verbal suffixes of the second past tense.	Subject person and number encoded by verbal suffixes of the first past tense.
4. Objective conjugation			
	No objective conjugation.	No objective conjugation.	Both subjective and objective conjugation (object person and number encoded by verbal suffixes).

objective conjugations and the personal endings are the same (see Tables 8–10). The connegative form of the lexical verb is also the same for both auxiliaries.

Both *aš-* and *iź-* appear in written contemporary Moksha in all personal forms of the subjective and objective conjugations. In addition, there are no differences as to the types of verbs they can occur with. Their interchangeability is further evidenced by the fact that both auxiliaries can be used within a single text and even within a single sentence, as in (28) and (29). In fact, as these types of sentences are rather frequent, this suggests that the alternation of the auxiliaries is at least partly determined by stylistic factors. In other words, the purpose of this alternation is to avoid repetition when several negative constructions occur.

(28) *Da, viďə-nc*   *azə-ms, käľə-ń*
      yes truth-GEN.POSS.3SG.SG tell-INF language-GEN
      šačə-ma-kasə-ma-sa   *tuftaлńä,*   *məźar-s*
      be.born-NMLZ-grow-NMLZ-INESS reason.NOM.DEF.PL how.many-ILL
      kodamə-vək   *učonajə-ńďi lac-ŕäc*   ***ašəśť***   ***sodav,***
      what.kind.of-CLT scholar-DAT well-in.order NEG.PST.3PL be.known.CNG
      iśť   ***muv.***
      NEG.PST.3PL be.found.CNG
      'Yes, to tell the truth, the reasons of the evolution of language have so far not been well known, not been discovered by any scholar.' [MokshEr-V.3/Moksha/2003-x/1]

(29) *No karabəľ-ś*   ***ašəź***   ***kuлcənda, iź***   ***šarkśńə***
      but vessel-NOM.DEF.SG NEG.PST.3SG obey.CNG   NEG.PST.3SG turn.CNG
      af śej,   *af tov.*
      NEG here.LAT NEG there.LAT
      'But the vessel didn't obey, didn't turn this way or that way.'
      [MokshEr-V.3/Moksha/2002/26]

The frequency of usage can also clarify the relationship of *aš-* and *iź-*. The fundamental assumption of the negative existential cycle is that in the intermediate stage B > C, the younger verbal negator that has developed from a negative existential gradually substitutes the older verbal negator. If we assume that there is competition between *aš-* and *iź-*, it should be possible to capture the current state of that competition by determining whether one is more common than the other in contemporary language.

Table 8: The subjective conjugation of *aš-* and *iź-* in the MokshEr corpus.

	aš-			*iź-*			Total
1SG	*ašəń*	175	82%	*iźəń*	39	18%	214
2SG	*ašəť*	43	88%	*iźəť*	6	12%	49
3SG	*ašəź*	734	44%	*iź*	921	56%	1 655
1PL	*ašəmä*	29	76%	*iźəmä*	9	24%	38
2PL	*ašəďä*	10	100%	*iźəďä*	0	0%	10
3PL	*ašəśť*	202	45%	*iśť*	244	55%	446
							2 412

Table 8 summarizes the frequency of occurrence of *aš-* and *iź-* in the subjective conjugation in the MokshEr corpus. The table provides the number as well as the percentage of occurrence of each personal form. As can be seen, the auxiliary *aš-* most commonly occurs with first and second person subjects, whereas *iź-* is slightly more common with third person subjects. As a tentative hypothesis, it could therefore be proposed that the younger auxiliary *aš-* has substituted the original *iź-* in non-third person forms faster than in third person forms. A possible explanation for this is that the third person forms are more frequent than the others and may have resisted the change more persistently. After all, past tense auxiliaries occur most often when the subject is in the third person, with the singular being more frequent than the plural. The number of occurrences of *aš-* is not far behind *iź-* even in the third person forms, as *aš-* appears in almost half of all the constructions.

Indeed it can be argued that the number of the non-third person forms in this corpus is rather small and interpretations must therefore be made cautiously. This need for caution is even more essential when analyzing the relationship of *aš-* and *iź-* from the perspective of the objective conjugation. Table 9 presents the data of the past tense auxiliaries that occur with an object in the singular and Table 10 for those with a plural object. As the data are extremely scarce, the frequency of occurrences is displayed in terms of their number, not in percentages. As demonstrated by the data, the frequency of all forms of the objective conjugation is extremely low, except for the forms of the singular third person objects. Even so, there is a clear tendency for *aš-* to be more common than *iź-* throughout the paradigm. The only exception is the form with a third person plural subject and a first person plural object. This ratio, nonetheless, can be regarded as being

Table 9: Objective conjugations of *aš-* vs. *iź-* in the MokshEr corpus (singular object).

O →	1SG				2SG				3SG			
S ↓	*aš-*		*iź-*		*aš-*		*iź-*		*aš-*		*iź-*	
1SG	–		–		*ašiɟťəń*	1	*iźiɟťəń*	0	*ašińä*	74	*iźińä*	5
2SG	*ašəmajť*	3	*iźəmajť*	0	–		–		*ašiť*	35	*iźiť*	0
3SG	*ašəmań*	8	*iźəmań*	1	*ašəńźä*	0	*iźəńźä*	0	*ašəźä*	242	*iźəźä*	11
									~ *ašəź*	4		
1PL	–		–		*ašədäź*	1	*iźədäź*	0	*aš əśk*	25	*iźəśk*	3
2PL	*ašəmaśť*	1	*iźəmaśť*	0	–		–		*ašəśť*	5	*iźəśť*	0
3PL	*ašəmaź*	6	*iźəmaź*	1	*ašədäź*	1	*iźədäź*	0	*ašəź*	66	*iźəź*	4

Table 10: Objective conjugations of *aš-* vs. *iź-* in the MokshEr corpus (plural object).

O →	1PL				2PL				3PL			
S ↓	*aš-*		*iź-*		*aš-*		*iź-*		*aš-*		*iź-*	
1SG	–		–		*ašədäź*	0	*iźədäź*	0	*ašińä*	8	*iźińä*	1
2SG	*ašəmaśť*	1	*iźəmaśť*	0	–		–		*ašiť*	0	*iźiť*	0
3SG	*ašəmaź*	1	*iźəmaź*	1	*ašədäź*	1	*iźədäź*	0	*ašəźəń*	33	*iźəźəń*	2
1PL	–		–		*ašədäź*	0	*iźədäź*	0	*ašəśk*	2	*iźəśk*	0
2PL	*ašəmaśť*	0	*iźəmaśť*	0	–		–		*ašəśť*	4	*iźəśť*	0
3PL	*ašəmaź*	0	*iźəmaź*	1	*ašədäź*	1	*iźədäź*	0	*ašəź*	40	*iźəź*	0

unreliable, as only one example of *iź-* and no examples of *aš-* were discovered in this category.[9]

The frequencies of occurrence suggests there is in fact competition between the negative auxiliaries *aš-* and *iź-*. Even though the auxiliaries can be used interchangeably in the same contexts, *aš-* seems to be selected more often than *iź-*. This could indicate that a gradual substitution of the older auxiliary by the newer one – based on the negative existential – is in progress.

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[9]Note also that in the case of *aš-*, there are two possible endings for 3SG>3SG – one that is in accordance with the same form of *iź-* and another in which the final vowel has been dropped, making the form identical to that of 3PL>3SG and 3PL>3PL. (See Trosterud 1994 and Keresztes 1999 for more details on the objective conjugation in the Mordvin languages.)

7 The development of Moksha *aš* and *aš-*

7.1 The negative existential *aš*

I mentioned in the introduction that the origin of the Moksha *aš* is uncertain. The same applies to the negative existential *araś* that occurs in the closest sister language, Erzya. The etymology of these two negative markers has been discussed in detail in earlier literature (see Hamari 2007: 107–113, 2013: 477–479), which is why I provide only a short summary on the development of the Moksha *aš ~ ajaš*. As I observed previously, the Moksha *aš ~ ajaš* and the Erzya *araś* most likely do not share an etymological connection. This means that both existentials have probably developed after the split of Proto-Mordvin. There is also no positive evidence of an earlier negative existential in the protolanguage. Regarding the origin of the Moksha *aš ~ ajaš*, two hypotheses have been proposed:

1) According to Klemm (1934: 388), *aš* could have originated from a combination of the negative particle in **a* and the Moksha verb *ašč:ə- ~ aš:ə-* 'be, be situated' (~ Erzya *ašťe-* 'id.') that originally would have taken the connegative suffix in **-k* (**a-ašč:ə-k > *ašk > aš*). The longer variant *ajaš* developed from a form in which /j/ was introduced to prevent hiatus (**a-j-aš > ajaš*).

2) According to Bartens (1996: 79), *aš* could have originally been a noun with meanings such as 'non-existence' or 'poverty'. Bartens elaborates that the variant *ajaš* could have an emphasizing prefix *aj-*, which is also sometimes added to the negative particle *af* (> *ajaf*).

Klemm's assumption would fit the outline of the negative existential cycle proposed by Croft (1991), but its etymological explanation is questionable. The negative particle *a* and its variant *aj* that occurs in the front of a verb with a word-initial vowel are only attested in Erzya, while the Moksha equivalent of the Erzya *a* is *af*. In other words, I am more inclined to agree with Bartens, although the noun *aš* 'non-existence; poverty' also lacks etymology. Nonetheless, considering the non-verbal conjugation and the use of *aš* as a noun, it is justified to assume that *aš* was not originally a verb but a nominal item.

7.2 The negative auxiliary *aš-*

Theories on the origin of the Moksha past tense auxiliary *aš-* have always taken into account its relationship to the negative existential *aš*. The traditional view (originally presented by Szinnyei 1884: 148) is that the auxiliary developed when verbal conjugation was introduced to the negative existential marker. However,

there are both semantic and functional problems with the assumption that a negative marker used primarily with the existential present tense would begin to be used as a past tense negative auxiliary in verbal predicates without acquiring other functions as a negator of verbal clauses. In Hamari (2007: 275; 2013: 480), I argue that the auxiliary *aš-* may actually have originated as a combination of the existential *aš* and the older negative auxiliary *iź-*. Thus, the development of the auxiliary *aš-* would represent an instance of the negative existential cycle where the negative existential begins to be used in verbal negation as a reinforcement for the regular verbal negator (cf. Croft 1991: 10–11).

It has been suggested that the negative existential marker *aš* could have originally been attached to the older negative auxiliary *iź-* for emphasis (as in 1SG **aš + iźəń > *ašəźəń*[10], 2SG **aš + iźəť > *ašəźəť* etc.) (Hamari 2007: 273–275, 2013: 479–480). As the construction lost its emphatic force, it was analogically adapted to the conjugation of the auxiliary *iź-* by dropping the element *-əź-* (for example, 1SG **ašəźəń > *ašəń*, 2SG **ašəźəť > ašəť*). The element *-əź-* has nonetheless been preserved in the first and second person forms of the subjective conjugation in the dialect of the Kovylkino district; Ščemerova (1972: 178) observes that this dialect has forms containing the element *-əź-* which is absent from other dialects (Kovylkino: 1SG *ašəźəń* 'I did not', 2SG *ašəźəť* 'you did not'). These dialectal forms could be regarded as transparent relics of the fusion of the existential and the original past tense negative auxiliary.

Another important point is that although the first and second person forms as well as the third person plural form of the auxiliary *aš-* are the regular first past tense forms of lexical verbs (such as cf. 1SG PST *pala-ń* 'I kissed' ~ *ašə-ń* 'I did not'), the third person singular is irregular (cf. 3SG *pala-ś* '(s)he kissed' ~ *ašə-ź* '(s)he did not'). As the only verb that has a voiced palatalized sibilant as a third person singular marker is the negative auxiliary *iź-* (3SG *iź* '(s)he did not'), it can be argued that the fusion of the original existential and the auxiliary continues to be visible in the singular third- person form of the subjective conjugation of the auxiliary *aš-* (3SG *ašəź < * aš + iź*).

One question still remains: what were the circumstances that led to the agglutination of existential *aš* and the past tense negative auxiliary *iź-*? There are no traces of *aš* functioning to emphasize negation which, in my opinion, means that we could search for answers in the context of *aš* in the past tense meaning, that is, as a pro-sentence.

As discussed in §5.4, the Moksha invariant *aš* is used as a pro-sentence, as a one-word answer to a question when it contains a clause that is existential, pos-

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[10]In Moksha, vowels other than *a* and *ä* are generally reduced in non-initial syllables and this means that the change *i > ə* in the construction is fully plausible.

sessive or locative, but also when the question has a verbal predicate in the first past tense. This clause-initial position (30a) could have offered a possibility for an agglutination of the invariant *aš* and a following past tense auxiliary (30b), accompanied by the reduction of the vowel *i* in an unstressed position. The next step in this development would have been the agglutinated auxiliary form **aš-əź* adjusting to the conjugation of the older auxiliary *iź-*, and the disappearance of the element *-əź-* (30c). A final observation is that the invariant *aš* could also appear as a one-word answer with the new negative auxiliary *aš-* (30d). It is important to note that steps (30a), (30c), and (30d) are still possible in contemporary Moksha and even (30b) is possible in the Kovylkino dialect.

(30)   Question:

 – *mora-ť   aľi aš?*
   sing-PST.2SG or NEG
  'Did you sing or not?'

Answer:

a.   – *aš,   iźəń   mora.*
      NEG NEG.PST.1SG sing.CNG
      'No, I did not sing.'

      >

b.   – *aš-əźəń   mora*
      NEG-NEG.PST.1SG sing.CNG
      'I did not sing.'

      >

c.   – *ašəń   mora.*
      NEG.PST.1SG sing.CNG
      'I did not sing.'

      >

d.   – *aš,   ašəń   mora.*
      NEG NEG.PST.1SG sing.CNG
      'No, I did not sing.'

Veselinova (2013: 127–133) observes that the process of negative existentials developing into a pro-sentence and then into a standard negator has also been observed in other languages.

7.3 Discussion

Moksha could be regarded as a language in Stage B of the negative existential cycle proposed by in Croft (1991) because it has separate negative markers for verbal negation and for the negation of existential clauses. According to Croft, the negative existential marker may be found to function in ways that previously were characteristic of some other negative markers. Thus, the negative existential begins to be used even in the negation of verbal clauses, and in time, this existential displaces the original negative marker of verbal clauses. When this type of displacement occurs, the negative existential becomes the only negative marker for verbal and existential clauses, and thus the cycle reaches the third stage, stage C. Croft's hypothesis is that the transition from stage B to C can proceed in the following ways (Croft 1991: 9–11):

1. "the negative existential may compete with the ordinary verbal negator, sometimes being used instead of it"

2. "the negative existential can reinforce the (presumably older) regular verbal negator"

3. "[there is] only gradual substitution of the negative existential for the verbal negator in only part of the verbal grammatical system"

The Moksha negative existential is not necessarily the result of an older negative marker of verbal clauses fusing with a positive existential, but the negative existential could also originally be a noun. Yet the further development of the negative existential displays characteristics of the cyclic development described by Croft, as the existential has penetrated the sphere of verbal negation by becoming a negative auxiliary of past tense verbal predicates. All in all, there are evident traces of all three means that Croft described. Thus, due to the use of the Moksha negative existential as a pro-sentence, the existential became used to possibly reinforce the older verbal negator (2) and subsequently a new verbal negator arose. The new negator that was based on the existential began competing with the ordinary negator and became the most frequently chosen option (1). Finally, the new negator has not supplanted the entire negation system, but this form is only used in one part of the verbal grammatical system (3): to negate past tense verbs.

Etymological evidence suggests that the time span of the evolution of the Moksha negative existential and its development into a negative auxiliary spans approximately one thousand years. As there is no cognate for the Moksha negative

existential in the closest sister language, Erzya or in any other Uralic language, this negative existential cannot be dated beyond the division of Proto-Mordvin that began around the eighth century.

8 Conclusions

I have demonstrated that *aš* occurs in many negative constructions of Moksha and has varied inflectional properties in different clausal functions. It is invariant as a negative pro-sentence, and it is likewise invariant in present tense existential and possessive clauses, with the exception of taking the second past tense marker when necessary. In locative clauses *aš* is conjugated in the present and the second past tenses. As a noun, *aš* is subject to derivation and case inflection and finally, as a past tense negative auxiliary, *aš-* is exclusively conjugated in the first past tense and used only in verbal clauses.

There are many possible reasons for the negative existential *aš* developing different functions. It may have originally been a noun meaning 'non-existence; poverty' and acquired personal suffixes in the predicate position of non-verbal clauses, such as in existential and possessive expressions. It also became an invariant negative pro-sentence in contexts where the other one-word negator *af* could not appear. In this clause-initial position, *aš* may have agglutinated into the earlier negative auxiliary *iź-* and created its own past tense personal conjugation. Consequently, both *aš-* and *iź-* are used as past tense negative auxiliaries in contemporary Moksha. The higher frequency of *aš-* may indicate that it is gradually replacing the original auxiliary.

Finally, *aš* has a longer invariant form *ajaš* which is only found in present tense existential and possessive clauses as well as a negative word for 'no'. Similarly, the particle *af* has the variant *ajaf*, which suggests the prefix *aj-* was originally most probably an emphasizing element.

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ISO codes

Erzya: myv   Moksha: mdf

Abbreviations

1	first person	IMP	imperative mood	
2	secont person	INESS	inessive case	
3	third person	INF	infinitive	
ABL	ablative case	LAT	lative case	
CLT	clitic	NEG	negative	
CNG	connegative	NMLZ	nominalizer	
CMPR	comparative case	NOM	nominative case	
COND	conditional mood	OPT	optative mood	
CONJ	conjuctive	PL	plural	
DEF	definite	POSS	possessive suffix	
DES	desiderative mood	PRS	present	
DIM	diminutive	PST	past	
ELAT	elative case	PTCP	participle	
EXT	extension	Q	question marker	
FREQ	frequentative	SG	singular	
GEN	genitive	TRA	translative	
ILL	illative case	VOC	vocative	

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Chapter 9

Croft's Cycle in Mandarin and Cantonese throughout history and across varieties

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One of the oldest problems in Chinese linguistics is negation and currently there is no consensus on a theory for the distribution of negators. This article explores this issue from the perspective of Croft's Negative Existential Cycle (NEC) based on diachronic evidence and synchronic comparative data from four varieties of Chinese. The results show that the NEC is attested in Chinese throughout its history and across all varieties, and that different varieties can be positioned at different stages in the Cycle. The shared historical origin of the Beijing and Taiwan Mandarin *méi(yǒu)*, the Hong Kong Cantonese *mou5* and the Gaozhou Cantonese *mau5*, and their involvement in the NEC account for their semantic similarity in producing a non-existence reading as a standard negator. They also provide a new understanding of the nature of these negators and their present-day structural behaviour.

1 Introduction

Negation in Chinese, particularly Mandarin Chinese, has received considerable attention in the last half century. Researchers in the field are keenly interested in solving the puzzle regarding the distribution of two Mandarin negators *bù* 'not' and *méi(yǒu)* 'not (have)'. The mainstream understanding thus far is that *méi(yǒu)* is a special negator for perfective sentences because they refer to terminated or finished situations, while *bù* is a 'neutral/general' negator that applies to all other conditions as the 'elsewhere' strategy as suggested in Li & Thompson 1981. However, there is little consensus on the reasons for this division of

labour in Mandarin negation. This study offers a diachronic-comparative analysis of Chinese negation from the perspective of Croft's Negative Existential Cycle (NEC). I argue that the standard negation in Chinese has a strong connection to its negative existential construction as suggested in Croft's (1991) original proposal. Therefore, this analysis serves three purposes. Firstly, it provides a new understanding of the overall architecture of the Chinese negation system, where negators such as *méi(yǒu)* are not perfective negators but negators of existence. This conclusion is inspired by the NEC, which provides a model for the connection between standard negation and existential negation. Secondly, the diachronic study of Chinese negation offers further evidence for the attestation of the NEC as a diachronic model (see the work by Veselinova on Uralic, Slavonic and Polynesian languages). Based on the typological findings reported in Veselinova 2014, a system (such as Polynesian) may require as long as two thousand years to complete the entire NEC. For this reason, Chinese is a strong candidate for testing Croft's NEC on actual diachronic data owing to the long history and extensive documentation of the Chinese language. Thirdly, this analysis constitutes a comparative study on four Chinese varieties: Beijing Mandarin, Taiwan Mandarin, Hong Kong Cantonese, and Gaozhou Cantonese.[1] The latter is a scarcely documented and un(der)-studied Cantonese variety spoken in Maoming, a southwestern county in the Guangdong Province of China. The main objective of this analysis is to determine how the NEC can apply to various Chinese varieties and how different varieties display properties of different stages in the Cycle.[2]

The article proceeds as follows. §2 presents the key features of Chinese negation and §3 illustrates the relevance of the NEC to Chinese. Then §4 focuses on the situation in Mandarin by first introducing historical evidence that demonstrates the development in the expression of the negative existential from Old Chinese to Pre-modern Mandarin, and then accounts for the emergence of *méi (yǒu)* as the standard negator in present-day Mandarin, inlcuding Taiwan Mandarin. In §5, I examine the two Cantonese varieties and discuss the variation observed among the four Chinese varieties as well as the key implications of this comparative study. Finally, conclusions are presented in §6.

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[1]Glottocode from glottolog 3.0: Beijing Mandarin (Sino-Tibetan, Sinitic, [...] Northern Chinese, Mandarinic, Mandarin Chinese, Beijingic) [beij1234]

Taiwan Mandarin (Sino-Tibetan, Sinitic, [...] Northern Chinese, Mandarinic, Mandarin Chinese, Beijingic) [taib1240]

Hong Kong Cantonese (Sino-Tibetan, Sinitic, [...] Yue-Pinghua, Yue Chinese, Yuehai, Cantonese) [xian1255]

[2]All Mandarin examples have been romanised using Hanyu Pinyin, and all Cantonese examples with Jyutping. Tones are marked on the lexical items that are mentioned in the text and tables, but not in the examples.

2 Background and methodology

2.1 The Chinese negation puzzle

This section presents the background of standard negation in the Chinese language. Standard negation is defined here as the construction that applies to the most basic verbal declarative main clause to reverse the truth value of the proposition that the clause expresses (Miestamo 2005). The marker used to perform such function is known as a 'standard negator', such as 'does not' in *Lucy **does not** swim*. Modern Mandarin has two standard negators, *bù* 'not' and *méi(yǒu)* 'not (have)', and both appear between the subject and the verb. Their distributional properties can be illustrated as follows.

In a simple verbal declarative clause without aspect-marking (henceforth 'bare sentence', which is also referred to as a 'plain sentence' in Wang 1965) such as the clause in example (1a), the default negative form is constructed by inserting *bù* 'not' immediately preceding the verb (1b). This reverses the meaning of what the proposition in the affirmative claims. In this case, it denies that the speaker buys books. I will refer to the negative form of bare sentences as the 'bare negative', for the absence of overt aspect-marking or any type of adverbial modification.

(1)   Mandarin (Mandarinic, Sinitic)

    a.   我買書
        wo mai shu
        I   buy book
        'I buy books.'

    b.   我**不**買書
        *wo **bu** [mai shu]*
        I   **not** buy book
        'I do not buy books.'

The system becomes more complicated when aspect-marking is present. Examples (2–3) contain the negation pattern in Mandarin when the verb *mǎi* 'to buy' is marked with perfective and experiential aspect, respectively. The sentences (2b) and (3b) illustrate the unmarked strategy for negating the affirmative sentences in (2a) and (3a). In short, whenever the affirmative sentence is aspectually marked either as perfective or experiential, *méiyǒu* is used instead of *bù* (see examples 2d and 3c). One important difference between the negation of perfective sentences and that of experiential sentences is the co-occurrence constraint

on the negator and the aspect marker – *méiyǒu* can co-occur with the experiential marker *guo* (3b), but not with the perfective marker *le*, as shown in example (2c).

(2) Mandarin negation and perfective aspect

    a. 我買了書
       *wo mai-**le** shu*
       I   buy-PFV book
       'I bought books.'

    b. 我**沒有**買書
       *wo **mei-you** mai shu*
       I   **not-have** buy book
       'I did not buy books.'

    c. 我**沒有**買了書
       wo **mei-you mai-**le** shu*
       I   **not-have** buy-PFV book
       Intended: 'I did not buy books.'

    d. 我**不**買了書
       wo **bu mai-**le** shu*
       I   **not** buy-PFV book
       Intended: 'I did not buy books.'

(3) Mandarin negation and experiential aspect

    a. 我買**過**書
       *wo mai-**guo** shu*
       I   buy-EXP book
       'I have bought books (before).'

    b. 我**沒有**買**過**書
       *wo **mei-you** mai-**guo** shu*
       I   **not-have** buy-EXP book
       'I have not bought books (before).'

    c. 我**不**買**過**書
       wo **bu mai-**guo** shu*
       I   **not** buy-EXP book
       Intended: 'I have not bought books (before).'

This is the Chinese negation puzzle. While this puzzle confirms that both *bù* and *méi(yǒu)* are standard negators in Mandarin, it also raises two issues. Firstly, Mandarin appears to have a neat system wherein the distribution of the negators is conditioned by the presence of aspect markers. Contrasting example (1) with (2–3), *bù* fails to perform its negator function when an affirmative sentence is aspect-marked; the only appropriate negator is *méi(yǒu)*. Huang 1988 suggested that *bù* cannot co-occur with perfective markers because *bù* must cliticise onto the verb first, but marking a non-event (an event already negated or denied) as completed or realised would result in semantic anomaly. In other words, the incompatibility is a matter of interpretation that stems from the narrow scope of negation. Ernst 1995 proposed that due to the unboundedness requirement of *bù* – meaning that *bù* has an intrinsic requirement to select for an unbounded situation as its complement – it is unacceptable in the presence of perfective markers. In short, a terminated or completed event would be incompatible with *bù*. Lin 2003 made a similar suggestion by stating that *bù* requires its complement to be a stative situation that does not require further energy input. Li 2007 in turn has adopted a feature-checking approach to account for negation-aspect compatibility. She proposes that both aspect markers and negators possess the same four atomic aspectual features, but different markers have different inherent values for these features, and their compatibility is a result of their feature compatibility.

The second issue concerns the intriguing connection between *méi(yǒu)* 'not (have)' and perfective aspect. As demonstrated in the examples above, *méi(yǒu)* can occur with the experiential marker *guo* (3b) but not with the perfective marker *le* as in example (2c). Wang 1965 is the first to propose that *yǒu* 'have' in *méi(yǒu)* and *le* are morphological alternants in complementary distribution, with the former appearing in negative contexts and the latter only in affirmatives. The morphological connection between *yǒu* and *le* has been challenged by Li & Thompson (1981: 434–438) as well as Li 2007, but the assumption that *yǒu* is an aspectual auxiliary (or a perfective auxiliary) has remained widely adopted in subsequent studies on Mandarin negation.

The position that negation has a close relationship with temporality is not new (see Zanuttini 2001 and Miestamo 2005), and the suggestion that aspect is the temporal system to which negation is connected in Chinese is exceedingly plausible as well, because aspect is the most prominently and overtly formalised temporal category in Chinese. Indeed, the same negation-aspect compatibility pattern is also identified in the two Cantonese varieties investigated in this paper – Hong Kong and Gaozhou Cantonese. Examples (4) to (9) adopt the sentences from example (1) and present the corresponding structures in the two Cantonese varieties.

(4) Hong Kong Cantonese

  a. 我買書
    ngo mai syu
    I   buy book
    'I buy books.'

  b. 我**唔**買書
    *ngo **m** [mai syu]*
    I   **not** buy book
    'I do not buy books.'

(5) Hong Kong Cantonese negation and perfective aspect

  a. 我買咗書
    *ngo mai-**zo** syu*
    I   buy-**PFV** book
    'I bought books.'

  b. 我冇買書
    *ngo **mou**   mai syu*
    I   **not.have** buy book
    'I did not buy books.'

  c. 我冇買咗書
    ngo **mou   mai-**zo** syu*
    I   **not.have** buy-**PFV** book
    Intended: 'I did not buy books.'

  d. 我**唔**買咗書
    ngo **m mai-**zo** syu*
    I   **not** buy-**PFV** book
    Intended: 'I did not buy books.'

(6) Hong Kong Cantonese negation and experiential aspect

  a. 我買**過**書
    *ngo mai-**gwo** syu*
    I   buy-**EXP** book
    'I have bought books (before).'

  b. 我冇買**過**書
    *ngo **mou**   mai-**gwo** syu*
    I   **not.have** buy-**EXP** book
    'I have not bought books (before).'

    c. 我**唔**買**過**書
       ngo **m mai-**gwo** syu*
       I   **not** buy-**EXP** book
       Intended: 'I have not bought books (before).'

(7) Gaozhou Cantonese

    a. 我買書
       ngo mai syu
       I   buy book
       'I buy books.'

    b. 我茅買書
       *ngo **mau** [mai syu]*
       I   **not** buy book
       'I do not buy books.'

(8) Gaozhou Cantonese negation and perfective aspect

    a. 我買**嗲**書
       *ngo mai-**de** syu*
       I   buy-**PFV** book
       'I bought books.'

    b. 我茅買書
       *ngo **mau** mai syu*
       I   **not** buy book
       'I did not buy books.'

    c. 我**茅**買**嗲**書
       ngo **mau mai-**de** syu*
       I   **not** buy-**PFV** book
       ('I did not buy books.')

(9) Gaozhou Cantonese negation and experiential aspect

    a. 我買**過**書
       *ngo mai-**gwo** syu*
       I   buy-**EXP** book
       'I have bought books (before).'

    b. 我茅買**過**書
       *ngo **mau** mai-gwo syu*
       I   **not** buy-**EXP** book
       'I have not bought books (before).'

The crucial difference between Gaozhou Cantonese and the other three varieties is that Gaozhou Cantonese has only one standard negator, *mau5* 'not'. One might naturally assume that the aspectual sensitivity in negation has emerged with the presence of more than one standard negator. In other words, it is possible to interpret the aspectual sensitivity as a division of labour between the negators. The pattern in Gaozhou Cantonese (see examples 7–9) falsifies that assumption, and argues for a new understanding of the Chinese negation puzzle for a deeper-rooted motivation for this shared 'specialisation' of perfective negation among Mandarin *méi(yǒu)*, Hong Kong Cantonese *mou5*, and Gaozhou Cantonese *mau5*. The aim of this paper is to introduce a new perspective on this old puzzle by examining the nature of negators such as *méi(yǒu)* throughout history and across four Chinese varieties, based on Croft's diachronic model of the Negative Existential Cycle. For the sake of an in-depth discussion on negators such as *méi(yǒu)*, the present analysis does not address the issues of *bù* and the compatibility between negation and imperfective aspect.

2.2 Methodology

The current study adopts a diachronic-comparative approach to examine Chinese negation. Two types of data are examined: acceptability judgments elicited from online questionnaires as well as a survey of historical corpora. Results from the online acceptability questionnaires provide the foundation for a synchronic cross-linguistic comparison between the four varieties of Chinese: Beijing Mandarin (BM), Taiwan Mandarin (TM), Hong Kong Cantonese (HKC) and Gaozhou Cantonese (GZC). A total of 130 participants have been consulted.[3] The results from the acceptability judgment questionnaires reveal the NEC stage to which each variety belongs.

All data obtained from the online questionnaires are annotated on a four-level grammaticality scale. The levels are completely acceptable (✓), slightly marginal (?), very marginal (??), and completely unacceptable (∗). This scale was created by first presenting the speakers of each variety a set of sentences and then requesting them to rate how acceptable those sentences were on a scale of 1 to 5, where 1 was completely unacceptable and 5 was completely acceptable. The

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[3]The questionnaires were completed in 2016. A total of 130 speakers of Chinese participated: 42 speakers of Beijing Mandarin, 24 of Taiwan Mandarin, 52 of Hong Kong Cantonese and 19 of Gaozhou Cantonese. All participants were native speakers of the respective variety and were aged from 20 to 40 (except for Gaozhou Cantonese, which involved a few speakers in their 60s). All had lived in the relevant area for at least ten years and most of them had not resided elsewhere.

set of sentences contained nine control sentences; five were well-formed structures, and four were ill-formed. The range of average scores that each group of speakers gave for these control sentences set the threshold for completely acceptable (✓) sentences and completely unacceptable (∗) sentences, respectively, whereas the median between these two boundaries defined the division point between slightly marginal (?)-sentences and very marginal (??)-sentences. This procedure generated a unique set of grammaticality ranges for each variety and they are presented in Table 1. The average of the ranges was 4.5–5.0 for (✓), 3.0–4.4 for (?), 1.6–2.9 for (??), and 1.0–1.5 for (∗).

Table 1: Data from online questionnaire

	✓	?	??	∗
BM	4.7–5.0	3.0–4.6	1.4–2.9	1.0–1.3
TM	4.5–5.0	3.0–4.4	1.6–2.9	1.0–1.5
HKC	4.4–5.0	3.0–4.3	1.6–2.9	1.0–1.5
GZC	4.4–5.0	3.2–4.3	2.0–3.1	1.0–1.9

The other data source consists of historical texts that are accessed from two Chinese text corpora – Chinese Ancient Texts Database 2017 and the Chinese Text Project (Sturgeon 2011). The historical data will provide evidence of the development of the Chinese negative existential expression and the connection between the negative existential and standard negation in various Chinese varieties.

3 The Negative Existential Cycle in Mandarin Chinese

In Croft's (1991) article, Mandarin Chinese appears as one of the 33 languages that have displayed signs of the NEC. According to the classification proposed by Croft, Mandarin Chinese represents the transition Type B~C[4], as he stated that:

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[4]More precisely, Croft argued that Mandarin should have progressed "directly from Type A to Type C without an intervening Type B (a fused or irregular negative existential)" (1991: 23). As mentioned in his text, the transition from a highly compositional Type A (NEG EX) to the emergence of a special NEG.EX form in Type B is expected to involve phonological fusion. It is argued that this fusion is absent in Mandarin. Croft claimed that phonological fusion, is "inhibited" in isolating languages for some unknown reason (1991: 23). However, I argue later in this chapter that Hong Kong Cantonese serves as a counterexample to Croft's claim following Law (2014).

> in Mandarin Chinese it appears that the negative-existential *méi* is already
> beginning to employ the positive existential *yǒu* analogically, and moreover
> is proceeding to use *méi* plus *yǒu* as a verbal negator (i.e. resembling type C)
> in some contexts without any phonological fusion taking place (Croft 1991:
> 23)

As a diachronic model, Croft's NEC postulates a negation system that initially treats the existential predicate as a normal verb, as in Type A where the negator and the positive existential predicate are considered to be obligatory in a negative existential construction. The system then develops a special treatment for the negation of the existential predicate; the most prominent method of doing so is to lexicalise the negative form of the existential predicate, which is what occurs in Type B. As the negative existential has its own special realisation, the existential predicate becomes redundant in negative contexts and only appears in affirmative contexts. The NEC is driven by the presence or absence of the analogy between the existential predicate and the normal verb until the system reaches Type C. During this stage, the negative existential can expand to other domains of the grammar, when it can negate (most) normal verbs and serve as a standard negator and even as the general negator of the language. However, at the stage of Type C, the negative existential is polysemous in that it acts as both the negative existential predicate in negative existential contexts and the standard negator elsewhere, which explains the redundancy of the existential predicate in negative contexts as it was before (Croft 1991: 12). When the origin of the negator as a negative existential predicate is no longer apparent, the existential predicate is once again considered equal to other verbs. This syntactic analogy results in the negator and the existential predicate being obligatory once again, i.e. the system is moving back to Type A, and the transitional phase produces Type C~A. The predictions made by the NEC are summarised in Table 2.

The development from Type A to B to C that Croft (1991) proposed has been challenged by the typological data in Veselinova 2016 where she reveals a cross-linguistic tendency to adopt a special strategy for negating the existential. This suggests that Type B is the predominant system. Therefore, it is likely that Type B, not Type A, is the initial stage of the Cycle and the state that linguistic systems gravitate towards. Whether or not Veselinova is correct has no effect on the predictions for each stage described in Table 2 and thus I will still follow those predictions for the remainder of this paper.

Croft's classification is supported by data from Beijing and Taiwan Mandarin. These varieties of Mandarin use the verb *yǒu* 'to have' as an existential predicate,

Table 2: Stages of the NEC

	Standard negation	Existential	Negative existential
A	NEG	EX	NEG *(EX)
A~B	NEG	EX	NEG *(EX) and NEG.EX (*EX) with restricted distribution
B	NEG	EX	NEG.EX (*EX)
B~C	NEG and NEG.EX in restricted domains		NEG.EX (*EX)
C	NEG = NEG.EX	EX	NEG (*EX)
C~A	NEG = NEG.EX	EX	NEG (EX)

as shown in example (10a). The negator *bù* cannot be used to negate an existential construction as demonstrated in example (10c). In such examples, *méi* is the only legitimate negator, as in example (10b) where the existential predicate *yǒu* is optional.[5]

(10) Existential construction in Mandarin

    a. 教室裏**有**鉛筆
       *jiaoshi   li   **you** qianbi*
       classroom inside **have** pencil
       'There are pencils in the classroom.'

    b. 教室裏**沒(有)**鉛筆

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[5]The existential predicate here is not the predicate for locative or ascriptive structures, and the negator for these two constructions is *bù* instead of *méi*. Thus, neither *bù* nor *méi* is a stative negator.

(i) 我不是老師
    *wo **bu** **shi** laoshi*
    I   **not be** teacher
    'I am not a teacher.'

(ii) 老師不在課室裡
    *laoshi **bu zai** keshi-li*
    teacher **not be.at** classroom-inside
    'The teacher is not in the classroom.'

> *jiaoshi   li   **mei(you)** qianbi*
> classroom inside **not-have** pencil
> 'There are no pencils in the classroom.'

c. 教室裏**不有**鉛筆
    jiaoshi   li   **bu you qianbi*
    classroom inside **not have** pencil
    intended: 'There are no pencils in the classroom.'

The fact that *méi* alone can express negative existence indicates that it is the special form for the negative existential and that both Beijing and Taiwan Mandarin are at least in the Type B stage of the NEC. Furthermore, the acceptability judgment survey results serve as evidence that both *bù* and *méi(yǒu)* can negate bare sentences, as demonstrated in example (11). This contradicts the suggestion raised by the Chinese negation puzzle, which was that *bù* is the default negator for bare sentences – simple verbal declaratives without any aspect-marking.

(11) Bare negatives in Mandarin

a. State: 我(不/沒有)害怕老鼠
    wo (bu / ?mei-you) haipa laoshu [Beijing Mandarin]
    wo (bu / ?mei-you) haipa laoshu [Taiwan Mandarin]
    I   not / not-have fear   rats
    'I do/did not fear rats.'

b. Activity: 我(不/沒)唱歌
    wo (bu / ?mei)   chang ge   [Beijing Mandarin]
    wo (bu / ?mei)   chang ge   [Taiwan Mandarin]
    I   not / not.have sing   songs
    'I do/did not sing.'

c. Accomplishment: 我(不/沒)寫這封信
    wo (?bu / ?mei)   xie   zhe feng xin   [Beijing Mandarin]
    wo (?bu / mei)   xie   zhe feng xin   [Taiwan Mandarin]
    I   not / not.have write this CLF letter
    'I do/did not write this letter.'

d. Achievement: 我(不/沒有)贏比賽
    wo (??bu / ?mei-you) ying bisai [Beijing Mandarin]
    wo (??bu / ?mei-you) ying bisai [Taiwan Mandarin]
    I   not / not-have   win race
    'I do/did not win the race.'

e. Semelfactive: 我(不/沒)打嗝

wo (?bu / ?mei)   *dage*   [Beijing Mandarin]

wo (?bu / mei)   *dage*   [Taiwan Mandarin]

I   not / not.have hiccup

'I do/did not hiccup.'

The acceptability of *bù* and *méi(yǒu)* depends on the situation type denoted by the predicate. The two forms are often only distinguished by their semantics because both *bù* and *méi(yǒu)* can negate bare sentences, while *méi(yǒu)* invariably denies the existence of the denoted situation, and *bù* expresses a lack of volition or habituality to actualise the situation. Table 3 provides a brief summary of the survey findings (see §2.2 for explanations on the grammaticality annotations).

Table 3: Negation of bare declaratives in Mandarin varieties

	Beijing Mandarin		Taiwan Mandarin	
	bù 'not'	*méi(yǒu)* 'not have'	*bù* 'not'	*méi(yǒu)* 'not have'
State [+psych]	✓4.8	?3.4	✓4.9	?4.4
State [−psych]	✓5.0	??2.5	✓5.0	??2.4
Activity	✓4.8	?4.4	✓5.0	?4.3
Accomplishment	?4.1	?4.1	✓4.6	✓4.8
Achievement	??1.6	?4.4	??1.6	?4.4
Semelfactive	?3.9	?4.5	?4.0	✓4.7

The results presented in Table 3[6] reveal that *méi(yǒu)*, the negative existential predicate in example (4b), is also a standard negator in Mandarin, particularly if we discount the incompleteness effect that has surfaced as general marginality in the Beijing Mandarin bare negatives with *méi(yǒu)*.[7] These results also sug-

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[6]Table 3 reports the average score (and the corresponding level of acceptability) of the tested items for each predicate type. Each type includes two to four test items.

[7]Based on the judgment survey results presented in Table 3, most of the bare sentences that are negated by *méi(yǒu)* are considered slightly marginal (?), which could cast reasonable doubt on the status of *méi(yǒu)* as a standard negator in Mandarin. This can, in fact, be attributed to the 'incompleteness effect' in Chinese sentences without aspect marking or adverbial modification (Tsai 2008). As 'bare sentences' are, by definition, simple verbal declaratives without aspect marking or any modifiers, the negation of these sentences could generally be judged as slightly marginal. That should not affect our conclusion that *méi(yǒu)* is one of the standard negators in Mandarin, although this phenomenon does credit further investigation.

gest that neither Beijing Mandarin nor Taiwan Mandarin represent Type C, the stage when the special form for the negative existential has developed into a general negator in the system. Firstly, the special form for the negative existential, *méi(yǒu)* 'not have', is not the only standard negator; *bù* 'not' is also a generally acceptable option for negating sentences that contain different classes of verbs. Secondly, the distribution of *méi(yǒu)* is not without restriction. Besides the issue of compatibility with different aspectual specification, *méi(yǒu)* has also been deemed unacceptable in bare sentences that contain non-psych stative predicates in both varieties of Mandarin, as shown in example (12).

(12)   Negation and non-psych state: 我 (不/沒有) 知道這件事
       wo (bu / ??mei-you) zhidao zhe jian shi   [Beijing Mandarin]
       wo (bu / *mei-you) zhidao zhe jian shi   [Taiwan Mandarin]
       I   not / not-have   know this CLF event
       'I do/did not know about this event.'

To summarise, *méi(yǒu)* 'not have' is a standard negator in both varieties of Mandarin but has not developed into a general negator that pervades the entire negation system; in other words, both Beijing and Taiwan Mandarin belong to the transition Type B~C as Croft 1991 has suggested. It should therefore be evident by now that the NEC is relevant to the Mandarin varieties as far as *méi(yǒu)* 'not have' is concerned. How this link between negation and existence (or more precisely, non-existence) emerged in the Chinese negation system remains unclear; §4 will offer some answers to this question.

4 From negative existential to standard negation

This section will examine eight sets of texts from the Old Chinese period to the Pre-Modern Chinese period. Historical linguists have yet to arrive at an unanimous consensus over the periodisation of the Chinese language, but there are two main criteria for the delineation of periods. They are phonological change and grammatical change. Based on existing proposals, e.g. Karlgren (1915), Wang (1958), Pan (1982), Norman (1988), Ohta (1988), Peyraube (1988, 1996), I adopt the periodisation indicated in Table 4 for the current discussion. A detailed description of various possible periodisations is included in Appendix A.

Table 4: Periodisation of the Chinese language

Language	Period
Old Chinese, a.k.a. Shanggu Hanyu	Shang to Han dynasty (ca. 1600 BC–AD 220)
Middle Chinese, a.k.a. Zhonggu Hanyu	Wei-Jin period to 10th c. AD (AD 220–960)
Pre-Modern Chinese, a.k.a. Jindai Hanyu	Song to Late Qing period (960–1842)
Modern Chinese, a.k.a. Xiandai Hanyu	Republican era to present (1911–present)

These manuscripts have been selected for their sample of dialogues that offer a more accurate representation of the colloquial use of language.[8] Table 5 provides basic information on these selected texts.[9]

Historical investigation of these texts addresses two issues. Firstly, since the contemporary Mandarin varieties both represent Type B~C in the NEC, we will determine whether the present expression of 'not have' has undergone any evolution through its history. Secondly, it reveals if there were other forms used to express negative existence in history and why the present form of the negative

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[8]When considering the historical texts, two tacit issues are important. The first is that the language documented in the writings might not reflect the spoken colloquial form. This is a well-known challenge in historical linguistics, and it is particularly true in the study of historical Chinese linguistics because the Chinese logographic writing rarely provides phonological clues for the articulation of the characters. Hence, based on the historical record available, I adopt the traditional assumption that the written language reflects the spoken form to a certain extent, and that the choice of texts which include dialogues may bring the written language even closer to the speech at the time. The second issue concerns the potential regional variation involved across the texts that cover a long time period. Indeed, a major challenge for the present study, and for the research of historical linguistics in general, is to identify the exact regional variety represented in the texts. One problem is that the author of some texts remains unknown or there may be more than one. A case in point is *The Analects*, which is the collection of dialogues between Confucius and his students that was posthumously compiled by his followers, and it therefore has multiple authors whose identities are undetermined. Nonetheless, following Tai & Chan 1999, I assume that each period has a koine that is determined primarily by the location of the capital city of the time. Appendix B, Table 14 presents the approximations of the regional variety that the respective text might represent.

[9]See Appendix B, Table 14 for the number of words in each text.

Table 5: Historical texts investigated in this study

Historical periods	Texts	Year of compilation	Genre
Old Chinese	《論語》 The Analects	480–350 BC Warring States period	Dialogue collection
	《史記》 Shiji	109–91 BC Western Han	History
Middle Chinese	《三國志》 Records of the Three Kingdoms	AD 265–300 Wei-Jin period	History
	《世說新語》 A New Account of the Tales of the World	420–581 Southern & Northern dynasties	Short stories
Pre-Modern Chinese	《太平廣記》 Taiping Guangji	977–978[a] Northern Song	Anthology
	《朱子語類》 Zhuzi Yulei	1270 Southern Song	Dialogue collection
	《西遊記》 Journey to the West	1520–1580 Ming	Novel
	《紅樓夢》 Dream of the Red Chamber	1784 Qing	Novel

[a]*Taiping Guangji* was edited and published in AD 977 (Northern Song), but most of the stories in the collection were written during the time of the Tang dynasty (AD 618–907).

existential (such as *méi(yǒu)*) became the dominant one and developed further into a standard negator. To keep the discussion more focused, this section concentrates on the development in Mandarin and for that reason, all historical data will be transcribed in Hanyu Pinyin; §5 will extend the scope of this investigation to the Cantonese varieties and explain the cross-linguistic variations across the four Chinese varieties examined in this analysis.

4.1 Evolution of the negative existential

As mentioned above, the verb 'to have' is the existential predicate in present-day Chinese (its form is *yǒu* in Beijing and Taiwan Mandarin, and *jau5* in the Cantonese varieties). Indeed, this verb has expressed existence since the Old Chinese period, as in (13):

(13)   'Have' as an existential predicate

    a. 天下**有**不順者, 黃帝從而征之
        *tianxia **you** bu shun   zhe,   Huangdi conger zheng zhi*
        world **have** not obedient person Huangdi then   fight PRO
        'Where there are disobedient populations, Huangdi would fight them.'
        (《史記·五帝本紀》 *Shiji* 109–91 BC)

    b. 鄭人**有**賣鄭於秦
        *Zheng ren   **you** mai Zheng yu Qin*
        Zheng people have sell Zheng to Qin
        'There are people in Zheng who betray the country for Qin.' (《史記·秦本紀》 *Shiji* 109–91 BC)

    c. **有**參軍見鼠白日行，以手板批殺之
        you   *canjun jian shu bairi xing, yi   shouban pi sha zhi*
        have officer see rat day walk with board   hit kill PRO
        'There was an officer who saw a rat walking in daytime, so he hit and killed it with a board.' (《世說新語》 A New Account of the Tales of the World AD 420–581)

The first two examples originate from two different chapters of an Old Chinese history text, *Shiji*. In (13a), the verb 'to have' predicates over the nominal complement, *bú shùn zhě* 'disobedient population', and together they mean that disobedient people exist with a reference to the locative subject *tiānxià*, 'the world'. This clause is therefore an existential construction that means 'there exists disobedient population in the world' (or literally 'the world exists disobedient populations'). Example (13b) presents a similar case where 'have' is the predicate that

means 'to exist' and it connects the entity that exists – people who betray the country, *Zhèng*, for another country, *Qín* – with the locative reference point, the *Zheng population*. Consequently, the meaning expressed is that within the population of Zheng, there are people who betray their own country for another, Qin. The third example is extracted from a later text, *A New Account of the Tales of the World*, which is a collection of short stories completed during the Southern-Northern period (AD 420–581). The example contains the verb 'have' to express the existence of an officer who saw a rat during the daytime. This sentence has no locative reference, unlike the two previous examples. In fact, its structure is reminiscent of the specific indefinite structure in contemporary Chinese. Examples (14–15) below provide the translations of the first clause in example (13c) in modern Mandarin and Hong Kong Cantonese.

(14) Modern Mandarin: 有一個士兵看見一隻老鼠大白天在街上跑來跑去
       *[**you** yi ge shibing] kanjian yi zhi laoshu dabaitian zai jie*
       have one CLF officer see   one CLF rat   big.morning be.at street
       shang pao-lai-pao-qu
       up   run-come-run-go
       'An officer saw a rat running on the street in broad daylight.'

(15) Hong Kong Cantonese: 有個士兵見到有隻老鼠日光日白喺條街度走黎走去
       *[**jau** go sibing] gin-dou   jau zek lousyu jat-gwong-jat-baak hai*
       have CLF officer see-COMPL have CLF rat   sun-light-sun-white be.at
       tiu gaai dou zau-lai-zau-hui
       CLF street LOC run-come-run-go
       'An officer saw a rat running on the street in broad daylight.'

The three examples in (13) show that 'have' has been an existential predicate since the earliest records.

As the verb 'to have' is an existential predicate, I will approach the issue of how the negation of existence was expressed by first identifying all the negative markers that can accompany the verb 'to have' and determine their respective developments. Historical records have revealed that at least twelve negative markers were available throughout the history of the Chinese language (Chappell & Peyraube 2016), but not all of them can appear with the existential predicate. Table 6 reveals the possibility of various negator-existential predicate (NEG+*yǒu* 'have') pairings in terms of annotations, *= unattested, % = rarely attested, ✓ = commonly attested. Table 15 in Appendix B lists the exact number of occurrences for each [NEG+*yǒu*] pairing per text.

Table 6: [NEG + yǒu] pairings

	[NEG + yǒu]			[NEG + yǒu]
勿 wù	%		微 wēi	✓
毋 wú	%		蔑 miè	*
弗 fú	*		莫 mò	✓
匪 fěi	%		不 bù	✓
非 fēi	✓		無 wú	✓
未 wèi	✓		沒 méi	✓

Based on the selected texts, 弗 *fú* and 蔑 *miè* never co-occurred with the existential predicate. Three others also rarely occurred with the existential predicate, namely 勿 *wù*, 匪 *fěi* and 毋 *wú*. The first two only appeared with the existential predicate less than ten times in the eight selected texts, and the last one, 毋 *wú*, only appeared with the existential predicate *yǒu* 'have' in one text – *Shiji* with twelve tokens (that is, 7% of the total NEG+HAVE tokens in the text). Excluding these five negative markers, the pattern that emerges is represented in Figure 1.[10]

The x-axis in Figure 1 represents the years, with 0 designating the year AD 1. The minus before some years replaces the abbreviation BC. Each line represents one form of realisation of NEG+HAVE and all of them have eight points, each of which marks the result from one of the eight texts selected for this study. The y-axis represents the proportion of each NEG+HAVE combination over the total number of NEG+HAVE occurrences in the text. For instance, 莫有 *mò*-have has occurred ten times in the third text, *Records of the Three Kingdoms* (AD 265–300), out of a total of 106 NEG+HAVE occurrences, hence the percentage shows 9.43% at the third point of the line. In another text produced later in history, a fourth text, *A New Account of the Tales of the World* (AD 420–581), which was produced later, only has nine occurrences of the form *mò*-have, but as there were only 40 tokens of NEG+HAVE in this text, the percentage marked at the fourth point of the same line is 22.5%.

The prominent pattern in Figure 1 is that many different NEG+HAVE combinations have been consistently attested across the eight texts, although the number of their occurrences were rather low. The forms *wéi*-have, *mò*-have, and *fēi*-have serve as examples of this. There are four particular NEG+HAVE combinations that

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[10]In Figures 1 and 2, the numerals next to the Pinyin stand for tones: 1 refers to a high level tone, 2 to a rising tone, 3 to a dipping tone, and 4 to a falling tone.
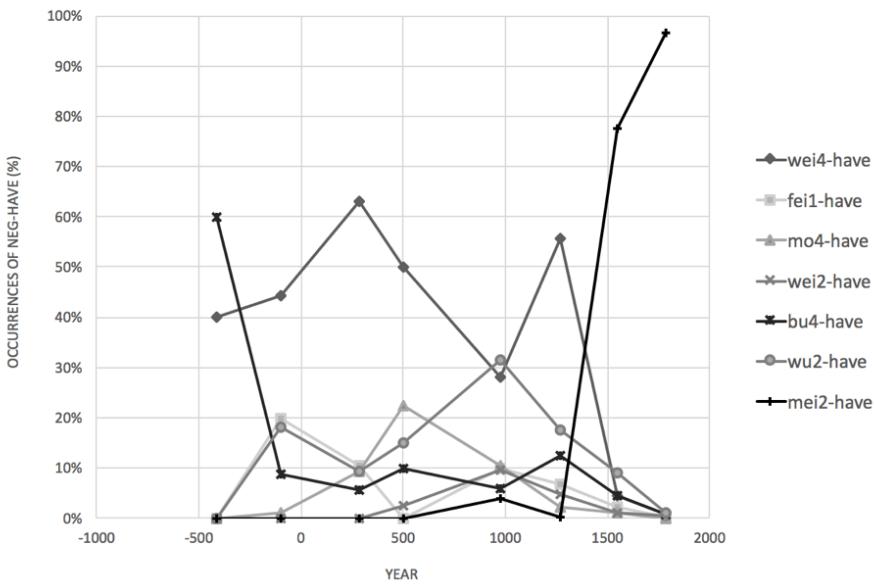
Figure 1: Percentage of NEG+HAVE realisations in historical texts (version 1).

have displayed more substantial changes over time: *wèi*-have (未有 *wèi-yǒu*), *bù*-have (不有 *bù-yǒu*), *wu2*-have (無有 *wú-yǒu*), and *mei2*-have (沒有 *méi-yǒu*), with the latter being the focus of this analysis. For clarity, these results are repeated in Figure 2 which uses the same design as Figure 1.

Figure 2 reveals three important findings. Firstly, *bù*-have is the earliest realisation of NEG+HAVE combination in *The Analects* (BC 480–350), but appearances of this form diminished in approximately AD 1300. Secondly, *wú*-have emerged as a competing form of NEG+HAVE against *bù*-have, and its usage constantly increased until around AD 1300. The discovery that *bù* and *wú* have coexisted since the Old Chinese period concurs with the traditional understanding of the M-/P division of negation in Old Chinese (see Hashimoto 1985 and Zhang 2002 for more details). In brief, the issue of M-/P-negation division concerns the historical observation that Old Chinese had two groups of negators which were distinguishable by their initial consonant. One of these groups has an initial nasal, while the other has a plosive. The contemporary Chinese equivalent to this nasal-plosive (also referred to as the M-/P division) is arguably the North-South division of regional varieties. Evidence for this is the 'not' negator. The Northern varieties have a plosive 'not', such as the Beijing Mandarin *bù*, while the Southern vari-
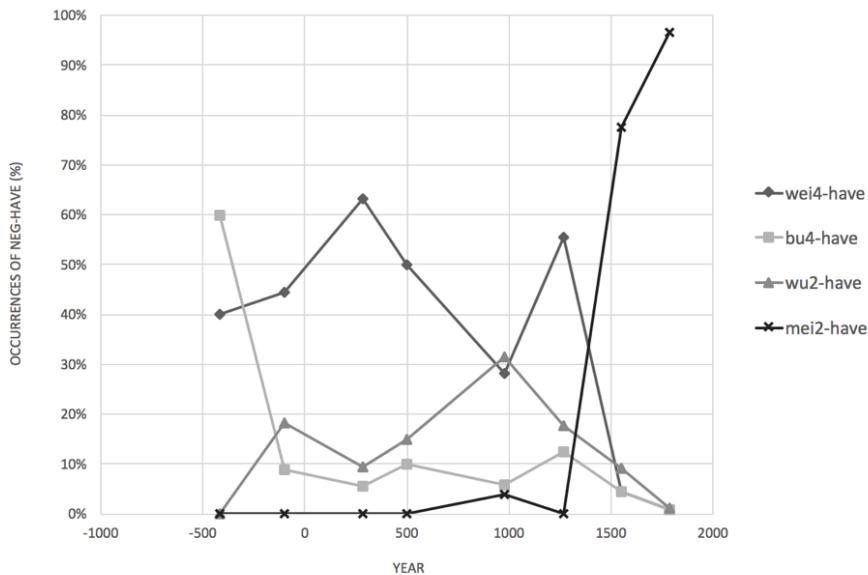
Figure 2: Percentage of NEG+HAVE realisations in historical texts (version 2).

eties have a nasal 'not', such as the Hong Kong Cantonese *m4* and the Gaozhou Cantonese *mau5*; Table 7 presents additional information on the regional M-/P-division (adapted from Hashimoto 1985 and Zhang 2002).[11]

Table 7 shows that what is referred to as the M-/P-division may not be as clear cut as it seems, and that instead of a rigid line, this 'division' should be conceived of as a continuum where gradual changes are evident, from the dominant M-form in the south to the non-nasal form in the north. A non-nasal, non-plosive F-form 'not' has also emerged between these two zones, as attested in Suzhou and Wenzhou.

Zhang (2002) suggests that the M-/P division of negation has crucial consequences in the sense that M-negators across the varieties of Chinese follow Croft's NEC and associate closely with non-existence, whereas this is not the case for the P-negators. According to Zhang's analysis, the Chinese negation system belonged to Type B~C in its earliest oracle bone records, where *wú* acted

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[11]The phonological representation in Table 7 follows the IPA. The cities are arranged according to their geographical location from north to south, the labels N(orth) and S(outh) are determined by whether they are to the north or south of Chang Jiang (also known as the Yangtze River), which is the traditional means of defining the north-south divide in China.

Table 7: The M-/P-division in the negator of regional varieties

		'not'	'not have'
N	瀋陽 Shenyang	pu	mei (iou)
N	北京 Beijing	pu	mei (iou)
N	濟南 Jinan	pu	mei (iou); mu (iou)
N	西安 Xian	pu	mo iou; m iou
N	合肥 Hefei	pəʔ	me; muɯ
S	蘇州 Suzhou	fəʔ	m̩ pɤʔ
S	南昌 Nanchang	pət	mau iu
S	長沙 Changsha	pu	mau tɤ; mau
S	溫州 Wenzhou	fu	nau < m-
S	福州 Fuzhou	ŋ < m̩	mɔ
S	廈門 Xiamen	m̩	bo < m-
S	汕頭 Shantou	m̩	bo < m-
S	梅縣 Meixian	m̩	mɔ
S	廣州 Guangzhou	m̩	mou

as both the special form for the negative existential and a verbal negator in some contexts, but as *wú* was not the only verbal negator, the system cannot be classified as Type C. In Later Old Chinese, the system might have evolved into Type A, where *wú* requires the presence of the verb *yŏu* 'have' to express negative existence. By Middle Chinese, the [*wú*-have DP] structure (that is, *wú* negating the existential predication of *yŏu* and its nominal complement) became more common and the use of *wú* and other derived forms such as 毛 *mau* prevailed particularly in the southern varieties. By the late Tang dynasty (ca. tenth century AD), the M-negators dominated the southern part of China, while the P-negators remained popular in the North. The key stages are summarised in Table 8 below.

Zhang proposed that in southern varieties such as Cantonese and Hakka, their 'not' negators were derived from their 'not have' negators which were once the general negator (see also Law 2014, who suggested that the Hong Kong Cantonese *mou5* 'not.have' was the product of *mou4* + *jau5* 'not + have'). Another standard negator could have been invented for the sake of keeping the negation of the existential distinct from the negation of normal verbs as suggested by Veselinova (2016). I will return to Zhang's analysis of the Cantonese negators in §5, but it is important to mention that Zhang has not explained how the Mandarin negation system evolved from the Old Chinese state to its present form, or

Table 8: Historical development in expression of the negative existential

| | Old Chinese | | Middle Chinese | Pre-Modern Chinese |
	Early	Later		
North	**B~C** m-negators as NEG.EX and verbal negator	**B~C** *wú*(have)* as NEG EX	**A** *wu have DP*	M- and P-negators co-exist
South			**B** *mou (=wu)* and other derived forms emerged	M-negators dominates

in other words, how *méiyǒu* emerged as the negative existential predicate and standard negator. It is significant that the sample texts featured in Figure 2 have no record of *méi*-have (or *méiyǒu*) until AD 1300, and afterwards, *méiyǒu* has become the predominant form to express NEG+HAVE. The situation continues at present as well, as contemporary Mandarin has no other acceptable forms of NEG+HAVE. The emergence of *méiyǒu* may seem rather sudden (Figure 2), but it is reasonable to postulate that this sudden appearance of *méiyǒu* found in the texts only marked the beginning of the documentation of more colloquial speech and it is not the actual point where the strategy emerged. The late thirteenth century to the beginning of the fourteenth century marks the end of a long history of Han rule and the beginning of 'foreign' rule – the Yuan dynasty (AD 1271–1368). This was a period when the Mongolians ruled the entire nation. The issue at hand is to determine how *méiyǒu* became the predominant form for NEG+HAVE, and how that resulted in its development into a standard negator in present-day Mandarin varieties.

4.2 Emergence of *méi(yǒu)* as a negative existential and standard negator

Based on the historical texts (beyond the eight selected texts) in the Chinese Ancient Texts Database 2017 and Chinese Text Project, 沒 *méi/mò* first appeared during the Pre-Qin era where it had three related meanings: to sink or submerge, to die, and the end of something, as illustrated in examples (16), (17), and (18), respectively. It is important to note that although these three readings of 沒 *méi/mò* are archaic, they continue to be found in present-day Chinese, such as, in Mandarin

and Cantonese. When this lexical item is used to express its three meanings in Beijing and Taiwan Mandarin, its phonological realisation is *mò* (*mut6* in Hong Kong Cantonese). Whereas, when it functions as a standard negator, it is realised as *méi*. This function is not found in Cantonese but if it were, the phonological form would still be *mut6*. For ease of exposition, I follow the pronunciation in contemporary Mandarin when glossing the lexical uses of this word as *mò* and its negation uses as *méi* in the examples and in the text. An important point to note, however, is that in terms of sound change, *méi* did not develop from *mò* (Schuessler 2007: 390).

(16)   *Mò* 'to sink or submerge'

    a. 不臨深泉, 何以知**沒**溺之患
       *bu lin   shen quan, heyi zhi   **mo**-ni-zhi   huan*
       not come deep stream how know **submerge**-drown-GEN danger
       'If one does not come close to a deep stream, how can one understand the danger of drowning?' (《孔子家語》*Kongzi Jiayu* 206 BC–AD 220)

    b. 可以步行水上不**沒**
       *keyi buxing shui   shang bu   **mo***
       can walk   water above not **sink**
       '[He] can walk on water and won't sink.' (《抱朴子》*Baopuzi* AD 300–343)

    c. 日月出**沒**其中
       *ri   yue   chu **mo** qi   zhong*
       sun moon out **sink** PRO within
       'The sun and moon appear there.' (《藝文類聚》*Yiwen Leiju* AD 624)

The main verb of the subordinate clause that denotes the action of sinking in example (16b) is *mò*. The following example, (16c), is a quote from a later text, *Yiwen Leiju* – an encyclopedia compiled during the Tang dynasty (AD 624). This quote illustrates how the meaning 'to sink/submerge' has been extended to non-human entities, such as the sun and the moon (for instance, the sunset is depicted as the sun sinking or submerging). Crucially, *mò* appears with *nì* 'drown' in (16a) and together they mean that someone sank and drowned, which reflects the natural link between sinking and death: sinking or submerging leads to drowning, which results in death.

Indeed, *mò* also denotes 'to be dead' in the examples below:

(17)   *Mò* 'to be dead'

   a. 父在, 觀其志; 父**沒,** 觀其行
       *fu   zai, guan   qi zhi; fu   **mo,** guan   qi xing*
       father live observe his will father **die**   observe his conduct
       'While one's father lives, observe his aspiration; when one's father
       dies, observe his conduct.' (《論語》 *The Analects* BC 480–350)

   b. 二親既**沒,** 所居齋寢
       *er   qin   ji   **mo,** suo ju   zhai qin*
       two parents already **die** PRO dwell alone sleep
       'With the death of the parents, [he] lived alone in [his] place (for
       mourning).' (《顏氏家訓》 *Yanshi Jiaxun* AD 420–581)

   c. 生有顯功, **沒**有美名
       *sheng you xian   gong, **mo**   you mei   ming*
       live   have remarkable feat   **dead** have good name
       '[He] had remarkable achievements when he lived, and a good name
       after he died.' (《藝文類聚》 *Yiwen Leiju* AD 624)

Example (17a) is a clear case in point. The parallelism of the two sentences
is deliberately used to highlight the contrast in content. The first clause in the
first sentence is 'when father lives', and in the second sentence, the first clause
expresses the opposite, 'when father dies', and the meaning of 'to die' is encoded
by *mò*. At a glance, example (17c) appears to present a case of *mò yǒu* (also known
as *méiyǒu*), where *yǒu* is the possessive predicate and 沒 *méi/mò* is the negator,
but this would be a misinterpretation. Similar to example (17a), this sentence
contains two clauses with parallel structure, expressing a contrastive meaning:
the first clause states that the person in question (although pro-dropped) attains
remarkable achievements when he lives, and the second clause contrasts that
by stating what he possesses when he dies. In both clauses, the verb *yǒu* 'have'
means 'to possess/own', and 沒 *méi/mò* in the second clause means 'dead' (hence
it is glossed as *mò*, not *méi*), the opposite of *shēng* 'live' in the first clause.

The third meaning of *mò* is 'the end of something', and this meaning, which
existed at the same time as the other two, is an extension of the notion of death
which we have seen in example (17). Just as the meaning of 'to sink/submerge'
has been metaphorically extended to the sun (as in, the sunset) the concept of
death being the end of the life can likewise be extended to non-human entities.
The concept of death can be 'the end' in general and this is illustrated by the
examples in (18) below.

(18) *Mò* 'the end of something'

  a. 於夏十月, 火既**沒**矣
      *yu xia   shi   yue,   huo ji   **mo**   yi*
      in summer tenth month fire already **exhaust** PRT
      'In summer, October, when the fire has died down.' (《孔子家
      語》 *Kongzi Jiayu* 206BC–AD 220)

  b. 恐**沒**世不復見如此人
      *kong **mo** shi   bu fu   jian ruci ren*
      fear   **end** world not again see such person
      'Fear that it won't be possible to find such person till the end of the
      world.' (《世說新語》
      A New Account of the Tales of the World AD 420–581)

  c. 立言不**沒**
      *li   yan   bu **mo***
      establish word not **end/extinguish**
      'The words [one] established do not perish.' (《藝文類聚》 *Yiwen Leiju*
      AD 624)

When *mò* denotes 'the end of something', it can be used as a verb (such as 'to end') or an adjective (such as 'final'). The former is illustrated by examples (18a) and (18c), and the latter by (18b). Once the meaning of *mò* has been semantically 'stretched' to mean 'death,' or even 'the end', both of which practically indicate that the entity in question ceases to exist, *mò* has become a natural candidate to express non-existence in general. Indeed, by the late thirteenth century, the negative existential function of 沒 *méi* emerged (19), as did its use as a verbal negator (20). Xu (2003) presents an alternative position that the emergence of *méi* could be phonologically-driven. According to Xu, sound change occurred approximately during the tenth century AD making *wú* (*mou4* in Hong Kong Cantonese, which resembles the Middle Chinese realisation more closely) and *mò* almost indistinguishable phonetically. As a result, by the Song dynasty (AD 960–1279), *mò* and *wù* tended to be used interchangeably, and by around the fifteenth century, *méi*/*mò* had completely replaced *wú* as the negative existential (see Pan 2002 and Xu 2003). In fact, the semantic bleaching and sound change accounts fit rather well in terms of timing and the empirical evidence, and it is likely that both factors contributed and motivated the rise of *méi*/*mò* as the new negative existential predicate. This special form for the negative existential later developed into a standard negator in contemporary Mandarin varieties, confirming the NEC prediction. Schuessler (2007: 376–377, 517–518) mentions that two

possible pathways have been proposed. On the one hand, Norman (1988: 126) suggests that *méi* (which was pronounced /muət/ in Middle Chinese) could be a variant of 勿 *wú* or 未 *wèi*, and that this variant was later fused with or influenced by *yǒu* 'have'. On the other hand, Pulleyblank (1973: 121) proposes that the etymology of 'not have' originated from 'submerge'. It began from the reconstructed form *ma, continued to 末 *mò* 'the end of something' and to 亡 *wáng* (*mong4* in Hong Kong Cantonese) 'to die or be dead', then to 無 *wú* (Hong Kong Cantonese *mou4*) 'not or nothing' or 莫 *mò* 'not or don't', and finally to 沒 *mò*/*méi* as 'not have'. A thorough examination of which of the two factors played a more significant role in the historical development would, however, go beyond the scope of the present study.

(19) *Méi* as a negative existential

    a. 一向都**沒**分別
       *yixiang dou **mei** fenbie*
       along   all MEI difference
       'There's no difference all along.' (《朱子語類》 *Zhuzi Yulei* AD 1270)

    b. 將船撐至**沒**人煙處
       *jiang chuan cheng zhi **mei** renyan   chu*
       make boat   punt till MEI people.smoke place
       '[He] punted the boat to a place without people.' (《西遊記》 *Journey to the West* AD 1520–1580)

    c. **沒**人照顧
       ***mei** ren   zhaogu*
       MEI people take.care
       'There is no one to look after him.' or 'He has no one to look after him.' (《儒林外史》 *The Scholars* AD 1750)

(20) *Méi* as verbal negator: 都**沒**理會了
    *dou **mei** lihui   le*
    all MEI take.notice le
    '[they] all didn't take notice.' (《朱子語類》 *Zhuzi Yulei* AD 1270)

The negative existential predication and general verbal negation functions of *méi* emerged almost simultaneously. This is made evident by a text from the Song dynasty, *Zhuzi Yulei*, which is a collection of philosophical dialogues between the scholar Zhuzi and his students compiled in AD 1270. Example (19a) is extracted from this same text and is an instance of *méi* denoting the non-existence of an

entity, *fēnbié* 'difference', although the locative reference that we have seen in the Old Chinese examples of *yǒu* 'have' (13a–13b) is absent. Example (20), on the other hand, shows *méi* as a verbal negator because it denies that the event of 'taking notice' has occurred. It is important to note that the negative existential predicate and verbal negator *méiyǒu* did not occur in the texts before the fourteenth century. In other words, the functions of *méi* as the negative existential predicate and as the verbal negator long predate the appearance of *méiyǒu*. It was not until the Ming dynasty (AD 1368–1644) that the *méi-yǒu* 'not-have' combination first appeared as a negative existential expression, as shown in (21). By the eighteenth century, the *méiyǒu* 'not have' combination began to function as a verbal negator. The first documented case of this was found in Dream of the Red Chamber (AD 1748), which is featured in example (22).

(21) *Méiyǒu* as a negative existential

    a. 連宿處也**沒**有了
       *lian shu chu ye [**mei** you] le*
       even sleep place also [MEI have] LE
       'There isn't even a place to stay now.' or '[We] don't have a place to stay.' (《西遊記》 *Journey to the West* AD1520–1580)

    b. 此處並**沒**有什麼蘭麝、明月、洲渚之類
       *ci chu bing [**mei** you] shenme lanshe mingyue zhou*
       this place really [MEI have] what fragrant.herbs bright.moon is
       chu zhi lei
       let that kind
       'There isn't herbs, moon, islet or the likes [elements for poetry] here.' (《紅樓夢》 *Dream of the Red Chamber* AD 1748)

(22) *Méiyǒu* as verbal negator:還**沒有**走到跟前
     *hai [**mei-you** zou-dao] genqian*
     still [**not-have** walk-COMPL] in.front
     'still have not walked to the front.' (《紅樓夢》 *Dream of the Red Chamber* AD 1748)

A world-renowned novel from the Ming dynasty, *Journey to the West*, contained many tokens of *méiyǒu* that expressed negative existence such as the one in example (21a). But example (21a) also reveals the ambiguity involved in the expression. As subject pro-drop has been very common in Chinese, instances such as (21a) can be interpreted as 'someone does not even have a place to stay'

or that 'this place or there does not even have a place for people to stay'. If it is the former (when the subject is a human), then (21a) is a possessive structure and *méiyǒu* means 'not possess', but if the latter is true (when the sentence has a locative subject), then it is an existential construction, and *méiyǒu* means 'not exist', as it does in the sentence in (21b). The ambiguity is significant to the development of *méiyǒu* from a negative existential predicate to a verbal negator (and a standard negator). As *yǒu* 'have' can be an existential predicate and a possessive predicate, it might have provided a stepping stone for *méi* to evolve from a negative existential predicate to a standard negator. Indeed, the verb *yǒu* 'have' has been polysemous in expressing existence and possession ever since the Old Chinese period; its existential sense has been discussed in §4.1 and the examples below illustrate *yǒu* 'have' as a possessive predicate.

(23) 'Have' as possessive predicate

    a. 秦王**有**虎狼之心

      *Qin wang   **you** hu   lang zhi xin*

      Qin emperor **have** tiger wolf GEN heart

      'The Emperor of Qin is full of ambition and calculation.' (lit. 'The Emperor of Qin has a heart like the tiger or wolf.') (《史記·項羽本紀》 *Shiji* 109–91 BC)

    b. 庾子躬**有**廢疾，甚知名

      *Yu Zigong **you** feiji,   shen zhiming*

      Yu Zigong **have** disability quite well-known

      'Yu Zigong has a physical disability which is quite well-known.' (《世說新語》 *A New Account of the Tales of the World* AD 420–581)

(23a) is an example of Old Chinese, where *yǒu* 'have' is the main verb that predicates over the nominal complement, *hǔ láng zhī xīn* 'ambition' (literally, 'the heart of the tiger or wolf'), and the subject *Qín wáng*, 'King of Qin', is the possessor. Likewise, in (23b), the subject (*Yǔ Zǐgōng*) possesses a physical disability, and the verb *yǒu* denotes 'to possess'.

To summarise, the development of Chinese negation began with a highly diverse situation where more than ten negative markers actively existed in the language, and among those negative markers, at least three were productive strategies to express negative existence.

Following Croft's NEC classification, Old Chinese displayed signs of the Type A system with the second strategy (*bù-yǒu*), the Type B system with the first strategy (*wú*), as well as the B~C (or even C~A) system with the third strategy

Table 9: Old Chinese negative existential expressions

wú	can stand alone as a special form of the negative existential (Zhang 2002)
bù	can negate the existential predicate *yǒu* 'have' to express negative existence
wú	can combine with the existential predicate *yǒu* 'have' to express negative existence

(*wú-yǒu*). In other words, because *wú* was only one of the Chinese verbal negators, it should be considered as Type B~C, but its presence with the existential predicate in negative existential contexts resembles the C~A system, hence the ambiguity. These strategies for the negative existential continued to be competing alternatives in historical records until a 'novel' form, *méi*, emerged in the late thirteenth century AD. That form developed through a series of semantic extensions and bleaching from 'sink' to 'dead', and then became a form to express non-existence and general verbal negation. Therefore, *méi* initially was a special form for the negative existential and also basically a verbal negator (in other words, Type B~C).

While *méi* later became compatible with the existential predicate *yǒu* 'have' in negative existential contexts, *méi-yǒu*, similar to *wú-yǒu*, can be ambiguously interpreted as a sign of a B~C or C~A system. The sign of Type B~C is that *méi* and *bù* co-exist as standard negators in contemporary Mandarin, and the sign of Type C~A is that *méi* itself is both a negative existential predicate and a verbal negator. Its compatibility with *yǒu* 'have' could indicate that the system was moving on to the compositional Type A.

The historical development sketched in this section has important implications for the analysis of contemporary Mandarin negation. Firstly, the fact that *méi* predates *méiyǒu* in being a negative existential predicate and a verbal negator indicates that *méi* cannot be interpreted as a contracted form of *méiyǒu*. The optional presence of *yǒu* in present-day Mandarin varieties is not simply a matter of phonological fusion or reduction in the fact that *yǒu* can appear with *méi* in negative existential contexts and standard negation indicates that the existential content of *méi* may be bleached. This results in the presence of *yǒu* being acceptable and not semantically redundant; and its optionality shows that the semantic bleaching remains underway. Secondly, the development of *méi* from a negative existential predicate to verbal negation might explain why *yǒu* must be negated by *méi*, while other verbs can be negated by either *méi* or *bù*. The connection

between *méi* and *yǒu* rests in their semantic connection, that is, existence. The next section will examine the negation system of two Cantonese varieties (Hong Kong and Gaozhou Cantonese) from the perspective of the NEC. The result will not only highlight the cross-linguistic similarities and differences, but will also account for the ambiguous statuses of *wú-yǒu* and *méi-yǒu*.

5 Variation within Chinese

The connection that Croft identified between the NEC and Mandarin Chinese also exists in the Cantonese varieties of Chinese. The verb 'to have' is generally used as the existential predicate in Chinese varieties, but it has varying phonological forms in different varieties. Thus, the verb 'to have' is *yǒu* in Mainland and Taiwan Mandarin and *jau5* in Hong Kong and Gaozhou Cantonese. The existential constructions in the Cantonese varieties are illustrated in the examples below:

(24)   Hong Kong Cantonese (Yue Chinese, Sinitic)

    a. 課室度**有**鉛筆
       fosat   *dou* ***jau*** *jyunbat*
       classroom place **have** pencil
       'There are pencils in the classroom.'

    b. 課室度**唔有**鉛筆
       fosat*   *dou* ***m jau* *jyunbat*
       classroom place **not have** pencil
       'There aren't pencils in the classroom.'

    c. 課室度**冇**(***有**)鉛筆
       fosat   *dou* ***mou***   (**jau)* *jyunbat*
       classroom place **not.have have**   pencil
       'There aren't pencils in the classroom.'

(25)   Gaozhou Cantonese (Gaoyang Yue Chinese, Sinitic)

    a. 課室具[12]**有**鉛筆
       fosat   *gui*   ***jau*** *jinbat*
       classroom that.place **have** pencil
       'There are pencils in the classroom.'

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[12]The character is merely an approximation for the phonetic realisation of *gui3* because Cantonese generally lacks systematic orthography.

b. 課室具**茅有**鉛筆
   *fosat   gui   **mau (jau)** jinbat*
   classroom that.place **not   have** pencil
   'There aren't pencils in the classroom.'

Examples (24a) and (25a) above contain the existential construction in Hong Kong Cantonese and Gaozhou Cantonese in an affirmative context, respectively. Both varieties use the verb *jau5* 'to have' to express the existence of the entity denoted by its complement, which is a pencil, with reference to a location, such as a classroom. This affirmative structure is equivalent to the one found in the Mandarin varieties (12). However, the negative sentences in examples (24b) and (24c) as well as in example (25b) are notably different. Firstly, Hong Kong Cantonese has two standard negators, *m4* 'not' and *mou5* 'not.have'. These largely resemble *bù* and *méi(yǒu)* in Mandarin, but the Mandarin *yǒu* 'have' has the option to follow *méi* but *jau5* in Hong Kong Cantonese cannot co-occur with *mou5*. Examples (24b) and (24c) reveal that the only legitimate negator in Hong Kong Cantonese negative existential constructions is *mou5*, but even there the presence of the existential predicate *jau5* is strictly forbidden. In addition, Gaozhou Cantonese differs from the other three varieties in having only one standard negator *mau5* 'not'. Thus, the counterpart of Gaozhou Cantonese in example (25b) resembles the Mandarin structure except that the negator *mau5* is the only standard negator in the variety. In terms of classifying the Cantonese varieties into the NEC types, as the Hong Kong Cantonese *mou5* 'not.have' can express negative existence on its own, it can be regarded as a special form of negative existential, which means that Hong Kong Cantonese would be categorised at least as Type B. Hong Kong Cantonese *mou5* 'not.have' resembles Beijing and Taiwan Mandarin in that it can also be used as a standard negator even though this usage is subject to some restrictions, as shown in Table 10[13] as well as in example (26), which involves a non-psych stative predicate. Therefore, Hong Kong Cantonese should be Type B~C, which is the same classification as the Mandarin varieties.

(26)   Negation and a non-psych state:
       我 (唔/**冇**) 知道呢件事
       *ngo (m/??**mou**)   zidou li   gin si*
       I   not/**not-have** know this CLF event
       Intended: 'I do not know about this event.' 'I did not know about this event.'

---

[13]To recap, 'bare negatives' refer to the negative form of bare sentences with no overt aspect-marking or any type of adverbial modification.

Table 10: Bare negatives in Hong Kong Cantonese

	m4 'not'	*mou5* 'not.have'
State [+psych]	✓ 4.6	?4.2
State [−psych]	✓ 4.6	??2.6
Activity	✓ 4.6	✓ 4.7
Accomplishment	?4.2	✓ 4.5
Achievement	??2.4	✓ 4.7
Semelfactive	?4.3	✓ 5.0

From the perspective of Croft's NEC, the three Chinese varieties that have two standard negators ('not' and 'not have'), namely, Beijing Mandarin, Taiwan Mandarin, and Hong Kong Cantonese, all represent Type B~C. This means that they have a special form for the expression of the negative existential, 'not have'. Gaozhou Cantonese is different from the three other Chinese varieties examined in this study because it only has one standard negator, *mau5*. Example (27) presents the standard negation in Gaozhou Cantonese, where *mau5* occurs in a preverbal position after the subject, similar to the other varieties. The acceptability of *mau5* with various situation types is illustrated in Table 11.

(27) 我茅寫己封信
*ngo **mau** se   gei fung seon*
I   **not**   write this CLF letter
'I don't write this letter.'

I argue that standard negation in Gaozhou Cantonese is an example of Type C~A in the NEC. Gaozhou Cantonese apparently lacks a special form for the negative existential, but at the same time, the presence of the existential predicate *jau5* 'have' is optional in negative existential contexts. This indicates that *mau5* can alone express negative existence and could be developing into a special form for the negative existential. Hence, it is possible to assume that Gaozhou Cantonese is Type A~B. However, according to Zhang (2002), while *wù* declined in use in the North during the Middle Chinese period, it became the predominant form for negative existence in the South and many phonologically derived forms emerged in the southern varieties. Zhang thus proposes that the M-negators could be the result of combining *wú* – once a standard negator developed from a negative existential – and the existential predicate *yǒu* (in Cantonese, *mou4*

Table 11: Bare negatives in Gaozhou Cantonese

	mau5 'not'
State [+psych]	✓ 4.6
State [−psych]	✓ 4.7
Activity	✓ 4.6
Accomplishment	✓ 4.5
Achievement	? 3.9
Semelfactive	✓ 4.6

and *jau5*). Zhang cites a great number of Cantonese varieties as examples of this historical development, including, *mou5* in standard Cantonese (Hong Kong Cantonese included) and *mau5* in Xinyi Cantonese. This latter example is crucial precisely because (i) Gaozhou, Xinyi, and Huazhou are the three county-level cities within Maoming, the southwestern county in Guangdong Province, and (ii) the negator, *mau5*, in the Xinyi variety is identical to that in Gaozhou Cantonese.

As far as Hong Kong Cantonese is concerned, Zhang's discovery has been supported by Law (2014) where the phonological process involved is suggested to be as in Figure 3.

segmental deletion → tone re-association
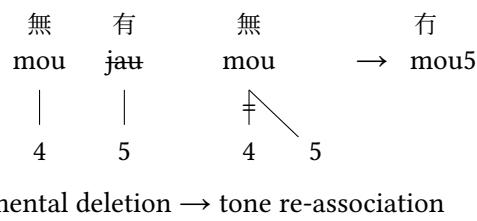
Figure 3: Hong Kong Cantonese (Yue Chinese, Sinitic): *mou5 < mou4 + jau5*

Law suggests that the marking of *mou5* involved two processes: first, the segmental information in the existential predicate *jau5* is deleted, then its tone (tone 5, the low-rising tone) is re-associated to the left, and replaces the original tone 4 of *mou4*. The result is *mou5*. Therefore, according to Law, wherever *mou5* appears, *jau5* is also present in the structure but phonologically silent (see Yue 2001 for an alternative account which argues that *mou5* is a product of *m4 + jau5*; *m* provides

the initial consonant and *jau5* provides the tone, and the vowel is influenced by the consonant). Law's (2014) analysis is supported by the reconstruction results in Norman (1988) and Schuessler (2007). Norman (1988: 213) notes that many M-negators in Chinese southern dialects are developed from 無 *wù* and new negators are formed by the fusion of *wù* and *yǒu* (Hong Kong Cantonese *mou4* and *jau5 > mou5*). Schuessler (2007: 518–519) further suggests that *wù* developed to express negative existence or the meaning of 'not have' in general (including negative possessive) during the Western Zhou period (1027–771 BC), and it later replaced all other forms with similar functions. Hence, 無 *wù* is most probably the source of the negative existential and standard negator *mou5* in contemporary Hong Kong Cantonese.

If Law's (2014) phonological analysis is well-founded and Zhang's observation on Xinyi Cantonese *mau5* is also applicable to Gaozhou Cantonese, they would carry two important implications. Firstly, the Gaozhou Cantonese *mau5* is also a standard negator that has developed from the negative existential, similar to the other three varieties – *méi(yǒu)* in Beijing and Taiwan Mandarin, and *mou5* in Hong Kong Cantonese. In that case, Gaozhou Cantonese should not belong to Type A~B, but is a typical example of Type C~A. As *mau5* alone can express negative existence, and acknowledging Zhang's account that *mau5* is derived from *mou4 + jau5* 'not [=not.have] + have', *mau5* itself is an example of a special form of the negative existential that has developed into a verbal negator. Indeed, the Gaozhou Cantonese data support this account: in terms of negation-viewpoint compatibility, *mau5* resembles *méi(yǒu)* and *mou5* in being able to appear with the experiential viewpoint *gwo3*. This would be unexpected if *mau5* 'not' should be patterned with the 'not' negator of the other varieties, such as *bù* and *m4*. The major difference between Gaozhou Cantonese and the other three Chinese varieties is that this derived verbal negator is not only a standard negator but also the general negator in the variety. Once the existential predicate *jau5* can once again appear with this derived negator (such as *mau5*) in negative existential contexts, it would indicate that the negation system in Gaozhou Cantonese has moved to a full cycle, that is, C~A; this is indeed the case as seen in example (25b). The second point concerns the difference between *méi(yǒu)* in the Mandarin varieties and *mou5* in Hong Kong Cantonese. As classified above, Hong Kong Cantonese and the Mandarin varieties all belong to Type B~C, but unlike its Mandarin counterpart, *mou5* cannot occur with *jau5* as illustrated in (24c). This restriction not only applies to negative existential structures (such as when *jau5* is an existential predicate), but occurs across the board – whenever *mou5* is present *jau5* must not, as shown in (28):

(28) Hong Kong Cantonese (Yue Chinese, Sinitic) *jau5* 'have'

　　a.　Existential negation: 課室度冇(*有)鉛筆
　　　fosat　　*dou*　**mou**　　*(*jau) jyunbat*
　　　classroom place **not.have have**　pencil
　　　'There aren't pencils in the classroom.'

　　b.　Possessive negation: 我冇(*有)鉛筆
　　　ngo **mou** *(*jau) jyunbat*
　　　I　　**not　have**　pencil
　　　'I do not have/own pencils.'

　　c.　Standard negation: 我冇(*有)知道呢件事
　　　ngo **mou**　　*(*jau) zidou li　gin si*
　　　I　　**not.have have**　know this CLF event
　　　'I did not know about this event.'

This would be expected if we follow the phonological account proposed by Law. The process applies indiscriminately to all syntactic structures precisely because *jau5* is phonologically merged with *mou4*. The Mandarin *méi*, on the other hand, did not undergo the same phonological fusion process. *Méi* developed into a negative existential predicate in Mandarin through a series of semantic changes. These went from 'to sink/submerge' which leads to the natural result of drowning and death (hence 'to be dead') and later extended to mean 'the end of something' which could develop from the idea of death being the end of life. The meaning of 'end of something' or 'something being extinguished or perished' can easily develop into the idea of non-existence, i.e. negative existence. Veselinova (2013) identified three major sources in her typological study of negative existentials and these are summarised in Table 12 (adapted from Veselinova (2013: Table 7)):

Table 12: Summary of the origins of negative existentials

Sources		Number of languages
(i)	Univerbation of standard negator and another word	17 (27.0%)
(ii)	Lexical item with a negative content	25 (39.7%)
(iii)	Formally identical with SN (origin unknown)	21 (33.3%)

Following Veselinova (2013), the Old Chinese *wù* and the present-day Mandarin *méi* are examples of the second source of negative existentials because

they are lexical items with a negative content – *wù* means 'absent' and *méi/mò* can mean 'dead', and both are common lexical sources for negative existentials in her typological study.[14] In contrast, the evolution of *mou5* and *mau5* in the two Cantonese varieties belong to source (i) where the negative existential was derived from the former standard negator *mou4* (*wú* in Mandarin) and the existential predicate *jau5* 'have'. The fact that *méi* never contained a 'have' element made it possible to appear with the existential predicate *yǒu*. By comparison, since *mou5* itself has evolved from *mou4-jau5*, co-occurrences of *mou5* and *jau5* in present-day Hong Kong Cantonese are blocked due to their structural clash and semantic redundancy. Comparing the two Cantonese varieties, the possible though optional appearance of *jau5* with *mau5* for negative existence and negative possession indicates that the semantics of *mau5* has been further bleached to the extent that its original meaning as a negative existential has been considerably weakened, whereas the sense of negative existence remains prominent in the *mou5* of Hong Kong Cantonese.

6 Conclusion

To summarise, this paper has based its arguments on historical evidence (from Old Chinese to Modern Mandarin and Cantonese) that Croft's (1991) Negative Existential Cycle, which postulates the connection between negation and the existential predicate as a source for the evolution of general verbal negators, is indeed attested in Chinese history and in various Chinese varieties to date. Thus, according to the NEC classification, Beijing and Taiwan Mandarin as well as Hong Kong Cantonese belong to the transition Type B~C where *méi* and *mou5*, respectively, are special forms of the negative existential which have extended their use to general verbal negation but have not been generalised to the whole grammatical system; *méi* and *mou5* co-exist with *bù* and *m4* as standard negators in Mandarin and Hong Kong Cantonese, respectively. Gaozhou Cantonese, unlike the others, has a general negator *mau5*, which this paper suggests, following Zhang 2002 and Law 2014, to have derived from *mou4* (once a special form for the negative existential) and the existential predicate *jau5*. Since Gaozhou Cantonese allows the existential predicate *jau5* 'have' to optionally appear with *mau5* even in negative existential contexts, I argue that Gaozhou Cantonese is an example of Type C~A, which means that *mau5* has had its existential content sufficiently bleached that it has become a normal verbal negator, and is therefore compatible

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[14]Veselinova (2013) mentions several common lexical origins for negative existential predicates: 'lack', 'absent', 'there is not', 'empty', and 'dead'.

with the existential predicate without creating redundancy or clashes. The historical development and the attestation of the NEC in the four Chinese varieties provide solid evidence for the strong connection of *méi* in Mandarin varieties, *mou5* in Hong Kong Cantonese, and *mau5* in Gaozhou Cantonese to the concept of (non-)existence. This connection to non-existence not only explains the interpretations that these negators generate in bare negatives, but also introduces a new understanding of the nature of these negators; they are not perfective negators but negators that assert non-existence.

Abbreviations

CLF	classifier	LOC	locative
COMPL	completive aspect	PFV	perfective aspect
EXP	experiential aspect	PRO	pronoun
GEN	genitive	PRT	particle
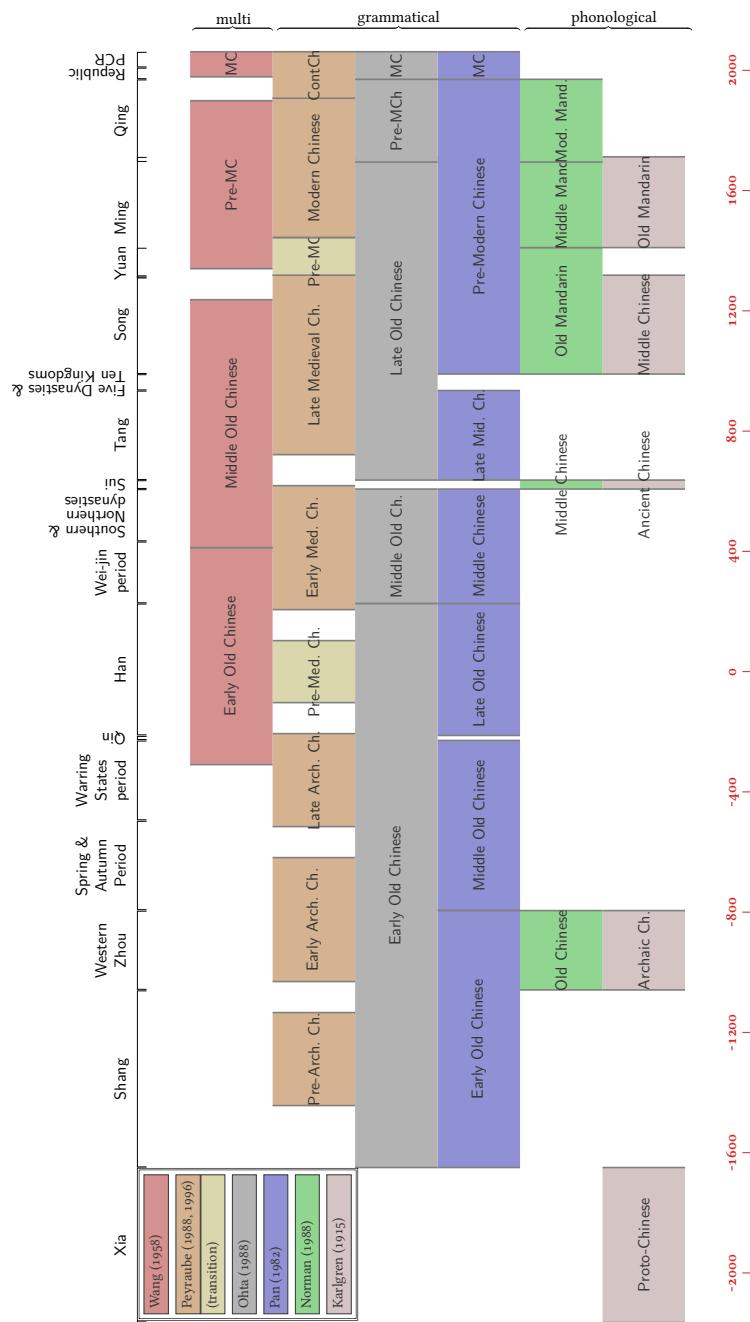
Acknowledgements

Appendix A Periodisation of the Chinese language

Table 13: Proposed periodisation of the Chinese language

Dynasty/Era	Capital city (Present-day location)	Phonological periodisation		Grammatical periodisation		Multi-criteria	
		Karlgren 1915	Norman 1988	Pan 1982	Ohta 1988	Peyraube 1988	Wang 1958
Xia *ca. 2100-1600BC*		**Proto-Chinese** (period before literary record)				**Shanggu Hanyu** 'Early Old Chinese', period before 3rd c. AD *Transition:* 3rd - 4th c. AD	
Shang *ca. 1600-1028BC*	Bo (Shangdong); Yin (Anyang)			Early Shanggu Hanyu (Early Old Chinese)	Shanggu Hanyu (Early Old Chinese)	Pre-Archaic Chinese 14th - 11th c. BC	
Western Zhou *1027-771BC*	Gaojing (Xi'an); Luoyi (Luoyang)	**Archaic Chinese**	Old Chinese, a.k.a. **Shanggu Hanyu** ca. 1000BC (compilation of *Shijing*)			Early Archaic Chinese 10th - 6th c. BC	
Spring & Autumn period *770-481BC*				Middle Shanggu Hanyu (Middle Old Chinese)			
						Late Archaic Chinese 5th - 2nd c. BC	
Warring States period *480-222BC*							
Qin *221-207BC*	Xianyang						
Han *206BC-AD220*	Changan (Xi'an)			Late Shanggu Hanyu (Late Old Chinese)		*Transition:* Pre-Medieval Chinese 1st c. BC-1st c. AD	
						Early Medieval Chinese 2nd - 6th c.	
Wei-Jin period *AD220-420*	Luoyang			Zhonggu Hanyu (Middle Chinese)	Zhonggu Hanyu (Middle Old Chinese)	**Zhonggu Hanyu** 'Middle Old Chinese' 4th - 12th c.	
Southern & Northern dynasties *420-589*	Jiankang (Nanjing); Changan (Xi'an)						
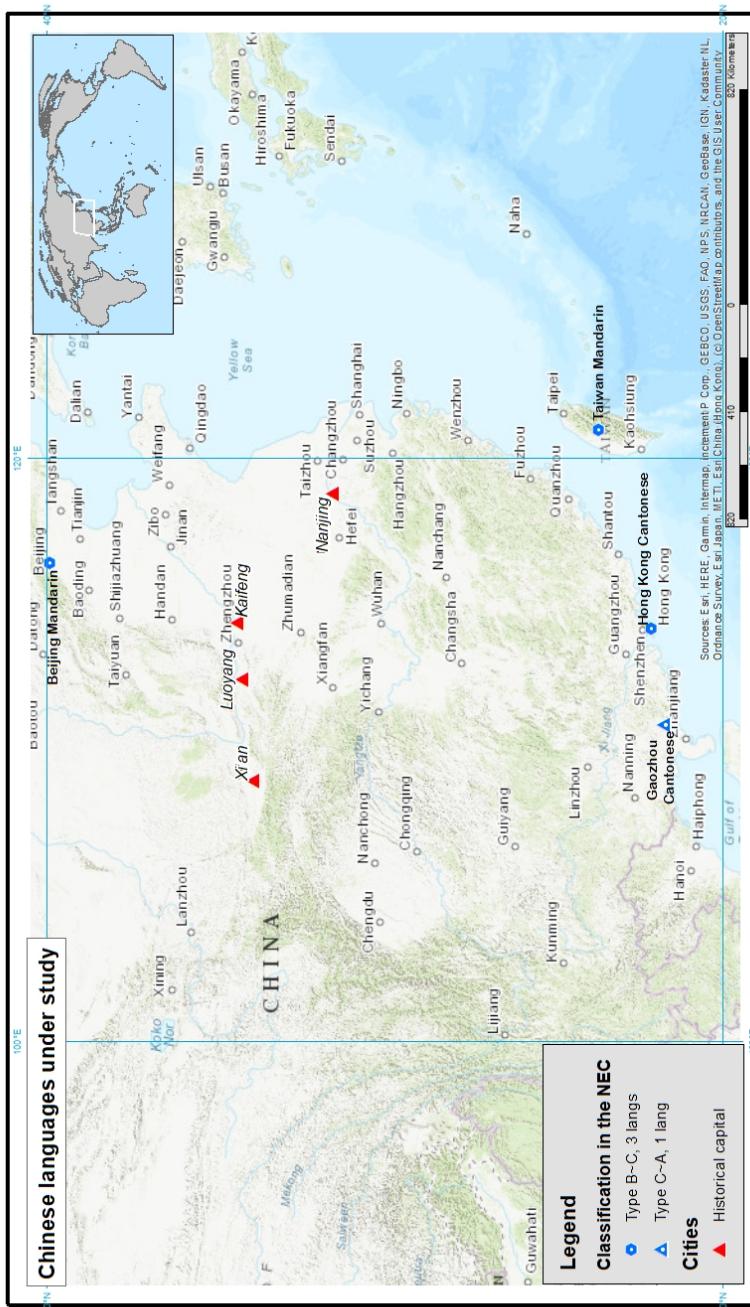
Figure 4: Location of the historical capital cities and four contemporary Chinese varieties examined (cf. Zhou 1995, Wan 1958)

Appendix B Data on the historical texts selected

Table 14: Basic information on the selected texts

	Texts	Year of compilation	Possible location of the koine represented	Total no. of words in text
I	《論語》 The Analects	480-350BC	Luoyang, Henan	12 700
II	《史記》 Shiji	109-91BC	Xi'an, Shaanxi	526 500
III	《三國志》 Records of the Three Kingdoms	AD 265-300	Luoyang, Henan	350 833
IV	《世說新語》 A New Account of the Tales of the World	420-581	Nanjing, Jiangsu; Xi'an, Shaanxi	68 967
V	《太平廣記》 Taiping Guangji	977-978	Kaifeng, Henan	1 782 000
VI	《朱子語類》 Zhuzi Yulei	1270	Kaifeng, Henan	1 973 905
VII	《西遊記》 Journey to the West	1520-1580	Nanjing, Jiangsu; Beijing	589 137
VIII	《紅樓夢》 Dream of the Red Chamber	1784	Beijing	731 017

Table 15: Number of occurrences of different [NEG-yǒu] 'NEG-have' in the texts

Texts	勿 wù	毋 wú	弗 fú	匪 fěi	非 fēi	未 wèi	微 wēi	蔑 miè	莫 mò	不 bù	無 wú	沒 méi	Total no. of [NEG+yǒu] tokens
I	0	0	0	0	0	2	0	0	0	3	0	0	5
II	0	12	0	1	34	76	0	0	2	15	31	0	171
III	2	0	0	0	11	67	0	0	10	6	10	0	106
IV	0	0	0	0	0	20	1	0	9	4	6	0	40
VI	2	0	0	0	52	420	37	0	16	94	134	1	756
VII	0	0	0	0	2	4	1	0	1	4	8	69	89
VIII	0	0	0	0	1	7	5	0	0	7	9	801	830

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Chapter 10

Non-verbal negation markers and the Negative Existential Cycle in Bashkir and Kalmyk with some typological parallels

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The Negative Existential Cycle presupposes involvement of negative existentials in a cyclical process whereby negative markers evolve. The aim of this paper is to show that negative markers used with noun phrases can also change their functions and, in particular, transform into verbal negators. As evidenced by Turkic languages, non-verbal negators can be used with future and some past forms as an alternative to verbal negators or instead of them. In Central Mongolic, a negative marker that was initially used as a negative existential first evolved into a nominal negation marker and then intruded into the verbal system, becoming a standard negation marker. At the same time, in Kalmyk an ascriptive negator competes with it as a verbal negator. It should be noted that similar phenomena are found cross-linguistically in genealogically different languages. At first, the markedness of the non-verbal negators contributes to their emphatic meaning in such uses, but their frequent co-occurrence with certain verbal forms can further result in them replacing a verbal negator and becoming the only negator used with these forms. Secondly, we aim to show that changes in a language system of negative markers do not necessarily close a cycle but sometimes shape a "tree", where a new element shares functions with older elements of the system, launching a new "branch" of changes, independent of the main line.

1 Introduction

1.1 General notes

As shown in Veselinova (2016), the Negative Existential Cycle (NEC) is rarely completed. Most of the sampled languages examined in her paper turned out to be at stages with variation. Even in cases when the system has already restructured completely, the former standard negation (SN) markers remain on the "periphery" of the syntax ("constructualized negation" in Payne 1985). In this paper, we argue that the scenario of the changes within the Negative Existential Cycle should include, along with negative existentials, other non-verbal negators. These are constituent negator for nouns, ascriptive negation and possessive negation markers defined further below. As demonstrated by Mongolic and Turkic languages, such markers can participate in the NEC as well, occupying their own functional niche in competition with other negators. The aim of this study is to reveal these functions and to explain what ensures stability of systems where different negators – both verbal and non-verbal – co-exist.

A special type of the use of non-verbal negative markers as SN is the intrusion of nominal negation. Payne (1985: 228) mentioned rare cases when the marker of sentential negation has nominal properties (see also Miestamo 2017). For instance, Nadëb (mbj, Makú) has a nominal negator *dooh*, which functions as a SN marker (Weir 1994: 294–295). At the same time, this grammaticalization path includes a category change and extending functions of the negation marker, so that it may acquire new properties.

Therefore, it is reasonable to say that we need to rethink the diachronic change of non-verbal negation based on Croft's seminal article (1991) to include in the discussion some other types of inroads of non-verbal negation into the sphere of use of standard negation. Moreover, we will show that there can be two or more processes of incorporation of different types of non-standard negation into the verbal negation system, which can influence each other and do not form separate cycles. The intrusion of non-existential, non-verbal negation into the domain of SN develops in conformity with a previous process of the expansion of existential negation and *vice versa*.

According to Payne's (1997) classification, there are six types of nominal predicates: proper inclusion, equation, attribution, location, existence and possession. The literature on negation mostly establishes a reduced distinction between adjectival, nominal and locative predicates only (see Dryer 2007). The classification that is most relevant to our purpose is that of Ljuba Veselinova (2015). According to Veselinova (2015: 550), negative counterparts for predication without a verbal

predicate – i.e. negators different from SN – are used for ascriptive (negation of the sentences with a nominal or adjectival predicate conveying the meanings of class inclusion, quality or a temporary state), locative, existential and possessive negation.

To test our hypothesis on the involvement of different non-existential non-verbal negators in the development of verbal negation, we will draw upon data of several types. Thus, this article consists of two parts: in the first part, we present and analyse in detail the data of two Mongolic and Turkic languages, Bashkir (bak) and Kalmyk (xal), where non-verbal negative markers different from negative existentials intrude into the system of verbal negation. Being acquainted with these languages through long-term fieldwork, we hope to be able to comprehensively depict their systems of negators, as well as the more subtle aspects of their use. In the second part of the article, we discuss cases of some other languages of the world in which a similar phenomenon – intrusion of a non-verbal negative marker different from the existential negator into the system of verbal negation – is observed, and try to find regularities in the use of non-verbal negators as verbal negators. It should be noted that this phenomenon has not been examined before, and there are no systematic typological studies on this issue so far. Based on our fieldwork data and several descriptions of the attested phenomenon from grammars of other languages, we thus provide a first description and tentative analysis of this pattern.

Following the first, introductory section, in §2 the data on the use of non-verbal negative markers in Bashkir and closely related Turkic languages is presented. §3 treats the evolution of the ascriptive and existential negation markers of Kalmyk due to changes in the system of Mongolic negation. §4 offers an analysis of examples of the intrusion of non-verbal negative markers different from negative existentials into the system of verbal negation that we found in grammars of genealogically different languages, namely Bornean languages and Egyptian Arabic. In Section 5, we identify and discuss some cross-linguistic regularities regarding this intrusion.

The main conclusion of the article is that the negators normally used for nominal negation and other non-verbal non-existential negative markers, when used as verbal negators, are still associated with some more specific meanings (such as emphatic negation), which determines their predominant use with certain verbal forms, ensuring the stability of systems where verbal and non-verbal negative markers co-exist and do not replace each other.

1.2 Data and context

Bashkir belongs to the northern subgroup of the Kipchak branch of Turkic languages, and genealogically it is closest to Tatar. The Bashkir people were first mentioned in the 10th century. Up to the 19th century they shared the same literary language, Volga Turki (Old Tatar, Old Bashkir), a regional variant of Turki, with the Tatars. Volga Turki used an alphabet that was based on Persian Arabic script. Spoken Volga Turki, however, had regional varieties specific to the different ethnic groups that used it. Starting from the 1920s, a literary Bashkir language formed. Initially, it continued to be written in an alphabet based on the Arabic script; this was revised in 1923. It was replaced with a Latin-based alphabet in 1930, and in 1940 an expanded Cyrillic alphabet was adopted, which has been used till the present day (Yuldashev 1981: 11–12).

Currently Bashkir is the co-official (together with Russian) language of the Republic of Bashkortostan in central Russia, west of the Urals. It is also spoken in neighbouring regions, with a total number of approximately 1,200,000 speakers. There are three major dialects: Southern, Eastern and North-western; the first two are very similar and have served as the basis for the literary language.

Bashkir field data was collected in Rahmetovo and Baimovo, two villages in the Abzelilovsky region of the Republic of Bashkortostan, in 2011–2016. It consists of the texts from the corpus of oral texts recorded, transcribed and glossed during the field trips, and elicited sentences collected by using questionnaires. As an additional source, texts from the Folklore Archive of Bashkir State University (http://lcph.bashedu.ru/editions/efolk.php?go=folk_id.28) were used. In order to ensure compatibility, only those folklore texts recorded in the Abzelilovsky region were taken into account. In addition, some constructions and forms were retrieved from the Internet. Kalmyk or Oirat (spoken in the Republic of Kalmykia, Russian Federation) belongs to the Western branch of the Mongolic language family and has a total number of approximately 80,000 speakers. In the 17th century, Kalmyk Oirat split off from other Oirat dialects (as are spoken today in parts of Xinjiang and Inner Mongolia, China, the western part of Mongolia and Issyk Kyl province, Kyrgyzstan) and migrated into the current area of the steppe near the Volga River.

The major dialects of Kalmyk (Dörbet, Torghut and Buzava) are close to each other, except for small lexical variations. The standard language is mostly based on the Dörbet dialect. Kalmyk is an official second language in the Republic of Kalmykia.

Kalmyk field data was collected in the Ketchenerovsky region in the Republic of Kalmykia in 2006–2008 and 2014–2015. Data was collected via questionnaires and in the form of oral narratives, which have been compiled as a small corpus of Spoken Kalmyk in Toolbox (approximately 17,000 words). Other sources for Kalmyk are two online corpora and publications of several Written Oirat / Old Kalmyk texts. The relatively small Kalmyk National Corpus by A. Vankaeva (KNC, http://web-corpora.net/KalmykCorpus) consists of 800,000 words. The National Corpus of Kalmyk Language (NCKL, http://kalmcorpora.ru) comprises approximately 8 million words of various text types. Written Oirat is the language of historical documents written in the Todo bichig "Clear Script" in the 17th–19th centuries (see Rákos 2015), and the subset of such texts written in Kalmykia can be termed Old Kalmyk. Here we use three source collections originally written in Todo bichig script over the span of one century: letters of Ayuki Khan and his circle (1710–1714; Suseeva 2003), letters of Dunduk-Dashi Khan (1741–1761; Kokshaeva 2011), and letters from different correspondents to Isaac Jacob Schmidt, a missionary and translator of the Bible into Kalmyk in the early 1800s (Krueger & Service 2002).[1]

Both Bashkir and Kalmyk have a complex morphology with a rich system of suffixes for both nouns and verbs. The morphology is agglutinative, using affixes, and there are a lot of periphrastic constructions consisting of auxiliary verbs and various participles and converbs to express TAME meanings. Complex verbs formed by a converb and head verb play an important role in expressing different, mostly aspectual, meanings. Syntactically, they are characterized by SOV word order.

2 Use of nominal negative markers with verbs in Turkic languages

2.1 General description of negation in Bashkir

There are two ways to express negation in Bashkir: morphologically and syntactically. Along with verbal suffixes, negation can be expressed by negative copulas,

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[1]We use transcriptions for our own data from texts and questionnaires, as well as for sentences from the online corpora. Examples from grammars and other publications are given in the author's or editor's transcription and with author's/editor's translations, while parsing and glosses are ours. We translate sources in Russian into English.

that is, by auxiliaries performing a supportive function with non-verbal predicates (following Hengeveld 1992).[2] The SN marker in Bashkir is *-ma* (*-mä*):

(1) Bashkir (questionnaires)[3]

  a. *Kärim kitap uqə-j.*
      Karim book read-IPFV
      'Karim is reading a book.'

  b. *Kärim kitap uqə-ma-j.*
      Karim book read-NEG-IPFV
      'Karim is not reading a book.'

If forming part of a derivational stem, the suffix *-ma* can be kept in a derived word, such as a deverbal noun (2):

(2) Bashkir (questionnaires)
     fakt-tar-ðəŋ döröθ   bul-ma-w-ə
     fact-PL-GEN truthful be-NEG-NMLZ-P.3
     'unreliability of facts'

Along with the verbal suffix *-ma* (*-mä*), three are other verbal negative suffixes in Bashkir: a negative suffix of the so-called "potential" future (Dmitriev 1948: 148) participle *-maθ* (*-mäθ*) and a suffix of the negative converb of attendant circumstances *-majənsa* (*-mäjensä*). The suffixes *-maθ* and *-majənsa* have developed from a combination of the SN marker *-ma* with other suffixes and subsequent phonological changes. The former (*-maθ*) derives from *-ma* and the suffix of the "potential" future *-r*, which later underwent the phonological change $r \rightarrow ð \rightarrow θ$ typical of Turkic languages (Dmitriev 1948: 149). The following pair of sentences illustrates the use of affirmative and negative "potential" future forms:

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[2]According to Hengeveld, strictly speaking, one can distinguish between two subclasses of such auxiliaries, copulas (in a narrower sense) and semi-copulas. The first ones are semantically empty, while the second ones are not, i.e. the difference between the subclasses consists in that "the semi-copula adds an element of meaning to the construction in which it occurs, whereas the copula does not" (1992: 35). In this vein Bashkir negative predicators are actually semi-copulas. However, for the sake of brevity, we will call them copulas in a broader sense and gloss respectively, which is not an exceptional situation – even Hengeveld himself, "in a rather loose way" (1992: 32), calls auxiliaries of the both subclasses copulas throughout his book.

[3]Unless otherwise mentioned, all examples from Bashkir present the authors' own data.

(3) Bashkir (questionnaires)

    a. *Min Mäskäw-gä   kit-er-gä   ula-j-əm.*
       I   Moscow-DAT leave-POT-DAT think-PRS-1SG
      'I think I will go to Moscow.'

    b. *Min Mäskäw-gä   kit-mäθ-kä   ula-j-əm.*
       I   Moscow-DAT leave-NEG.POT-DAT think-PRS-1SG
      'I think I will not go to Moscow.'

The etymology of *-majənsa* is not so clear. Analysing forms in *-majənsa* as negative equivalents of the converb in *-ɣansa* (Dmitriev 1948: 188) is probably inappropriate, at least for data from Rahmetovo Bashkir. Indeed, *-majənsa* does not seem to paradigmatically or formally correspond to any affirmative form, and it is perhaps best considered as an independent converb marker expressing the absence of secondary action (as discussed in detail in Mishchenko 2011). This is seen in (4) and (5):

(4) Bashkir (questionnaires)
  Min däres-kä   kil-de-m   kitap-tə uqə-majənsa.
  I   lesson-DAT come-PST-1SG book-ACC read-NEG.CVB.ATT
  'I came to the lesson without having read the book.'

(5) Bashkir (questionnaires)
  Qəð beje-mä-j   / + beje-mäjensä   malaj jərla-j.
  girl dance-NEG-PRS dance-NEG.CVB.ATT boy   sing-PRS
  'The boy is singing, while the girl is not dancing.'

All this shows that the suffixes *-maθ* and *-majənsa* are not negative markers proper but rather cumulative markers expressing certain TAME meanings along with negation. They are strictly limited to some specific contexts and therefore do not bear on the focus of this article.

2.2 Non-verbal negation

The group of unbound morphemes expressing negation in Bashkir consists of the negative copulas *juq* and *tügel*.[4] The first one is a negative existential predicator.

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[4]In an unpublished report on fieldwork (Mishchenko 2011), it is argued that one should postulate two homonymous units *tügel* at the synchronic level, particle and copula, because of the differences in their syntactic functions. However, it is not the only possible interpretation; *tügel* can be regarded as a single polyfunctional negative marker as well. Here we will not touch upon this question and will regard *tügel* in all types of use as one and the same unit.

The range of meanings it can express includes existential negation (6), negative "presentative" possession (in the sense of Hengeveld 1992), and "indefinite" possession (in the sense of Stassen 2009) (7), alongside negative non-presentative locative meanings (8). Paradigmatically, it is a negative equivalent of the affirmative existential copula *bar*.

(6) Bashkir (questionnaires)
Aš-həw-ða   öθtäl juq.
food-water-LOC table NEG.EX.COP
'There is no table in the kitchen.'

(7) Bashkir (questionnaires)
Mineŋ mašina-m   juq.
I.GEN car-POSS.1SG NEG.EX.COP
'I haven't got a car.'

(8) Bashkir (questionnaires)
Mineŋ kitab-əm   öθtäl-dä   juq.
I.GEN book-POSS.1SG table-LOC NEG.EX.COP
'My book is not on the table.'

As shown in Mishchenko (2017), in the latter meaning *juq* competes with the second negative copula, *tügel*. The choice of a copula depends on the information structure of the clause. If a location is the topic, then the copula *juq* is used, cf. (9). If, by contrast, the topic is a localized object while the location is a comment, then the copula *tügel* will be chosen instead as shown in (10):

(9) Bashkir (questionnaires)
Mineŋ keθä-m-dä   täŋkä juq.
I.GEN pocket-POSS.1SG-LOC coin   NEG.EX.COP
{– That coin I gave you, is it in your pocket? – No,} 'there is no coin in my pocket.'

(10) Bashkir (Mishchenko 2017: 138)
Ɉuq,   min Räxmät-tä   tügel.
NEG.EX.COP I   Rahmetovo-LOC NEG.COP
{(Talking on a cell phone:) – Hello, where are you, are you in Rahmetovo?} '– No, I am not in Rahmetovo.'

One can find *tügel* connected with the expression of contrastive focus: for example, 'Rahmetovo' in (10) can be presented as that contrasting current location of the subject, as opposed to other possible locations.[5] Since such contrasts are sometimes irrelevant (especially outside a wider context), the negators can be mutually interchangeable:

(11) Bashkir (Mishchenko 2017: 138)
    Min kisä-ge   šəltəra-t-qən-da   äsäj   eš-tä   tügel
    I   yesterday-ADJ ring-CAUS-PTCP.PST-LOC mother work-LOC NEG.COP
    ine   / juq   ine.
    be.PST NEG.EX.COP be.PST
    'Yesterday, when I phoned, my mom wasn't at work.'

It is also interesting that the copula *juq* can be used for negating predicates referring to age, in which a regular negator is *tügel* (12). But this usage is only possible in a specific situation: when expressing a scalar meaning of unachieved age (13a). And even in this case, *tügel* is possible, as seen from (13b):

(12) Bashkir (Mishchenko 2017: 138)
    Morat-qa   ös   jäš tügel,   ä biš jäš Ø.
    Murat-DAT three year NEG.COP but five year COP
    'Murat isn't three, he is five years old.'

(13) Bashkir (Mishchenko 2017: 139)

    a. *Min Öfö-gä bar-ɣan-da   un biš juq   ine.*
       I   Ufa-DAT go-PTCP.PST-LOC ten five NEG.EX.COP be.PST
       'When I went off to Ufa, I wasn't even 15 years old.' (lit. I wasn't 15 years old)
    b. *Min Öfö-gä bar-ɣan-da   un biš tügel   ine.*
       I   Ufa-DAT go-PTCP.PST-LOC ten five NEG.COP be.PST
       'When I went off to Ufa, I wasn't even 15 years old.' (lit. I wasn't 15 years old)

The capability of *juq* to be used in such "scalar" contexts is understandable if one interprets reaching a certain age as its subsequent existence. Thus, the non-existence of the unachieved age is expressed by means of *juq*, as in (13a).

To return to existential contexts, it is important to note that the use of the negative existential depends on the tense and referential status of the NP in subject/

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[5]As Ljuba Veselinova rightly notes, the same is true for its Turkish cognate *değil*.

object position. While *juq* is the only possibility when referring to the present (cf. (6)), with future time references only a verbal strategy with the verb *bul-* 'to be' and the standard negator can be used (14):

(14) Bashkir (questionnaires)
      Donja-la   bal   qort-o   bötön bul-ma-jasaq.
      world-LOC honey worm-POSS.3 whole BE-NEG-FUT
      'Soon there will be no bees in the world.'

For past time references, both copula-based and verbal strategies are employed, depending on the communicative status of the NP in subject/object position:

(15) Bashkir (questionnaires)
      Mindä at   juq   ine.
      I.LOC   horse NEG.EX.COP be.PST
      'I didn't have a horse.'

(16) Bashkir (questionnaires)
      Min awəl-da   jäšä-gän-dä   traktor-əm   bul-ma-nə.
      I   village-LOC live-PTCP.PST-LOC tractor-POSS.1SG be-NEG-PST
      'When I lived down in the country, I didn't have my tractor.'

In terms of the difference between sentences like (15) and those like (16), in sentences of the former type there is a generic NP in a subject position, while in sentences of the latter type the NP expressing a possessee is specific and definite.

Thus, in this respect Bashkir should be classified as a language of A B type in NEC (Veselinova 2016): the negative existential *juq* is used in the present tense (6) and the SN marker *-ma-* is used in the future (14), while in sentences with past reference both negators are possible, and the choice depends on the referential status of the subject, as seen in (15) and (16).

The main sphere of use of the negative copula *tügel* comprises sentences with a referential predicate, that is, a predicate based on terms (referring to expressions with a nominal head) and larger referential units (predications, propositions, clauses) (Hengeveld 1992: 77–91), such as (17):

(17) Bashkir (questionnaires)
      Min jað-əw-sə   tügel   / tügel-men.
      I   write-NMLZ-AG neg.COP neg.COP-1SG
      'I am not a writer.'

Example (17) also illustrates the fact that, as distinct from *juq*, *tügel* can option-ally agree with the subject in person and number. All the interviewed speakers considered forms of *tügel* bearing a suffix of person and number agreement to be grammatical, although they do not generate similar forms themselves.

Other meanings of *tügel* include localization at a particular point on the time axis (for example, on a particular date, day of week, or at specific time of day) (18), inner states and states of environment (19), and "non-presentative" posses-sion (Hengeveld 1992) or "definite" possessive (Stassen 2009) (20) meanings. The copula *tügel* also competes with *juq* when expressing a non-presentative locative meaning and a meaning of age, as was shown above. In present tense affirmative sentences of this type, there is a zero copula.

(18) Bashkir (questionnaires)
Ǯəjələš kisä-gä tügel ine, ä joma kön-dö bul-də.
meeting yesterday-DAT NEG.COP be.PST but Friday day-ACC be-PST
'The meeting was not yesterday, but on Friday.'

(19) Bashkir (questionnaires)
Uram-da həwəq tügel.
street-LOC cold NEG.COP
'It is not cold outside.'

(20) Bashkir (questionnaires)
Bəl urən hineke tügel.
this place you.POSS NEG.COP
'This place isn't yours.'

Broadly stated, the distribution of negative copulas in the Bashkir non-verbal sentences can be formulated as follows: *juq* negates existence of a generic entity, while *tügel* negates identity between the object and a referential unit. This prop-erty of *tügel* manifests in non-sentential use as well. Apart from copulative use, *tügel* can be employed for constituent negation, as, for example, in (21):

(21) Bashkir (questionnaires)
Min ður tügel alma aš-tə-m.
I big NEG.COP apple eat-PST-1SG
'I ate a small [lit. not big] apple.'

The scope of *tügel* following an NP can include only part of it, for example, an adverb, like *bik* 'very' in (22):

(22) Bashkir (questionnaires)
bik=ük   aqəllə   tügel   keše
very=same intelligent NEG.COP person
'not a very intelligent person'

2.3 Negative copulas in verbal clauses

What is especially important for the purposes of this article is the capability of negative copulas to be used in some verbal clauses. In Bashkir, the existential copula *bar* is used with the so-called past participle (which in modern Bashkir can be the head of the main – or only – clause) to express experiential meaning (23) or some perfect meanings. As a negative equivalent of *bar*, *juq* is used in corresponding negative sentences (24):

(23) Bashkir (questionnaires)
Min unə   osra-t-qan-əm   bar.
I   that.ACC get-CAUS-PTCP.PST-P.1SG there.is
{– Have you ever met my sister? –} 'I have met her.' (roughly 'there is my having met her')

(24) Bashkir (questionnaires)
Unda   ber qasan=da   bul-ɣan-əm   juq
that.LOC one when=EMPH be-PTCP.PST-1SG NEG.EX.COP
/²? bul-ma-ɣan-əm.
be-NEG-PTCP.PST-1SG
'I have never been there.'

A similar situation is found in other Turkic languages; see examples from Tatar (tat) (25) and Uzbek (uzb) (26):

(25) Tatar (Poppe 1961: 126)
Anə   hich kür-gän-em   jük.
that.ACC never see-PTCP.PST-1SG NEG.EX.COP
'I have never seen him.'[6]

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[6]Here and throughout this section, examples borrowed from grammars are given with our glosses and original translation; the spelling and punctuation of the original are kept.

(26)   Uzbek (Sjoberg 1963: 123)
       Men kor-gan-im   yoq.
       I   see-PTCP.PST-1SG NEG.EX.COP
       'I didn't see.'

Therefore, in this respect, Bashkir and the other Turkic languages in which negative existentials can be used in similar past tense constructions should be classified as belonging to the B C type. Hence, Bashkir is situated simultaneously at stage A B and B C, depending on which part of its negation system is concerned.

However, it is not only the negative existential *juq* that intrudes into verbal negation. The non-verbal negator *tügel* participates in forming negative finite verbal clauses as well. Thus, in Bashkir, as an alternative to the regular verbal negation of future forms, nominal negation can be used; for example, see:

(27)   a.   Bashkir (questionnaires)
            Ul   miŋä aqsa   bir-mä-jäsäk.
            that I.DAT money give-NEG-FUT
            'He will not give me the money.'

       b.   Bashkir (Say 2017: 349)
            Ul   miŋä aqsa   bir-äsäk tügel.
            that I.DAT money give-FUT NEG.COP
            'He will not give me the money.'

It is worth noting that the future form *-asak(-jäsäk)* is etymologically a participle (Dmitriev 1948: 152), even though in modern Bashkir it is used almost exclusively as a finite form and has lost the attributive use. The origin of this form thus explains its compatibility with the non-verbal negator *tügel*.

It seems that in Bashkir there is no semantic difference between the two variants, a future form negated by a SN marker or non-verbal negator. However, the situation is different in Turkish (tur). Here, future verbal forms that are negated by nominal negation are interpreted as expressing a kind of higher degree of confidence. Compare neutral (28a) with the SN marker and emphatic (28b) with a nominal negation marker:

(28)   Turkish (Ketrez 2012: 244)

       a.   *Size   inan-**ma**-yacağ-im.*
            you.DAT believe-NEG-FUT-1SG
            'I will not believe you.'

b. *Size   inan-acak **değil-im.***
   you.DAT believe-FUT NEG.COP-1SG
   'Of course I will not believe you.'

A similar situation of use of nominal negation markers along with SN markers is found in many other Turkic languages, such as Tatar (Poppe 1961), Karachay-Balkar (krc) (Seegmiller 1996), extinct Chagatay (chg) (Bodrogligeti 2001) and others. The grammatical descriptions available to us do not always provide a clear description of the difference between these two strategies of negating future forms, and sometimes it is not obvious whether a difference exists at all. However, if any semantic specifics of sentences with nominal negation are mentioned, it is emphatic prominence or a higher degree of speaker confidence that the situation will not take place. This fits well with the observation on the nature of non-verbal negators by Horn (1989). He notes that it is common for a non-verbal negation marker to be used in verbal clauses in pragmatically marked contexts, for example, for contrastive or metalinguistic negation (Horn 1989: 446, 451–452).

There are also related languages in which the nominal negation marker is used with past verbal forms. An example of this is Tatar where perfect meanings can be conveyed by combinations of a past participle with both existential (30) and nominal negation (31). Compatibility of a non-verbal negator with this form is evidently explained by the fact that even when heading a clause, it is still of a nominal origin. Unfortunately, we have no data on how exactly the two constructions are distributed, though the contrast of both to a verbal form with SN, which is aspectually neutral, is evident (see (29)).

(29) Tatar (Poppe 1961: 69)
      Men ešlä-mä-gän-men.
      I   work-NEG-PTCP.PST-1SG
      'I didn't work.'

(30) Tatar (Poppe 1961: 126)
      Anə   hich kür-gän-em   jük.
      that.ACC never see-PTCP.PST-1SG NEG.EX.COP
      'I have never seen him.'

(31) Tatar (Poppe 1961: 126)
      Ɉašlək uŋ-gan   tügel.
      crop grow-PTCP.PST NEG.EX.COP
      'The crops haven't grown.'

2.4   Concluding remarks about nominal negation in Turkic languages

To sum up, the data of Turkic languages proves that nominal negation can intrude into verbal systems along with the negative existential, filling its own niche. Initially, its compatibility with certain verbal forms is explained by nominal – namely, participial – origin. At the synchronic level, when used with verbal forms, the nominal negation marker is associated with emphatic negation.

3   Verbal and non-verbal Kalmyk negation

3.1   General description of negation in Kalmyk

This section starts with a short overview of negation markers in Kalmyk. Modern Kalmyk has six distinct markers to express negation: namely, the preverbal negative particle *esə*, the preverbal prohibitive particle *bičä* and the postverbal negation markers *uga* and *bišə*, which also have the respective contracted variants *-go* and *-šə*. For the emergence of these suffixes and the corresponding grammaticalization process, see Baranova (2018). There is an asymmetry in the morphosyntactic organization of positive and negated predicates in that most of the negated verb forms are participles and converbs, as opposed to the finite verbal suffixes that dominate positive sentences.

The section further contains a detailed description of the negative copula-like markers *uga* and *bišə* in non-verbal and verbal clauses. The preverbal prohibitive particle *bičä* is used with the different imperative forms of a verb, including all second person imperatives and the jussive form *-txa*.

(32)   Kalmyk (Oral Corpus)

eežə,   bičä   jumə ke-tn!
grandmmother NEG.IMP thing do-IMP.PL
'Grandma, don't do anything.'

The preverbal particle *esə* is used mostly in subordinate clauses (see Baranova 2019).

(33)   Kalmyk (NCKL)

oda deer-än   en šin oborudovani-gə esə av-xla,
now while-POSS.REFL this new equipment-ACC NEG take-CVB.SUC

xöön-nj   öŋgär ir-š-go-ʙi-n^j   med-x   kergtä
after-POSS.3 for.free come-PTCP.FUT-NEG-ACC-P.3 know-PTCP.FUT must

'While as of now [we] haven't received this new equipment, it is important to know that later on it won't come free of charge.'

In what follows, we discuss the distribution of only two negators, *uga* and *bišə*, along with their contracted variants; the other two negators, being unable to negate declarative clauses, are excluded. Both *uga* and *bišə*, on the other hand, can function as SN markers. The negation marker *uga* is used in a rich variety of forms to express negation and fulfil different functions, including that of a nominal, existential and verbal negator. The negation marker *bišə* functions as an ascriptive negator (in the sense of Veselinova 2015) but also intrudes into verbal negation.

3.2 *Uga* and *bišə* as non-verbal negators

To understand the current function of the negation markers discussed in this section, it is useful to start with a historical note. The word *uga* derived from *ügei* '(there is) not, none', while the grammaticalization path of *bišə* includes the reanalysis of an element *bisi / bišə* 'other' > 'other than' > 'not the one' (Janhunen 2012: 250–251). The negation marker *uga* has some nominal properties in that it may take case marking in contexts in which it means 'absent', though such forms are not very frequent in Modern Kalmyk. In (34), the form *uga-ʁar* NEG.COP-INS may be translated as 'with lack (of permission)'.

(34) Kalmyk (Oral Corpus)
    *xörə-n tavə-n duuna-d komendant-in selvəg **uga-ʁar***
    20-EXT five-EXT kilometer-DAT commander-GEN advise NEG.COP-INS
    *madən-də jov-dəg **al^j** **uga** bää-sən bol-ža-na*
    1PL-DAT go-PTCP.HAB where NEG.COP be-PTCP.PST become-PROG-PRS
    'Without the commander's permission, we could not get out anywhere (more than) 25 kilometres.'

Both markers, *uga* and *bišə*, may function as constituent negators, as in the second part of (34) where *uga* is postposed to the word *al^j* 'where/which' and expresses the spatial reference 'nowhere'. The negation marker *bišə* mostly occurs with words that express attributive or adverbial meaning. It should be noted that Kalmyk adjectives are morphologically similar to nouns. There are a few roots in Kalmyk that in combination with *bišə* can be used attributively, such as *sän* 'good' versus *sän bišə* 'bad'.

In negative non-verbal sentences, both negation markers correlate with the copula verb *bää-nä* 'BE-PRS', carrying the verbal markers in existential affirmative clauses and locative predicates. In spoken Kalmyk, the copula verb *bää-nä* 'BE-PRS' is often omitted, as in (35):

(35) Kalmyk (Oral Corpus)
madn-də, un-är temän uga, mörə-n, xö-n, bod-malə
1.PL-DAT true-INS camel NEG.EX.COP horse-EXT sheep-EXT cattle
'Honestly speaking, there are no camels (on our farms), (only) horses, sheep, cattle.'

The negation marker *uga* occurs in non-verbal existential clauses.

(36) Kalmyk (Oral Corpus)
sän jumə-n uga
good thing-EXT NEG.EX.COP
'There is nothing good.'

The negation marker *bišə* is functionally more diverse; it occurs in non-verbal sentences that negate a quality/attribute (37) or identity (38).

(37) Kalmyk (Oral Corpus)
donta biš-i
crazy NEG-Q
'Isn't she crazy?'

(38) Kalmyk (Oral Corpus)
oda cag-tə uvəl uvel bišə
now time-DAT winter winter NEG
'Nowadays the winter is not (a real) winter.'

Bišə can also be used to negate temporal localization (39).

(39) Kalmyk (questionnaires)
asx-na hotə dolan čas-la bišə
evening-GEN meal seven hour-COM NEG
'The dinner is not at 7 o'clock (it will be at 8 p.m.).'

The negation marker *bišə* also occurs in the construction 'not only … but also'; here it is an expletive or pleonastic negation (that is, a marker of negation without negative meaning, according to Horn (2010: 126).

(40) Kalmyk (Oral Corpus)
terə ʁancxən gergə-nj bišə alʲ ezəvltə ol-žə av-čə
that single wife-POSS.3 NEG.PRS or property find-CVB.IPFV take-EVID
'He has not only obtained his wife but also a kingdom.'

There is the context of locative predication where both negation markers occur. Example (41a) may be negated either by the existential negator *uga* or the negation marker *bišə*. The example (41b) with marker *uga* means that whatever is designated by the nominal in object position cannot be found under the table, so with a negative existential the object nominal receives a generic reading. In the variant in (41c) with the non-verbal negation marker *bišə*, 'the ball' is interpreted as specific and definite and it denies its particular location. Similar competition between a non-verbal negator and 'an existential negator that depends on focus can also be found in Slavonic languages (see Veselinova 2010: 197).

(41)   Kalmyk (questionnaires) (Baranova 2015: 14)

    a.   *širä   doorə   mečik bää-nä*
        table under ball   be-PRS
        'There is a / the ball under the table.' / 'The ball is under the table.'

    b.   *mečik širä   doorə   uga*
        ball   table under NEG.EX.COP
        'There is no ball under the table.'

    c.   *mečik širä   doorə   bišə*
        ball   table under NEG.PRS
        'The ball is not under the table.'

As for the formal properties of the negators *uga* and *bišə* in non-verbal clauses, negation markers function as a copula which stands at the end of the clause and may carry personal verbal affixes (i.e. as *bišə* in example (42)). It should be noted that regular predicative adjectives or nouns cannot take such suffixes.

(42)   Kalmyk (KNC)
    bi   čon   bišə-v
    1.SG.NOM wolf NEG-1SG
    'I'm not a wolf.'

In a similar way, the negation marker *uga* may receive a personal marker. It also can take an indirect evidential marker *=č* (which clitizised from a former copula).

(43) Kalmyk (Oral Corpus)
xojr kövü-n   xojr küükǝ-n däkčǝ tedn-ä   ǯil-in   küük-tǝ
two boy-EXT two girl-EXT again 3PL-GEN year-GEN child-PL
uga=č
NEG.COP=EVID
'There are 2 boys and 2 girls and it looks like there is no more children
with that year (of birth).'

It should be stressed again that the marker *uga* combines properties of a noun
and a copula: when used in nominal negation, it may undergo nominal declina-
tion, while when used as a copula-like negation marker it combines with personal
verbal affixes or the evidential clitic, which normally could be added to verbs.

Thus, to summarize, *biǯǝ* functions as an ascriptive negator in non-verbal pred-
ications, while *uga* in non-verbal clauses states the absolute absence of the pred-
icated entities. In the next section, we examine these markers in the function of
verbal negators.

3.3 Negative copulas in verbal clauses

The main focus of this article is the capability of negation markers which origi-
nated as non-verbal negation to be used in some verbal clauses. The existential
negator *uga* has extended to verbal clauses with non-finite verbal forms, includ-
ing the past participle ending in *-sǝn* (it occurs as a counterpart for a form of
past tense ending in *-v* in affirmatives), an anterior converb ending in *-ad* (for
remote past ending in *-la*) and some other, more rare forms. The combination of
the non-finite form with the negative copula *uga* is the neutral and only way to
negate past-referring forms.

(44) Kalmyk (Oral Corpus)
däkčǝ zarʁ-dǝ   od-sǝn   uga
again court-DAT go-PTCP.PST NEG.COP
'He hasn't gone to court again.'

(45) Kalmyk (Oral Corpus)
a⁷madǝn tüü-n-dǝ tas   mu   ke-ʁäd uga-vidn
but   3.SG   that-EXT-DAT very bad   do-CVB.ANT NEG.COP-1PL
'But we did not do anything awfully bad to him.'

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[7]Russian adversative conjunction.

There are several ways to negate verbs with non-past time reference: the copula-like *bišə* and the negative affixes *-go* and *-šə*. *Bišə* occurs with two participles: the future participle ending in *-x* and the habitual participle ending in *-dəg*. The etymologically participial forms in Modern Kalmyk can be used predicatively but tend to co-occur with an affirmative affix or clitic *-n/mən* (derived from *mön* 'same'). Even with the future participle, *bišə* negates the present states. When *bišə* occurs in the verbal predication with a future participle or a habitual participle, it has a modal component of meaning (obligation or permission) or leads to an emphatic expression. It should be noted that the negation marker *bišə* with the habitual participle and the future participle predominantly co-occurs with the affirmative affix *-n*, and the modal meaning may come from the combination of *-əm bišə*.

(46) Kalmyk (KNC)
      tednä   tuskar mart-x-mən   bišə
      3PL.GEN about forget-PTCP.FUT-AFF NEG.PRS
      'One should not forget about them.'

(47) Kalmyk (questionnaires)
      sään kövü-d tii-gd-əm   bišə!
      good boy-PL do.so-PTCP.HAB-AFF NEG.PRS
      'Good boys do not act like this!'

Another way of expressing SN with a non-past time reference in Kalmyk is the use of contracted suffixes that emerged from shortening the full negation markers during the grammaticalization process. The affixes are mostly used interchangeably with the whole negation markers *uga* and *bišə*, but there is a tendency in the distribution.

The affix *-šə* is mostly used within the negated form of the future participle in *−x*, while the affix *-go* occurs with the habitual participle in *-dəg*, with the deverbal affix in *-l* or modal converb in *-l*, with the anterior converb in *-ad* and, most frequently, with the affix *-š* (Baranova 2018: 13), which is usually considered as a future participle allomorph with changing *x>š* before the negation marker *-go*. There is another understanding of an element *-š* before the negation marker as the deverbal affix ((Janhunen 2012: 181-182)). Interestingly, the future participle ending in *-x* with affix *-šə* expresses the negation of present tense (48), whereas the affix *-go* with the same participle, as in (49), has a more straightforward meaning in that it tends to negate a future event.

(48)   Kalmyk (Oral Corpus)
       *nan-ta   xamdan **unt-ča-x-šə***
       1.sg-assoc together sleep-prog-ptcp.fut-neg
       '(She) is not (at this moment) sleeping together with me.'

(49)   Kalmyk (Oral Corpus)
       *meklä-tä   us-ar   xotə ke-ǯə   **bol-š-go***
       frog-assoc water-ins food do-cvb.ipfv become-ptcp.fut-neg
       '(She/he) cannot cook with water containing frogs.'

The negation marker *-güi* or other contracted variants from the cognate *ügei* (Kalmyk *uga*) have intruded into verbal negation in all Central Mongolic languages, and it is also attested in some Southern Mongolic languages (Brosig 2015: 70–81), thus suggesting a development that already started in the Middle Mongol period. But the extension of the ascriptive negator *bišə* and its contracted form *-šə* into SN is only attested for Kalmyk/Oirat, Southern Mongolic Bonan (peh; Wu 2003) and Central/Southern Mongolic Eastern Shira Yughur (yuy; Nugteren 2003). In Bonan and Eastern Yughur, the marker *-ši* attaches to the future participle, too, but then negates future events. Only in Kalmyk/Oirat does the combination of the future participle plus *-šə* have present time reference. So, the first steps in the grammaticalization of the existential negator *ügei* took place in several related languages, including all of Central Mongolic, while the second variant (from *bišə*) developed only in OiratEastern Yugur and Bonan, which as a Southern Mongolic language should only have participated in this innovation if at some historically indeterminate point in the past it was spoken many hundred kilometres north-west of its current position in the south-eastern Qinghai province of China. Thus, the non-compositional present tense meaning with the future participle developed only in Kalmyk/Oirat.

In Kalmyk, the marker *bišə* is less frequent than the negative copula *uga*, as shown in Table 1. The frequency of the negative affix *-šə*, in turn, is also lower than the affix *-go*.

Table 1: Frequency of *bišə* and *uga* and negation affixes in the written corpora.

	bišə	*-šə*	*uga*	*-go*
NCKL	17 321 (2 156 ipm)	18 288 (2 286 ipm)	6 7649 (8 456 ipm)	42 260 (5282 ipm)
KNC	1 771 (2 213 ipm)	970 (1 212 ipm)	6 390 (7 987 ipm)	2 330 (2 912 ipm)

Nevertheless, the less frequent negation marker also can be used in some verbal clauses. So, the frequency of use itself is not the sole determining factor for the expansion into the verbal domain. This nominal negator intruded into the verbal system along with the negative existential marker. Analogically to the contracted variant *-go* from *uga*, it developed into an affix which is now used as SN. This requires some comments about SN in Middle Mongolian and its diachronic development.

3.4 The historical development of Mongolic and Old Kalmyk negation

Two different types of negatives in Mongolic languages are distinguished according to their position. Yu (1991: 3) called this the principle of "preverbal and postnominal" negativity marking in Mongolic. The original and (in terms of 13th-century synchronic morphology) non-derived verbal negators *ese* and *ülü* were used in Middle Mongolian (xng, 13th–15th centuries) and consistently placed before the predicate. Similarly, the prohibitive particles *bü / bütügei* (> Modern Kalmyk *bičä*) always preceded the imperative form of a verb. On the other hand, the nominal negators *ügei, busu / busi* and *üdü'üi* in Middle Mongolian were placed after the word that they negated. The main transformation of this negative system in Mongolic was the gradual replacement of the preverbal particles by the extension of the use of the existential negator *ügei* to verbal clauses (see esp. Yu 1991, Brosig 2015). This functional extension of *ügei* to verbal negation occurred with converbal and participial forms and is thus cross-linguistically typical for negative existentials intruding into the SN domain through their use with nominalized verbs, as stated by Veselinova (2016: 155).

The negation marker *ügei* took over SN. In terms of Croft's model (1991), Central Mongolic languages including Kalmyk belong to type C, while in most other Mongolic languages an existential negation marker makes inroads into verbal negation (stage B C) (as summarized in Brosig 2015: 128. Thus, the SN marker in most modern Central Mongolic languages developed from existential negation. But in addition to this process of expansion of negative existential negation into verbal negation, another grammaticalization process has taken place that involves the simultaneous extension of the ascriptive negator *bišə* into SN. That will be examined in the rest of this section.

In "The Secret History of the Mongols" (13th century), there are the words *busu* and *buši* 'other', which Yu (1991: 134) states were just phonological variants, with a prevalence of *busu* in early MM texts. Most contemporary Mongolic languages have inherited some variants of the item *buši > biši*.

The grammaticalization of the element *busu* 'other' into a negator of nouns starts in late MM (from the 14th century). Yu (1991: 127) mentions that as a lexical word 'other' it precedes the NP, while as a negation marker *busu* always follows the NP. In postnominal position, *busu* negates nouns, as in example (50):

(50)　MM: Twelve deeds of the Buddha F40v (Poppe 1967: 141 glossed by Brosig 2015: 105)

ene　　　mör ber jobalang-i　maɣad ɣar-ɣa-n　　cida-qu
DEM.PROX path FOC suffering-ACC certain exit-CAUS-CVB can-NPST.PTCP

*mör **busu**　bu-i*
path ASC.NEG COP-PRS

'This path is not the path that can save from suffering.'

In Old Written Kalmyk (17th–19th centuries), there was a negation marker *biši* and sometimes *bišai*. It was used in two ways: in some texts, *biši* functions as a constituent negator, while in others it is a copula in non-verbal sentences.

In the letters written by Kalmyks in Kalmyk to Isaac Jacob Schmidt, the missionary and Mongolist who lived among that people between 1804 and 1806 (Krueger & Service 2002), in particular, it functions as a constituent negator which always directly follows the negated noun (i.e. has scope only over it). In 19 out of 23 examples in these manuscripts, it occurs as part of the formula *erke biši* capricousness NEG 'inadvertently, at once, immediately, without fail'. So, this usage looks similar to other expressions with a comparable meaning with negation *ügei*, which are more common, including a construction that is very typical for mail: *udal ügei* take.time-VRBL NEG 'without delay' (Krueger & Service 2002: 57).

Apart from this construction, the negation marker *biši* occurred in non-verbal predication.

(51)　Old Written Kalmyk (Krueger & Service 2002: 27, Letter 9, lines 7–8)
ike　sayin mör-in　　bišai　　bilei
very good horse-GEN NEG.PRS be.PST

'This is not [a sign] of a very good horse.'

In a stage of evolution that is probably subsequent to this stage, the negation marker *biši* occurs in verbal predication. In some less known manuscripts, such as the letters of Donduk-Dashi (1741–1761) (Kokshaeva 2011), there are some interesting cases of the use of *biši* with participles and other verbal forms.

(52) Old Written Kalmyk (Kokshaeva 2011: 167)
    ünen xudal-iyini labla-ji   mede-kü   biši
    true lie-POSS.3   specify-CVB.IPFV know-PTCP.FUT NEG.PRS
    'We do not know if it is true or false.'

The later manuscript "Legend about pilgrimage to Tibet Baaza-bakshi from Maloderbet" (from the late 19th or early 20th century) contains an example in which *bišə* occurs with a past participle in -*gsan* (53), which more commonly was negated by *ügei* (54).[8] The form -*gsan bišə* is semantically rather different from -*gsan ügei*: it has an emphatic meaning with more broad scope and describes the negation of a presupposition, while the form -*gsan ügei* just negates an event designated by a verb; see (53) and (54):

(53) Old Written Kalmyk (Bembeev 2004: 103)
    sedkil-d-e:n   sana-qu-du   maniyi-gi küün küči:r
    heart-DAT-P.REFL think-PTCP.FUT-DAT 3PL-ACC   man by.force
    yabu-ulu-gsan   biši
    go-CAUS-PTCP.PST NEG
    '(Although I am suffering so much I always) remember in my heart that that it was not so that a person sent us by force.'

(54) Old Written Kalmyk (Bembeev 2004: 103)
    beye-ni   cu-ɣa:r šarrqu bol-o:d   od-bai ge-be   čigi
    body-POSS.3 all-INS wound become-CVB.ANT go-PST say-PST CONC
    ükü-gsen   ügei
    die-PTCP.PST NEG.EX.COP
    'Although (our camels) went there becoming covered with wounds, they did not die.'

As shown in Sections 3.2-3.3, in Modern Kalmyk, the marker *bišə* is used as both a verbal and non-verbal negator. Compared to closely related languages, it looks more frequent than in Khalkha Mongolian, where it is used mostly in nominal sentences (Yu 1991: 123–125) or it is relatively seldom used as a verbal negator with participles (Janhunen 2012: 251).

The last point of interest is the emergence of the affixes -*go* and especially -*šə* from *uga* and *bišə*. In the absence of reliable data, it is hard to identify the period when the development of the contracted form and its dissemination in spoken

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[8]In modern Kalmyk, the form of the past participle ending in -*sən* normally occurs with the negation marker *uga* or its contracted version -*go*.

Oirat took place. In the Old Kalmyk texts of the 18th–19th centuries which we analysed, there are no negative affixes. Probably they were used in the spoken Kalmyk of that time. According to Bembeev (2004: 114), there is a trace of the use of negative affixes in a manuscript on the verge of the 20th century.

3.5 Concluding remarks about Kalmyk negation

To sum up, the Kalmyk data shows a co-existence of two negation markers functioning on a synchronic level, both in non-verbal clauses and in verbal predication with non-finite form. Both markers developed a contracted form which is restricted to verbal clauses. The evolution of an existential negation into the verbal negation is typical of the NEC, and the negation marker *ügei* follows the cline. At the same time, Kalmyk is arguably particularly suited for the discussion, because its other non-verbal negator, *bisə*, evolved into a SN marker as well.

The item *bišə* developed in Middle Mongolian from an adjective *busu / bisu* 'other' into a negator for non-verbal negation. Thus, in Old Written Kalmyk, the negation marker *bišə* is used as a constituent negation with nouns and in non-verbal sentences. Then, it occurs with participles, in particular with future participles and occasionally with a past participle. So, the negation marker *bišə* extends its function and intrudes into the verbal negation. It is frequent in Kalmyk (possibly more so than in other Central Mongolic languages); unlike in most of those other languages, there it has grammaticalized to the affix of SN -*šə* in parallel with the contraction of *ügei / uga* to -*go*.

4 Other cases of non-verbal negators developing into SN markers

4.1 General notes

The penultimate section of the paper deals with other possible types of evolution of nominal negation and its inroads into the domain of SN in some other, unrelated languages. As mentioned in §1, relatively little attention has been paid to the cross-linguistic description of non-verbal negation markers that have intruded into the verbal clause. The selection of cases was partly determined by the data available to the authors. Due to the limited number of sources, we focus on two aspects of the evolution of originally nominal negation to verbal negators: their use as emphatic negative markers and their compatibility with future verbal predicates.

§4.2 deals with emphatic negation as found in Bornean languages. §4.3 treats the asymmetric use of negators or, more precisely, cases when nominal negators "occupy" future tense negation, like in Bashkir (see §2 above), as exemplified by Egyptian Arabic.

4.2 Bornean languages

According to Kroeger (2014), Bornean languages,[9] especially Malayic Dayak and languages of the Northeast Borneo subgroup, distinguish rather consistently between nominal and non-nominal negation. That is, different negators are used for verbal and adjectival predicates on the one hand and nominal predicates on the other, as in the following examples from Malay (ind, zsm; Kroeger gives examples from Standard Malay and from Indonesian, labelling both of them as "Malay"):

(55) Malay (Sneddon 1996: 195, cit. by Kroeger 2014: 1)
Mereka tidak menolong kami.
3PL   NEG help   1PL.EXCL
'They didn't help us.'

(56) Malay (Sudaryono 1993: 88, cit. by Kroeger 2014: 1)
Saya tidak lapar.
1SG   NEG hungry
'I am not hungry.'

(57) Malay (Sneddon 1996: 195, cit. by Kroeger 2014: 1)
Dia bukan /*tidak guru.
3SG NEG   NEG   teacher
'She isn't a teacher.'

Thus, in Malay *tidak* is used with verbal (55) and adjectival (56) predicates, but it cannot be used with nominal predicates (57) – this function is fulfilled by *bukan*. The latter can also be used with verbs, but only if there is any emphatic meaning in the sentence, like in (58):

(58) Malay (Asmah Hj. 1982: 145, cit. by Kroeger 2014: 1)
Dia bukan tidur tetapi ber-baring   sahaja.
3SG NEG   sleep but   mid-lie.down only
'He is not sleeping, but only lying down.'

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[9]"Bornean languages" are a group of Austronesian languages clustered according to a geographic principle. These include languages spoken on Borneo (Kalimantan), an island divided between Malaysia, Indonesia and Brunei.

The same is true for most Bornean languages: the nominal negation marker, which normally does not negate verbs and adjectives, can be used in verbal clauses to mark emphatic negation. Specific types of "emphatic" uses may include contrastive negation (59b), contradiction of a proposition that has been asserted or could be assumed (60b), focus marking of an argument (61b), or just unspecified emphasis (62b). The (a) cases in each pair of examples illustrate the use of the correspondent negator for negating nominal predicates.

(59) Mualang (mtd) (Tjia 2007: examples 9–102, 110, cit. by Kroeger 2014: 5)

    a. *Ia' ukay uma ku.*
       that NEG rice.field 1SG
       'That is not my rice field.'

    b. *Ku ukay pulay. Baru' ka' angkat.*
       1SG NEG go.home just FUT go
       'I am not going home; I am just about to leave.'

(60) Kimaragang Dusun (kqr) (Kroeger 2014: 7–8)

    a. *Kada matagur, okon.ko' tidi ku ika!*
       don't scold NEG mother 1SG.GEN 2SG.NOM
       'Don't scold me, you are not my mother!'

    b. *Okon.ko' bobogon dialo ilot tanak yo dat maanakaw, suuon nogi.*
       NEG beat.OV 3SG that child 3SG REL steal.hab order.OV PRT
       'He doesn't beat that child of his who keeps on stealing, he actually orders / sends him (to steal)!'

(61) Timugon Murut (tih) (example a in Brewis 1988: 10, cit. by Kroeger 2014: 8); (example b in Brewis et al. 2004: 612, cit. by Kroeger 2014: 8)

    a. *Sala'=ka lalaing ku io.*
       NEG=PRT child 1SG.GEN 3SG.NOM
       'He is not my child.'

    b. *Sala'=ka aku mangansak ra kaluu'.*
       NEG=PRT 1SG.NOM cook ACC rice
       '*I* didn't cook rice.'

(62) Tatana' (txx) (Chan & Pekkanen 1989: 6, 44, cit. by Kroeger 2014: 11)

    a. *Loin ko disio baloi dino.*
       NEG PRT his house that
       'That house is not his.'

b. *Loin ko   idagang ku   anak ku.*
NEG PRT be.sold 1SG.GEN child 1SG.GEN
'It's not like I'm selling my child.' (said during bride-price negotiations)'

Interestingly, Bornean languages also provide an example of the nominal negator being used as a part of double negation (together with SN) conveying a positive meaning. In Begak-Ida'an (dbj), *(a)pon*[10] serves as a SN marker (63). The nominal negator is *pəngka*, a contracted form of *(a)pon* with a discourse particle *ka*[11] (64). In sentences with double negation like (65), both *(a)pon* and *pəngka* are used, where *pəngka* serves as the first negative marker with scope over the SN marker *(a)pon* as the second negator.

(63) Begak-Ida'an (Goudswaard 2005: 300, cit. by Kroeger 2014: 15)
Siti apon mangan bakas.
Siti NEG eat   wild.pig
'Siti does not eat pork.'

(64) Begak-Ida'an (Goudswaard 2005: 304, cit. by Kroeger 2014: 15)
Ino   pa asu matay, pon.ka[12] *anak mo.*
yonder PRT dog dead   NEG   child 2SG.GEN
'This is a dead dog hey, this is not your child.'[13]

(65) Begak-Ida'an (Goudswaard 2005: 305, cit. by Kroeger 2014: 16)
aku pəngka pon atow muli, aku atow, …
1SG NEG   NEG know return 1SG know
'It is not the case that I do not know how to go home, I do know.' (lit. I do not not know (how) to go home, I do know)

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[10]This occurs along with *(n)inga'*, another SN marker. The author discusses the subtle differences between the two forms; however, they seem to be irrelevant for the purposes of the present study.

[11]As Goudswaard (2005: 304) states, "The combination *pon ka* is most of the times pronounced as *pəngka* rather than as *pon ka*: the vowel /o/ of *pon* being reduced to schwa."

[13]In the original work (Goudswaard 2005), this unit is written separately as two words, *pon ka*, according to its interpretation as a combination of the marker of sentential negation *(a)pon* with a discourse particle *ka*

[13]Kroger's translation of this sentence is not clear, but it is supposed to convey a general "emphatic" meaning, as in other cases.

On the one hand, such use of nominal negation markers is just a logical extension of their emphatic use and/or their compatibility with focus markers. But at the same time, they demonstrate that nominal negators are considered by the speaker as an additional opportunity to express verbal negation when another means has already been employed. It seems that this opens the door for subsequent expansion of nominal negative markers into the verbal system.

To sum up, according to the current information, in almost all the Bornean languages nominal negators can be used to negate verbal clauses.[14] However, their use with verbal predicates is limited to pragmatically marked contexts. There is some parallelism with the Turkic data discussed in §2, where nominal markers can be used with some specific verbal forms along with SN markers, bringing emphatic meaning, and more broadly with typological observations on the development of negative markers, such as that by Horn (1989), which testifies to the tendency for non-verbal negators to be used in verbal clauses for contrastive and narrow focus negation.

4.3 Egyptian Arabic

Egyptian Arabic (arz) and particularly its Cairene dialect differ from Standard Arabic in several domains of grammar, including negation. In Egyptian Arabic, there is a negative particle *muš*, which negates the nouns and adjectives which it precedes. This item is a result of grammaticalization of a negative particle plus a word meaning 'thing'. Wilmsen (2020) shows the broader context of negation *muš* in Arabic languages. It covers the meanings of negation of identification and attribution.

(66)   Egyptian Arabic (Ramazan Mamedshakhov, pers. commun.)

    a. *huwwa muš tˤaalib   huwwa farraaf*
       3.SG   NEG student 3.SG   messenger
       'He is not a student, he is a messenger.'

    b. *ʔil-beet=da   muš kibir*
       DEF-house=DEM NEG big
       'This house is not big.'

Muš as used in (66b) is not an existential negator, for which Egyptian Arabic employs a circumflex or doubled negative markers on the locative word *fii* 'in', as in (67a). It differs from Standard Arabic, which uses a particle *laa* 'no', as in

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[14]Exceptions seem to be very few; Kroeger (2014) mentions Tombonuwo.

(67b) for existential negation, which is also used as a SN for present tense events (Gadalla 2000: 232).

(67) Egyptian and Standard Arabic (Gadalla 2000: 234)

    a. *ma-fii-š   riggaala fi-l-madiin-a*
       NEG-in-NEG men   in.the-city
       'There are no men in the city.'

    b. *laa rijaal-a   fi-l-madiin-at-(i)*
       no men-ACC in.the.city-(GEN)
       'There are no men in the city.'

SN in Egyptian Arabic is expressed by the combination of the proclitic *ma-* and affix *-š* (it also can be treated as a circumflex / discontinuous morpheme; see Gadalla 2000: 234), as in (68a). This combination of negative markers occurs in the past and present, but the only way to express verbal negation in the future is via the nominal negator *muš*, which co-occurs with the finite form of the future tense,[15] as in (68b):

(68) Egyptian (Cairine) Arabic (Ramazan Mamedshakhov, pers. commun.)

    a. *ʔil-raagil=da   ma=rga<a>ˤ-ø-š*
       DEF-man=DEM NEG=return<PFV>return-3SG.M-NEG
       'This man did not return.'

    b. *ʔil-raagil=da   muš ha-ji-rga<a>ˤ-Ø*
       DEF-man=DEM NEG FUT-3SG.M-return<IPFV>return-3SG.M
       'This man will not return.'

Other examples of the negator *miš / muš* as verbal negation in Egyptian Arabic can be found in Wilmsen (2020: 93–94). He states that *miš / muš* with a verb instead of *mā- ... -š* has pragmatic meanings, such as rhetorical or metalinguistic negation Wilmsen (2020: 94). Meanwhile, our data – as well as examples from Wilmsen's paper itself – show that in some cases it is a quite neutral way of negating future events.

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[15]It should be noted that future tense in Egyptian Arabic is made up of two elements: the preterite of the grammaticalized verb *raaħ* 'to go' together with a verb in the present tense: e.g. *raaħ jiktib* '(he) will write'.

4.4 Discussion of the typological context

The use of nominal negation markers with verbal predicates can be conditioned pragmatically, as can be seen from the data of the Bornean languages, or grammatically, as in Egyptian Arabic. The reasons for the first type of use seem to be more understandable: if a language possesses several negative markers, one can expect that the use of a marker originally supposed to be used as a non-verbal negation marker in a new context will be pragmatically marked – and, indeed, there are examples of this among the world's languages. In contrast, the possibility of grammatical motivation towards the use of nominal negation markers requires explanations. We suggest that one such explanation may be in the nature of certain grammatical meanings (and, consequently, forms) that makes them "predisposed" to become negators other than standard verbal negators. Cross-linguistically, the future tense is an outstanding category, often being weaker and grammaticalized later than past and present tense (Lindstedt 2001: 771), with its semantics close to modality (Bybee et al. 1994: 280). This possibly makes future forms the best candidates to combine with new negative markers which intrude from non-verbal forms to standard negation, but further research is necessary in order to prove or disprove this speculation.

It should be noted that the situation is different in Egyptian Arabic and Bashkir. In the latter, future verbal forms are the only grammatical context where nominal negators can be used along with verbal SN markers, and no semantic difference is observed. In the former, the nominal negator has established itself as the only grammatical means to form negative future forms. In both languages a nominal negator does not add an emphatic semantic component. Alongside the languages described in this paper, there are other examples of use of the non-verbal negation marker in the function of verbal negation with future tense. For instance, "the attributive negator *gɔ̀nyi* has been grammaticalized as the SN negator for verbs with future and near-past time reference" in Kanuri (Veselinova 2016: 172). The traces of this pattern are also attested in a number of languages. However, a detailed description of the relation between non-verbal negators, their uses as focus markers and their subsequent uses as negators for the future tense still remains to be made.

One can expect that the markedness of the nominal negation marker will gradually wear out, it will expand its functional scope, and a new emphatic negative marker will arise (a well-known example of a similar semantic weakening of a negative marker is French *pas* in *ne … pas*, which has come a long way from the emphatic to a neutral strategy of negation). However, no evidence of such a process is observed in any of the languages examined here, though a more thorough investigation of the diachronic sources is necessary to definitively conclude this.

5 Conclusion

In this paper we have discussed several issues related to Croft's Negative Existential Cycle. First, do the processes of change really occur cyclically, and if so, is there only one cycle? Second, what elements can be involved in it? Our initial data from Kalmyk and Bashkir bore evidence that changes taking place in a language system of negative markers do not necessarily close a cycle. The development of negation systems includes different new markers, where a newly introduced element shares functions with older elements of the system. Moreover, not only negative existentials but also other types of non-verbal negation can participate in this process.

One of the interesting points is a place taken by a new negation marker in the system of negation, as well as the relationship between nominal negators intruding into the verbal negation and negative existentials, which typically develop the function of SN in languages of the world. Observed cases show that there are different possibilities. For Kalmyk, we postulate an analogical evolution. The marker *bišə* develops from a marker in the non-verbal identity/ascriptive predication to assume the function of negation of verbal predication with participles and converbs in parallel with the development of the marker *ügei / uga*, which started this development earlier and underwent it in more Mongolic varieties. As for the Bornean languages and Egyptian Arabic, the intrusion of negative existentials into the domain of SN is not attested.

According to typological data, involvement of the non-verbal negative markers into the system of verbal negation can first exploit their markedness to express emphatic negation. It may be supposed that at the first step, they can be just another way to negate a verbal predicate, with an additional emphatic meaning, as compared to a neutral verbal negator. But their frequent co-occurrence with certain forms or high compatibility of the emphatic meaning with certain grammatical semantics can allow them to replace a verbal marker initially used with certain verbal forms and become the only way to negate them.

In particular, we have considered examples of the use of nominal negative markers with future forms, which seems to be a relatively frequent situation. Our sampled languages show different statuses of forms of nominal negation with future forms. In Bashkir and some other Turkic languages, the nominal negation competes with SN in the future tense. Egyptian Arabic displays a common way to negate an event in the future with the nominal negator *muš*. Thus, Egyptian Arabic should be classified as situated at a more advanced stage of the nominal negation's intrusion into the verbal system, as compared to Bashkir and other Turkic languages, where a similar phenomenon is found. We suggest that such an

association of the future with noun negation is explained by specific properties of the future tense as a grammatical category.

Abbreviations

1, 2, 3	1, 2, 3 person	LOC	locative
ACC	accusative	M	masculine
AFF	affirmative clitic	MID	middle voice
AG	agentive nominal	MM	Middle Mongolian
ANT	anterior	NCKL	National Corpus of Kalmyk Language
ASC	ascriptive (negation)		
ASSOC	associative	NEC	Negative Existential Cycle
ATT	attendant circumstance		
CAUS	causative	NEG	negation
COM	comitative case	NEG.COP	negative copula
CONC	concessive	NEG.EX	negative existential
COP	copula	NMLZ	nominalizaton
CVB	converb	NOM	nominative
DAT	dative	NPST	nonpast
DEF	definite	OV	object voice
DEM	demonstrative	PFV	perfective
EMPH	emphatic	PL	plural
EVID	evidential	POSS	possessive
EX	existential	POT	potential
EXCL	exclusive	PROG	progressive aspect
EXT	extension (unstable consonant -n in nominative of some nouns which disappears in oblique cases)	PRS	present
		PRT	particle
		PST	past
		PTCP	participle
		Q	question marker
FUT	future	REFL	reflexive
GEN	genitive	REL	relative
HAB	habitualis	REM	remote past
INS	instrumental case	SG	singular
IPFV	imperfective form	SN	standard negation
IPM	instances per million words	SOV	subject-object-verb word order
KNC	Kalmyk National Corpus	TAM	tense, aspect, modality

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Chapter 11

Integration of the negative existential into the standard negation system: The case of Nanaic languages

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The paper deals with the use of negative existentials in the system of standard negation in different Nanaic varieties (a subgroup of Tungusic languages). Three different types of integration of negative existentials into standard negation constructions are discussed: 1) "converb + negative existential"; 2) "present/past indicative finite verb + negative existential"; 3) a series of constructions in which the negative existential functions as a pleonastic negative marker. While the first construction is attested in almost all Nanaic varieties, the others are less widespread. For each construction under discussion we propose a possible grammaticalization path. All the constructions refer to stage B>C in Croft's cycle. We argue that in some aspects the first construction goes beyond Croft's cycle.

1 Introduction

The paper deals with the use of negative existentials in the system of standard negation in different "Nanaic" varieties, a subgroup within the Tungusic family, including Nanai and some other closely related varieties (see Map 1).

According to Veselinova (2013: 107), negative existentials (NegEx) are special markers used in negative existential predications like "There are no mice in the

basement", while standard negation (SN) is a negation of declarative sentences with an overt verb predicate (see Miestamo 2005: 39–45).

In Nanaic, the negative existential can function as an element of some standard negation constructions. These standard negation constructions vary across Nanaic languages. The most widespread one is a past tense construction, illustrated in (1):

(1) Naikhin Nanai
N'oani naj   sore-e-wa-ni   xāle=dā   ičə-m=dā
3sg   human fight-prs-acc-3sg when=emph see-cvb.sim.sg=emph
aba-ni.
neg.ex-3sg
'He has never seen people fighting.' (Avrorin 1986: 154, text)

As shown in (1), it consists of the simultaneous converb[1] of the lexical verb (*ičə-m* 'seeing') and the negative existential (*aba*). An optional element of the construction is the particle *=dA*. It has an emphatic meaning in its proper use (see Avrorin 1961: 264), but within the SN-construction the import of its meaning seems to be lessened.

This construction is attested in most Nanaic varieties, however, in notably different versions. Its possible diachronic development seems to be non-trivial. We include some comparative data on this construction, which can shed light on its grammaticalization from the NegEx-construction.

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[1]The "simultaneous converb" is one of the central non-finite verb forms. In its main use, it refers to an event that is simultaneous with the event of the main clause (i).

(i) Naikhin Nanai
Ele-se-māri   ičə-ʒi-či.
stand-ipfv-cvb.sim.pl see-res.prs-3pl
'They are standing and watching.' (elicitation)

´ Outside the negative construction with *aba*, this converb has no negative meaning. The negative converb is derived with a negative suffix *-(r)A* and a negative particle *əm* (see example (ii) below), which is different from the SN-construction with *aba* presented in example (1). Negative forms of converbs are not discussed in the article.

(ii) Naikhin Nanai
Mi bičxə-wə əm niru-ə-mi   akpaŋ-go-xam-bi.
1sg letter-acc neg write-cng-cvb.sim.sg lie.down-rep-pst-1sg
'I went to sleep without writing a letter. (~I did not write a letter and went to sleep).' (elicitation)

In some of the Nanaic varieties, other SN-constructions with negative existentials are also attested. These cases basically agree with the expected cross-linguistic patterns of NegEx-evolution.

The paper is organized as follows. Section §2 gives some background information on the Nanaic subgroup. In §3, we present the data and methodology of the study. §4 describes the standard negation systems and negative existentials attested in Nanaic languages. In §5, we provide analysis of the most widespread SN-construction with the negative existential (see example 1), based on the comparative data of different Nanaic varieties. In §6, we discuss other, less frequent constructions. Finally, §7 contains a brief summary.

2 Nanaic varieties within the Tungusic family

According to the classification of Tungusic languages in Doerfer (1978), Nanaic varieties form a Central-Western Tungusic subgroup comprising Nanai (ISO-code gld), Ulch (ISO-code ulc), Orok (ISO-code oaa) and Hezhe (also known as Kili, glottocode kile1243).[2] It constitutes the Central Tungusic group together with the Central-Eastern Tungusic languages: Oroch (ISO-code oac) and Udihe (ISO-code ude).

The general name "Nanaic languages" in a broad sense includes Nanai, Ulch, Orok and, in some classifications, also Hezhe. These varieties are spoken in the Russian Far East and in the North East of China. In the paper, we discuss the Amur Nanai dialects: Naikhin and Dzhuen (the Middle Amur subgroup), Sikachi-Aljan (the Upper Amur subgroup), Gorin (the Lower Amur subgroup), Bikin Nanai and Kur-Urmi (which are also sometimes attributed as Nanai dialects), and the Hezhe and Ulch languages (see Map 1).

Hezhe and Bikin Nanai are nearly extinct, while Amur Nanai dialects as well as Kur-Urmi are endangered; furthermore, Ulch is severely endangered. See Gerasimova (2002), Sumbatova & Gusev (2016) and Kalinina & Oskolskaya (2016) on the current sociolinguistic situation.

Besides the Central Tungusic languages there are the Manchu-Jurchen and Northern branches (see Map 2). The Manchu-Jurchen branch comprises Jurchen (ISO-code juc), Manchu (ISO-code mnc) and Xibe (ISO-code sjo). The Northern

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[2]The genealogical affiliation of Hezhe is a question of many debates, because this variety shares different linguistic features with different Tungusic groups, so that it can refer to the Nanaic, Udiheic, Manchu-Jurchen and Northern (which includes Even, Evenki and Negidal) branches, according to different classifications; see Hölzl (2017). As Hezhe has some features common with the Nanaic varieties, we decided to include some basic information on negation in Hezhe in our research.

branch comprises Even (ISO-code eve), Evenki (ISO-code evn), Negidal (ISO-code neg) and Oroqen (ISO-code orh). Data of the Manchu-Jurchen and Northern branches are not discussed in the paper.

3 Data and methodology

Our data come from different sources. The information on Hezhe, Bikin Nanai and Kur-Urmi is taken from grammatical descriptions and published texts (Zhang et al. 1989 and Zhang 2013 for Hezhe, Petrova 1967 and Tsumagari 2009 for Orok, Sem 1976 for Bikin Nanai, and Sunik 1958 for Kur-Urmi). The data on Naikhin, Sikachi-Aljan, Dzhuen and Gorin dialects, as well as the Ulch data, were collected during our fieldtrips to the Russian Far East in 2015–2017. Some information was received through elicitation tasks of several types: 1) We asked speakers to translate Russian negative sentences into their native languages (Nanai or Ulch). 2) Then we asked them to judge some sentences in their own language, which we constructed ourselves, using the negative form we were interested in. 3) We also asked speakers to assess negative forms derived from various verbal lexemes, to give a couple of sentences with the negative form and to explain their meanings.

(2)   Examples of the elicitation tasks:

a.   Researcher
   (in Russian): How do you say "He didn't write a letter"?

   Speaker (in Naikhin Nanai):
   N'oani bičxə-wə   əčiə   niru-ə-ni.
   3sg   letter-acc neg.pst write-cng-3sg

b.   Researcher: Is it a correct Nanai sentence:
   N'oani bičxə-wə   niru-mi   aba.
   3sg   letter-acc write-cvb.sim.sg neg.ex

   Speaker (in Russian):
   Yes, you can say it this way.

c.   Researcher: Is it a correct Nanai expression:
   Niru-m=də   aba.
   write-cvb.sim.sg=emph neg.ex

   Speaker: Yes, it is.

Researcher: Could you give an example with this expression? What does it mean?

Speaker:
N'oani bičxǝ-wǝ niru-m=dǝ   aba.
3SG   letter-ACC write-CVB.SIM.SG=EMPH NEG.EX

Speaker: It means 'He didn't write a letter at all'.

Some parts of our research are based on the Nanai and Ulch text collections, consisting of our own field records (different Amur dialects, Ulch), Ulch texts collected by V. Gusev, S. Toldova, E. Kalinina and N. Sumbatova in 2007–2010 in Ulchsky District (Khabarovsk Krai, Russia), and Nanai and Ulch published texts from Avrorin (1986) and Sunik (1985).

4 Standard and existential negation in Nanaic

4.1 Standard negators

The majority of modern negative forms and analytic constructions attested in Nanaic varieties go back to a construction with the dedicated negative verb **ǝ-* and the non-finite form of the lexical verb, marked with the connegative suffix *-(r)A*.[3] Within the Nanaic subgroup, this construction is attested in its initial form only in Orok (3).[4]

(3) Orok

a. *Tari nari e-si-ni   ŋennee.*
   that man NEG.AUX-PRS-3SG go.CNG
   'He doesn't go.' (Tsumagari 2009: 13)

b. *Tari nari ec-ci-ni   ŋennee.*
   that man NEG.AUX-PST-3SG go.CNG
   'He didn't go.' (Tsumagari 2009: 13)

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[3]The suffix *-(r)A* is assumed to be etymologically related to one of the TAM-suffixes and to the marker of the non-simultaneous converb. It is described as the "aorist suffix" in the proto-Tungusic reconstruction by Benzing (1955: 124 ff., 146). In the modern Nanaic varieties, these three types of use can be strictly distinguished by their phonological form and syntactic properties. This explains why they can be regarded as three different markers.

[4]Analytic constructions with the negative verb are more widespread in Northern Tungusic languages. For a more general picture of standard negation in Tungusic languages, see, e.g., Hölzl (2015).

In (3), the negative verb *ə- takes the finite form (with reference to the present in (3a) and the past in (3b)), marked with person-number inflection, and the lexical verb 'go' takes the uninflected connegative form.

In all other varieties the negative verb *ə- has undergone a further development. Different frozen TAM-forms of *ə- have been grammaticalized to a range of negative particles. Synthetic negative verb forms attested in Nanaic also go back to the analytic construction with *ə-.

The resulting inventories of standard negators in Nanaic languages are quite rich and heterogeneous. In this section, we focus on the present and past tense negative paradigm, since the constructions with NegEx, which are discussed in detail in the paper, belong exactly to these domains. The data on the main past tense negators, except those containing negative existentials, are summarized in Table 1. The constructions with NegEx markers are discussed separately in §5.

The first negative construction with reference to the past contains the special past negative particle *əčiə* and the connegative form of the lexical verb. The particle *əčiə* goes back to the past tense form of the negative verb *ə-; cf. (4) from Naikhin Nanai:

(4) Naikhin Nanai
Əži agža-o-so, əčiə bu-də-ni=əmdə.
PROH believe-IMP-IMP.2PL NEG.PST.COP die-CNG-3SG=QUOT
'Don't believe him, he has not died.' (text, Naikhin, our field data)

Unlike in (3b) from Orok, in (4) the former past tense form of the negative verb is frozen; it does not take person-number markers, they (optionally) attach to the connegative form of the lexical verb.

The second past tense form is synthetic. Here, the connegative and the past tense form of the negative verb constitute synchronically a single verb form; cf. (5):

(5) Kur-Urmi
… kera-du-i bəjə bi-wə-n=xəj sa-o-rā-čin …
edge-DAT-1SG person be.PRS-ACC-3SG=what know-IMPS-CNG-PST
'it was unknown that there are people who live nearby …' (Sunik 1958: 145, text)

A structurally similar synthetic form is used with reference to the present (6). It goes back to the combination of the connegative and the present tense form of the negative verb.

(6) Ulch
Uj=də   tị-wa   sā-ra-sị.
who=ᴇᴍᴘʜ this-ᴀᴄᴄ know-ᴄɴɢ-ɴᴇɢ.ᴘʀs
'Nobody knows it.' (text, Bulava, our field data)

Outside the present and past paradigms, some other negative forms and constructions are used. Most of these also contain elements that go back to the former negative verb. For instance, in Amur Nanai varieties, there is the negative particle *əm*. It is the negative verb, frozen in a form of its simultaneous converb. In modern Amur Nanai, it is used as a component of analytic negative nonindicative forms with the auxiliaries *ta-* 'do' and *bi-* 'be':

(7) Naikhin Nanai
Mī əm ənə-rə bi-mčə-i.
1sɢ ɴᴇɢ go-ᴄɴɢ be-sʙᴊᴠ-1sɢ
'I would not go.' (elicitation)

4.2 Negative existentials

The most widespread negative existential in Nanaic varieties is *aba* (the majority of Amur varieties, Bikin Nanai, Kur-Urmi). Other negators are attested in Ulch (*kəwə*), Gorin Nanai (*kəukə*), Orok (*ana*), and Hezhe (*anči*); see Table 1. *Kəukə* and *kəwə* are cognates, while *aba*, *ana*, *anči*, and *kəukə/(kəwə)* are not related to each other. All these negators have very similar behavior in NegEx-functions in all the varieties.

The range of their uses is wider than the existential proper; however, it basically agrees with cross-linguistic generalizations on negative existentials. Table 3 illustrates the list of functions of *aba* in Naikhin Nanai. The list is based on the cross-linguistic study on negative existentials by Veselinova (2013). The further description in this section is also based on the Naikhin data. In the other varieties under discussion, the picture is similar. In Ulch and Gorin Nanai, in which the word *aba* is absent (see Table 2), the word *kəwə (kəukə)* has the same range of uses and the same structural properties as *aba*. We do not have enough information about the use of negative existentials in Orok and Hezhe.

Structurally, *aba* is an item of a mixed nature. In many ways it behaves as a morphologically reduced noun. The syntactic structure of the NegEx-construction is similar to the structure of the possessive noun phrase. *Aba* occupies the position after the subject noun and agrees with it in person and number, as well as the head noun referring to a possessee; cf.:

Table 1: Inventory of standard negators in Nanaic languages.

	Naikhin Nanai	Gorin Nanai	Bikin Nanai	Sikachi-Aljan	Kur-Urmi	Hezhe	Ulch	Orok
PRESENT								
synthetic form e.g., *sā-ra-sị* know-CNG-NEG.PRS	yes	yes	yes	yes	yes	yes	yes	no
negative verb + V-CNG e.g., *e-si-ni ŋennee* NEG.AUX-PRS-3SG go.CNG	no	no	no	no	no	no	no	yes
PAST								
ǝčiǝ(l) V-CNG e.g., *ǝčiǝ bu-dǝ-ni* NEG.PST.COP die-CNG-3SG	yes	yes ('not yet')	no	marginal	yes	no	('not yet')	no
synthetic form e.g., *sa-o-rā-čin* know-IMPS-CNG-PST	yes	yes	yes	no	yes	yes	no	no
negative verb + V-CNG e.g., *ec-ci-ni ŋennee* NEG.AUX-PST-3SG go.CNG	no	no	no	no	no	no	no	yes

Table 2: Negative existentials in Nanaic varieties

	NegEx-marker	**use in SN-constructions**
Amur Nanai (except Gorin), Bikin Nanai, Kur-Urmi	*aba*	yes
Gorin Nanai	*kəukə*	no
Ulch	*kəwə*	yes
Orok	*ana*	no
Hezhe	*anči*	?[a]

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[a]Zhang (2013) includes examples in which the NegEx-marker is used in the prohibitive construction. However, we do not have enough data for a detailed discussion.

(8)   Naikhin Nanai

Mədur-səl aba-či   ≈ *mədur-səl xasar-či.*

dragon-PL NEG.EX-3PL ≈ dragon-PL wing-3PL

'Dragons do not exist.' (lit. 'the absence of dragons') ≈ 'wings of dragons' (elicitation)

In NegEx contexts, *aba* takes person-number markers according to the person-number of the subject of non-existence in most of the varieties. The person-number marker is optional for the 3SG context. See Oskolskaya & Stoynova (2015) for more detail on *aba* in Amur Nanai dialects.

5   The construction CVB.SIM + NegEx in different Nanaic varieties

In this section, we discuss in detail a past tense standard negation construction, consisting of the negative existential and a converbial form of the lexical verb. This SN-construction with NegEx is the most widespread in Nanaic varieties. For each particular variety (Sections 5.1-5.4), we give information on its status within the past negative paradigm and on its competition with other past negators. We also describe some formal properties of this construction with a special focus on the degree of its formal cohesion: the presence/absence of the person-number inflection on the NegEx, the number marking of the converb, and the presence/absence of the emphatic particle. In §5.5, we compare the data from different Nanaic varieties and formulate a hypothesis on the evolution path of the construction under investigation.

Table 3: Functions of *aba* in Naikhin Nanai: A typological profile (based on Veselinova 2013: 118–119)

function name	short description	*aba*
neg.ex	Negation of existence	yes
neg.loc	Negation of location	yes
neg.poss	Negation of possession	yes
no	The negative existential is also used as a short answer 'no'	yes
pro-sentence	The word used has the same propositional content as the preceding proposition (V or not?)	?yes
disappear	The negative existential is related to 'disappear'	(yes), *abana-* 'disappear'
absent, away, gone	The negative existential is also used with any of these senses	no
lack	The negative existential also has the sense 'lack'	no
dead	The negative existential also has the sense 'dead'	no
destroy	The negative existential also has the sense 'destroy'	no
nothing	The negative existential also has the sense 'nothing'	no
none	The negative existential is also a negative indefinite pronoun	no
without	Use of the negative existential as a pre-/postposition meaning 'without' or as a privative marker	no
neg.emphatic	The use of the negative existential produces an emphatic statement	no
not_noun	Use of negative existentials as a negator for nominal constituents	no
not_be	The negative existential is a general negative copula	? (negative existentials can function as a negative copula among other items)
co-occurs with 'be' restricted	The negative existential may be used to negate the copula verb	no
+ classification	There are different negative existentials depending on the semantic properties of the noun phrase: animate, human, age	no

5.1 Naikhin Nanai (the Middle Amur subgroup of dialects)

In the Naikhin dialect of Nanai, the default way to express standard negation with a reference to the past is the past negative particle *əčiə* together with a verbal form with the connegative suffix *-(r)A*; see example (4). The standard negation construction with the negative existential *aba*, which is of interest in this section, is also attested (see example i). In Avrorin's grammar of "Standard Nanai" (based mostly on the Naikhin variety), it is mentioned briefly as one of very marginal past tense negative constructions (1961: 108).

Our consultants allowed its use in special contexts such as an emphatic one: 'he did not do it at all'. However, there are no examples of CVB.SIM + NegEx construction in our texts collected since 2007. In the texts collected by Beljdy & Bulgakova (2012) in 1980–2006, only one occurrence is attested. In the texts collected by Avrorin (1986) in the middle of the 20th century, we found few occurrences (13 uses).

Generally, a reduced form of the converb (*-m*) is used in all the sources. Sometimes it is palatalized as *-m'*. The allomorph *-mi* occasionally occurs as well. The suffix *-m/-m'/-mi* is used irrespective of number, which is not typical for the use of the simultaneous converb in its main function (i.e., as the head of a dependent clause). Thus, one can assume that this converb has been grammaticalized to a special unchangeable form which is specific for this negative construction. However, the plural converb form with *-mAri* (or reduced *-mAr*) is still allowed by some speakers in the case of the plural subject; cf. (9):

(9) Naikhin Nanai
     Buə ʒobo-mar(i)(=da)   *aba-(pu).*
     1PL work-CVB.SIM.PL=EMPH NEG.EX-1PL
     'We didn't work.' (elicitation)

In the texts, all 13 examples refer to a singular subject and have the *-m/-mi* converb form. Among them, only one example has a full form with *-mi*.

The particle *=dA* is optional. However, most of the examples attested in texts (except for two) contain this particle. Interestingly, modern speakers of Naikhin Nanai, who do not use the construction actively, interpret the particle *=dA* during elicitation as a proper emphatic particle rather than as a neutral part of the construction as it is in other Nanaic varieties where this construction is common (e.g., in Sikachi-Aljan dialect):

(10) Naikhin Nanai

N'oani soŋgo-m=da   *aba!*

3SG   cry-CVB.SIM.SG=EMPH NEG.EX

'She didn't cry at all!' (elicitation)

The negation marker *aba* can agree with the subject in person and number. But this agreement is optional, see example (10), in which the 3SG marker *-ni* is omitted: in the texts, person-number affixes are omitted in all three attested examples with 1st and 2nd person subject and in two examples (out of ten) with 3rd person subject.

In the data elicited from modern speakers, it is quite difficult to determine factors that influence the choice of the CVB.SIM + NegEx construction instead of the *əčiə*-construction, which is a more common negator. In his grammar Avrorin (1961: 108) postulates "a slight modal component" in the semantics of the CVB.SIM + NegEx construction. Avrorin's text data give the impression that the construction in question is (or was) likely to be used in perfect contexts (e.g., in the experiential meaning (11)[5] or in the case when the result of a negated action is still important for the point under consideration (12)). Note that there is no affirmative perfect form and no other dedicated negative perfect form in Naikhin Nanai.

(11) Naikhin Nanai

N'oani naj   *sore-e-wa-ni*   *xāle=dā*   *ičə-m=dā*

3SG   person fight-PRS-ACC-3SG when=EMPH see-CVB.SIM.SG=EMPH

aba-ni.

NEG.EX-3SG

'He has never seen fighting people before (lit. he is absent while seeing fighting people).' (Avrorin 1986: 154, text)

(12) Naikhin Nanai

Əǯi-ni   *sənə-m=dā*   *aba.*

husband-3SG wake.up-CVB.SIM.SG=EMPH NEG.EX

'Her husband hasn't woken up (lit. her husband is absent while waking up).' (Avrorin 1986: 209, text)

The verbs, attested in texts in a CVB.SIM + NegEx construction, are states, as in (11), atelic processes, and achievements, as in (12), which is important for further discussion (see §5.5).

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[5]The experiential meaning is indicated by the use of an adverb *xāle=dā* 'never'. As Nanai lacks a special affirmative perfect form, the context is the only evidence for the perfect use of the form in question.

Therefore, it seems that initially the *əčiə*-construction and the CVB.SIM + NegEx construction were distributed as the most common negator with a past tense reference (the *əčiə*-construction) and a special perfect negator (the CVB.SIM + NegEx construction). Nowadays, Nanai speakers gradually shift to Russian. In this sociolinguistic situation, the more marginal CVB.SIM + NegEx construction is used rather scarcely. If CVB.SIM + NegEx is a perfect negator, then the small number of its uses in Avrorin's texts (collected before the language shift) is not surprising either: these are narratives, mostly legends and folktales, in which perfect contexts are very rare.

5.2 Sikachi-Aljan Nanai (the Upper Amur subgroup of dialects)

In the Sikachi-Aljan dialect of Nanai (at least in the data from one speaker who was asked), the construction CVB.SIM + NEGEx is a neutral means of past negation. An alternative construction with *əčiə* (cf. Naikhin Nanai) is accepted in elicitation tasks, but it is not used in practice.

Our data on Sikachi-Aljan are very poor and come mostly from elicitation received from one speaker. According to these data, the construction CVB.SIM + NegEx basically has the same morphosyntactic features as in Naikhin Nanai: 1) the non-palatalized reduced singular converb suffix *-m* is the preferred one, but other variants (plural *-mAr*, palatalized *-m'/-mAr'*, full markers *-mi/-mAri*) are also accepted, 2) the emphatic particle *=dA* as well as person-number markers on *aba* can be omitted but usually they are not; cf. the only available text example:

(13) Sikachi-Aljan Nanai
Golʒon=də ewača-mar=da aba, sea-go-j=da
stove=EMPH fire-CVB.SIM.PL=EMPH NEG.EX eat-CVB.PURP-REFL.SG=EMPH
xaj=də ul'si-mar=da aba.
what=EMPH boil-CVB.SIM.PL=EMPH NEG.EX
'{There is nobody at home}, (the sister) has not fired the stove, she has not cooked dinner.' (text, Sikachi-Aljan, our field data)

5.3 Kur-Urmi

Our data for Kur-Urmi come from a short grammatical sketch and seven texts published in Sunik (1958). Although these data are obviously not enough to get a complete picture of the use of *aba*, it is possible to make some observations.

The construction CVB.SIM + NegEx is one of the basic past tense standard negators in Kur-Urmi:

(14) Kur-Urmi
      Ē-wa=da   *wā-m=da*   *aba-ni.*
      what-ACC=EMPH kill-CVB.SIM.SG=EMPH NEG.EX-3SG
      'He didn't catch anything.' (Sunik 1958: 134, text)

Alternative means of past negation include a synthetic past tense form (see example 5) and the analytic construction with the negative particle *əčə*, like the construction in example (4).

There are also other past tense negative constructions with *aba* similar to the construction in question but with the present/past indicative form instead of the *mi*-converb. They will be discussed in §6.3.

In the texts (Sunik 1958, ca. 9700 words), 20 uses of SN-markers with a reference to the past were found in total. According to these preliminary data, the construction CVB.SIM + NegEx seems to be the main past tense negative form: it occurs eight times with a diverse range of verbs (*wā-* 'kill', *ičə-* 'see', *mədələ-* 'match a bride', *nōdače-* 'spread out', *xarxe-* 'twist', *mora-* 'cry', *m'ækora-* 'bow'). The synthetic negative form occurred six times; however, four of them are passives of two particular verbs: *sa-* 'know' and *ičə-* 'see' (cf. example (5) above). The construction with the indicative past tense form + *aba* was attested four times (also one use with the present tense form was found). No examples of the analytic construction with *əčə* mentioned by Sunik in the grammatical sketch are attested in texts. See Table 4.

Table 4: Kur-Urmi: SN-constructions with reference to the past in the texts (Sunik 1958)

	N of uses
CVB.SIM + NegEx	8
PST + NegEx	5
synthetic negative form	6 (restricted to two verbs)
əčə-construction	not attested

The construction in question has the same structure as in Amur Nanai: it consists of the simultaneous converb, the particle *=dA* and the negative existential *aba*. The simultaneous converb on the whole may have different suffixes for singular and plural subjects: *-mi* and *-mAri*. However, as Sunik points out, the suffix *-mi* often occurs with plural subjects also (Sunik 1958: 95). For the past negative construction, Sunik gives the reduced converb suffix *-m* for all forms irrespective

of number (cf. *tɔ̌či-m=də aba-su* sit-CVB.SIM.SG=EMPH NEG.EX-2PL 'you didn't sit'). All the text examples have singular subjects. So, we do not know whether the plural form *-mAr(i)* can be used in this construction in Kur-Urmi.

In seven text examples (out of eight), the reduced form of the converb *-m* and the emphatic particle *=dA* are attested. The only one example with the full suffix form *-mi* does not contain *=dA*:

(15) Kur-Urmi
  *Mədələ-**mi**   aba-i.*
  ask.in.marriage-CVB.SIM.SG NEG.EX-1SG
  'I didn't ask (her) in marriage.' (Sunik 1958: 127, text)

The person-number marking of the negative existential is optional; it is attested in seven out of eight examples. One occurrence refers to the 1SG subject (example 15). All the other occurrences, including the one without a person marking, refer to 3SG subjects.

5.4 Ulch

In Ulch the negative existential marker is *kəwə*. The standard negation construction under consideration is V-*m(i)/mər(i)(=də) kəwə-*.person.number:

(16) Ulch
  Tatoči̧-xa, tara i̧kzami̧n-ti̧ ŋənə-m=də   kəwə-ni.
  study-PST then exam-DIR go-CVB.SIM.SG=EMPH NEG.EX-3SG
  'She studied, but she did not go to pass the exam.' (text, Bulava, our field data)

This construction is used as the most common past tense negator in a wide range of contexts, while other constructions expressing standard negation with reference to the past are quite numerous but much less frequent; cf. Table 5:[6]

The emphatic particle *=dA* is optional. In our text sample, it is attested in 55% of uses (47 uses).

The negative existential *kəwə* in SN-construction optionally takes person-number markers. In the grammatical sketch by Petrova (1936: 65), the following distribution is outlined: the person-number marker is used for 1st and 2nd person,

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[6]The data sample used for Ulch consists of oral texts that we collected in 2017 (about 4600 words) and by V. Gusev, S. Toldova, E. Kalinina and N. Sumbatova in 2007–2010 in Ulchsky District (Khabarovsk Krai, Russia, about 11,000 words).

Table 5: Ulch: the inventory of past tense negators (frequency in texts)

negator	N of uses		semantic nuances
CVB.SIM*(=də) kəwə*	86	(78%)	neutral
əčəl V-NEG	10	(9%)	'not yet'
V-PST *kəwə*	6	(5%)	emphatic
əŋdə V-NEG	5	(5%)	emphatic
other markers	3	(3%)	
total amount	110	(100%)	

and it is not used for 3rd person. Data from contemporary texts, presented in Table 6, show the following picture: a) the person-number marker is optional for all persons and numbers, b) it is more probable for 1st (or non-3rd) person contexts,[7] and c) it is less probable for 3SG contexts.

Table 6: Ulch: Person-number markers on *kəwə* in SN-construction

kəwə-PERSON.NUMBER	*kəwə*	2-tailed exact Fisher test
1SG	16	9	1st person vs. 3rd person: significant, p=0.0066
1PL	6	0	
3PL	7	8	
3SG	14	26	3SG vs. other: significant, p=0.0169

In the majority of uses, the form of the converb is reduced (*-m, -mAr*, not *-mi, -mAri*), but this is a general feature of Ulch converbs.

The converb tends to be used in the singular form (*-m*) both in singular and plural contexts. However, uses of the plural form (*-mər*) are also attested (in plural contexts). The choice of the plural versus the singular form of the converb in plural contexts correlates with the presence versus absence of the plural number marker on *kəwə*. Table 7 shows the text data for uses with reference to the plural subject (the correlation is statistically significant, two-tailed exact Fisher-test, p=0.0139).

Therefore, the plurality of the subject tends to be marked in the construction only once, either on the converb or on the negative existential, but not on both components.

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[7]We do not have any 2nd person contexts in our sample.

Table 7: Ulch: CVB.SIM + NegEx with plural subjects: The singular vs. plural form of the converb

	CVB.PL (*-mAr*)	CVB.SG (*-m*)
kǝwǝ unmarked	5	3
kǝwǝ-person.number	1	12

5.5 CVB.SIM + NegEx past tense negative construction and its grammaticalization across Nanaic varieties

A summary of formal properties of CVB.SIM + NegEx in different Nanaic varieties is given in Table 8.

We can make the following observations on the basis of these comparative data:

1. The CVB.SIM + NegEx construction has a different status within the SN-system in different varieties. In some of them, it is the neutral preferred one; in others it is rare and tends to be used in specific contexts. Our synchronic data seem to reflect different stages of the diachronic process of the integration of NegEx into the SN-system:

(17) degree of integration into SN system (low ↔ high)
      (Gorin, Dzhuen, Hezhe) – Naikhin – Kur-Urmi – Sikachi-Aljan, Ulch

2. An overt person-number marking of NegEx is attested in all varieties under consideration, though it is optional. Thus, the NegEx retains its morphosyntactic status, being used as part of the SN-construction, and it does not change into a frozen item. The most regular rules of omission are attested in Ulch, where CVB.SIM + NegEx is a default past tense negator (i.e., where it is the most integrated into the SN-system).[8]

3. The emphatic particle *=dA* can be estimated to be a full part of the construction for all varieties, except for Ulch. Maybe this is one of the factors that enable its full grammaticalization into a default past tense negator in Ulch. In all the other varieties, an additional step is expected to take place for the complete grammaticalization process, namely, the desemantization of *=dA* (or otherwise the loss of this particle in the negative construction).

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[8]In fact, we also need more accurate comparative data on the possibility of omission of person-number markers in NegEx-proper uses for each variety.

Table 8: CVB.SIM + NegEx past tense negative construction across Nanaic varieties

	Kur-Urmi	Sikachi-Aljan	Naikhin	Ulch
CVB.SIM + NegEx past tense negators in competition with CVB.SIM + NegEx negative existential	one of the preferred past tense negators *əčə* V-CNG, V-PST NegEx, synthetic form	preferred past tense negator (*əčiə* V-CNG)	rare, mostly in perfect contexts *əčiə* V-CNG, synthetic form	preferred past tense negator *əčəl* V-CNG, V-PST NegEx, *əndə* V-CNG
use of plural converb suffix *-mAr(i)* occurs more often	*aba* not attested, the paradigm is given with singular *-mi*	*aba* allowed, but singular *-mi* occurs more often	*aba* allowed, but singular *-mi* occurs more often	*kəwə* allowed, but singular *-mi*
use of emphatic particle *=dA*	optional, *=dA* is rarely omitted	optional, *=dA* is rarely omitted	optional, *=dA* is omitted rarely	optional, *=dA* is omitted in half of the occurrences
person-number marking of negative existential	optional, omitted rarely	optional, omitted rarely	optional, omitted rarely	optional, rarely omitted for 1st person subjects, preferably omitted for 3sg subjects

4. The converb tends to be used in the frozen singular form irrespective of the subject number in all varieties in question. It is evidence of some degree of grammaticalization.[9]

We can propose the following considerations on the grammaticalization path of the CVB.SIM + NegEx construction. On one hand, these data can be analyzed in terms of the so-called Croft's cycle. Croft (1991) proposed a cyclical model of the evolution of standard negation markers from negative existentials, based on synchronic cross-linguistic data. This cycle comprises three stages, which are presented in Table 9.

Table 9: Negative-existential cycle (Croft 1991)

	existential negative predication	standard negative predication
type A	SN marker	SN marker
type B	negative existential	SN marker
type C	negative existential	negative existential[a]

[a]Type A implies the use of one construction for both existential and negative predications, while in type C existential negative and standard negative predications are expressed by different constructions containing the same negative existential.

These types are not equally frequent in the languages of the world: according to Veselinova (2016: 147), type C is poorly represented in comparison to types A and B. Moreover, a lot of languages display stages with variation of types A>B, B>C and C>A, and stages with variation can be diachronically stable (see Veselinova 2016: 158).

The Nanaic data display a transition from type B to type C. Similar cases are described by Croft as a "gradual substitution … in only part of the verbal grammatical system" (1991: 10) (here the past tense form). However, our data do not make it clear whether this construction has really substituted a past standard negation construction or if it functions in a different way and takes a special place in the negation system, which has nothing in common with a potential process of substitution.

A possible hypothesis is that this construction emerges as a counterpart to an affirmative imperfective construction with the verb *bi-* 'be' attested in the majority of Nanaic varieties.

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[9]In fact, the use of the singular form of the converb in plural contexts is also sporadically attested outside this construction.

(18) Naikhin Nanai
      Xon'=da   nūči-du-i   xupi-məri   bi-či-pu.
      how=EMPH little-DAT-REFL.SG play-CVB.SIM.PL be-PST-1PL
      'We used to play when we were young.' (elicitation)

The parallel between these two constructions is evident:

(19) the symmetry of literal readings:
      'to be V-ing'   or VS 'to be absent V-ing'

(20) structural symmetry:
       CVB.SIM *bi-* 'X exists while V-ing'
      CVB.SIM(=*dA*) *aba* 'X does not exist while V-ing'

However, they can be considered as real counterparts only at some previous stage of grammaticalization, not on a synchronic level. The first difference between the affirmative construction and the negative one is aspectual. The function of the affirmative construction CVB.SIM *bi-* is imperfective: it marks habitual or progressive events (18). The negative construction CVB.SIM(=*dA*) *aba*, in contrast to the affirmative one, has no special imperfective semantic nuances in any of the Nanaic varieties (see the discussion and examples in sections 5.1-5.4). It can refer to both perfective and imperfective events.[10]

One more difference is that the negative construction is restricted to a single TAM-form, while the affirmative one can be used in various tense and mood forms (in the past and present tense forms, in the imperative, etc.).

Moreover, the only negative form, CVB.SIM(=*dA*) *aba*, which refers to the past, is structurally equivalent with the affirmative present tense form, not the past tense one, as expected. In the affirmative construction, TAM is consistently expressed by the corresponding form of the existential verb *bi-* 'be'. The negative existential *aba-* in the negative past tense construction CVB.SIM(=*dA*) *aba* formally corresponds to the present tense form *bii-*, not to the past tense form *biči-* (20). If the negative construction were parallel with the affirmative one, one would expect the present tense form of NegEx (*aba*) not in past contexts, but in present ones (a)–(b), and in past contexts, the past tense form of the NegEx (*aba biči-*) would be expected (c)–(d). The last form is not really attested in the construction at all.

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[10]Neutralization of aspectual distinctions is common under negation, see Miestamo (2005).

(21)   Naikhin Nanai

    a.   *xupi-mər=də*   *aba-pu*
       play-CVB.SIM.PL=EMPH NEG.EX-1PL
       'we did not play' (expected: *'we are not playing')

    b.   *xupi-məri*   *bi-i-pu*
       play-CVB.SIM.PL be-PRS-1PL
       'we are playing / we play regularly' (elicitation)

    c.   **xupi-mər=də*   *aba*   *bi-či-pu*
       play-CVB.SIM.PL=EMPH NEG.EX be-PST-1PL
       expected: *'we were not playing'

    d.   *xupi-məri*   *bi-či-pu*
       play-CVB.SIM.PL be-PST-1PL
       'we were playing / we played regularly' (elicitation)

The asymmetry between the affirmative construction and the negative one is shown schematically in Table 10.

Table 10: The negative CVB.SIM + NegEx vs. the affirmative CVB.SIM + 'be'

	affirm	neg
'present'	CVB.SIM be-PRS	-[a]
'past'	CVB.SIM be-PST	CVB.SIM NegEx-PRS

[a]In the present tense, a standard negator is used, see §4.1.

So, for the negative construction we have to postulate the reinterpretation from present to past.[11] A possible way of such a semantic shift is via perfect contexts, which are intermediate between present ones and past ones. The most affected verb classes are probably states and atelic processes with the reading 'entry to state / process' in the past tense form. While used in the perfect context, the past tense form of such a verb has a meaning which is pragmatically very close to that of the present tense form ('he has seen' ≈ 'he can see now,' 'he has cried out' ≈ 'he is crying now'). The same is true under negation ('he has not seen' ≈ 'he cannot see now,' 'he has not cried out' ≈ 'he is not crying now'). This provides an opportunity for a semantic shift of the CVB.SIM + NegEx

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[11]Similar developments are observed in Bantu languages, see Nurse (2008: 148).

construction. Hypothetically, at first, through the implication, the present tense 'he cannot see, he is not crying now' undergoes reinterpretation as a past tense form in the perfect context: 'he has not seen, he has not cried out'; here it is being generalized to all past tense contexts. Another verb class that probably triggers the shift from the present tense to past tense readings is that of achievements. The momentary event cannot have a proper progressive reading in the present tense. While affirmatives are likely to take the prospective reading in this case ('he wake.up.PRS' > 'he is about to wake up'), the perfect reading is a more natural option for negatives ('he wake.up.NEG.PRS' > 'he has not waken up'); cf. the reconstruction of the shift for the verb 'see', as in (11) above, and for the verb 'wake up', as in (12).

(22) 'he cannot see now' > 'he has not seen' > 'he did not see'
      #'he is not waking up' > 'he has not waken up' > 'he did not wake up'

The predisposition to perfect contexts and the range of verbs attested in Naikhin Nanai, in which the CVB.SIM + NegEx construction has the most restricted usage, supports the idea of such a shift. For more detail on the hypothesis, see Oskolskaya & Stoynova (2017).

If it is true and the CVB.SIM + NegEx construction emerges as a counterpart to some affirmative construction and subsequently loses connection with it, then it differs from examples of the B>C type, described in Croft (1991). In accordance with the logic of Croft's cycle, it does not fill any gap in the SN-system, because it does not substitute an existing part of the negation system; see the discussion of similar cases attested in some Slavic and Polynesian languages in Veselinova (2014, 2016).

6 Other SN-constructions with negative existentials

6.1 Bikin Nanai

The picture attested in Bikin Nanai differs radically from the picture described in §5 for the other Nanaic varieties. The past tense construction CVB.SIM + NegEx is completely absent in this variety. However, the negative existential *aba* is involved in the SN-domain even more than in other varieties.

The data on this nearly extinct dialect are very restricted; the short description below follows the sketch (Sem 1976) and reflects the data of a couple of texts from the same book.

The negative existential *aba* is used in Bikin Nanai as a pleonastic element with all verbal negation forms, except prohibitives, as shown in (23):

(23)   Bikin Nanai
       Xuə=də   ab   čik-s'i!
       plank.bed=ᴇᴍᴘʜ ɴᴇɢ.ᴇх fit-ᴘʀs.ɴᴇɢ
       '(He) does not fit in the plank-bed!' (Sem 1976: text 2)

In SN-constructions, *aba* behaves as a frozen form (i.e., as a particle): a) it takes no inflection markers, and b) it induces no morphological/syntactic changes in the initial negation construction. In sɴ-use, it can have a reduced form *ab*, as in (23) above.

According to Sem (1976), *aba* is optional with synthetic negation forms (such as in (23)), and it is an obligatory part of analytic forms with auxiliaries *bi-* 'be' (24) and *oda-* 'do, become' (25). However, both in synthetic forms and in analytic ones, *aba* is not the only negator, but a pleonastic one; cf. the same affix ᴘʀs.ɴᴇɢ in (24) and (25).

(24)   Bikin Nanai
       āba   ənə-ə-s'i   bi-mcə-i.
       ɴᴇɢ.ᴇх go-cɴɢ-ɴᴇɢ.ᴘʀs be-sʙᴊᴠ-1sɢ
       'I would not go.' (Sem 1976: 76)

(25)   Bikin Nanai
       Āba   ənə-ə-s'i   oda-žam-b'i.
       ɴᴇɢ.ᴇх go-cɴɢ-ɴᴇɢ.ᴘʀs do-ꜰᴜᴛ-1sɢ
       'I won't go.' (Sem 1976: 75)

Possible preconditions for a more intensive expansion of *aba* in Bikin Nanai in comparison to other Nanaic varieties are shown in the following.

1. In Bikin Nanai, *aba* reveals morphological reduction already in NegEx-function. Unlike its equivalents in other varieties, the Bikin Nanai marker completely loses person-number markers, not only in SN-construction but also as a negative existential proper (Sem 1976: 51); cf. (26) and (8):[12]

(26)   Bikin Nanai
       Xədun=də   aba.
       wind=ᴇᴍᴘʜ ɴᴇɢ.ᴇх
       'There is no wind.' (Sem 1976: 51)

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[12]In Amur Nanai, the person-number marker is optional in this context (see above). In Bikin Nanai, it never occurs.

2. The second explanation is related to the fact that Bikin Nanai lacks one of the main SN-markers used in Amur varieties (i.e., the particle *əm*; see §4). The Amur Nanai analytic forms with *əm* and the Bikin Nanai analytic forms with *aba* are quite similar, both structurally and paradigmatically, though they are not completely parallel with each other (cf. (24) from Bikin Nanai and (7) from Amur Nanai). Thus, we can say that *aba* in Bikin Nanai in some sense takes the vacant place of the absent *əm* and fills up a paradigmatic gap in the system.

In Croft's (1991) classification, the Bikin Nanai negation system would be an example of the intermediate type B>C: reinforcement. The additional negative item *aba* in Bikin Nanai "reinforces" the existing standard negative construction. From this point of view, it can also be considered in terms of Jespersen's well-known double negation cycle (Jespersen 1917, van der Auwera 2009, 2010)[13] mark. Synthetic forms (with optional *aba*) and analytic ones (with obligatory *aba*) present two different intermediate stages of the cycle:

(27)   neg1 – **neg1+(neg2)**   – **neg1+neg2**   – (neg1)+neg2 – neg2
                 synthetic forms   analytic forms

This reinforcing function is probably obtained by the negative existential via its use as a no-answer; see §3 (i.e., the double negative constructions *aba* + V.NEG go back to such structures as 'No, X does not V').

We can hypothesize the following grammaticalization path. At first, *aba* comes to the analytic sub-paradigm of the SN-system—probably supported by the analogy with Amur Nanai *əm*-constructions in the course of the language contact. Then the process of *aba*-integration also affects synthetic SN-forms—due to the analogy with analytic ones. This likely diachronic sequence is exactly reflected in the position within Jespersen's cycle: the older analytic *aba*-forms are already obligatory and the younger synthetic ones are still optional; see also van der Auwera et al. (2022 [this volume]) on the intertwining of cyclical processes.

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[13] *Aba* in this case is hardly just a negator like English *No* (cf. English sentence "No, I would not go"), because it takes an internal syntactic position; cf. example (24), where *aba* goes after the subject, and example (i), where *aba* is in the beginning of the sentence:

(i)   Bikin Nanai
       Āba, f'iktə-s   īlə   d'id-ə-cən.
       no   child-2sg here come-cng-neg.pst
       'No, your child did not come here.' (Sem 1976: 52)

6.2 Ulch

In Ulch, two marginal standard negation constructions with the negative existential (*kəwə*) are used together with the main CVB.SIM + NegEx construction (cf. §5.4). They are not mentioned in the short surveys of Ulch grammar by Petrova (1936) and Sunik (1985). However, they are attested (in relatively few cases) both in texts collected by Sunik (1960–1970s) and in our sample of modern texts. The first construction is used with reference to the present or future, and its structure is "the present tense affirmative form (+ the emphatic =*dA*) + the negative existential *kəwə*". The second one is used with reference to the past, and it is structurally parallel with the first one: "PST + (=*dA*) + *kəwə*", see (28) and (29) below:

(28) Ulch
      Nat mimbə   tunč-i-n=də   kəwə.
      3PL 1SG.ACC touch-PRS-3SG=EMPH NEG.EX
      '{There are lots of animals here.} However they will not attack me!' (text, Bulava, our field data) — PRS + *kəwə*

(29) Ulch
      Uj=də   pansa-xa-n=də   kəwə   nambat!
      who=EMPH ask-PST-3SG=EMPH NEG.EX 3PL.ACC
      'Nobody asked them!' (text, Bulava, our field data) — PST + *kəwə*

The uses of both constructions illustrated in (28) and (29) seem to be more emphatic than the uses of default present/past tense negators[14] (≈ 'even not V,' 'still not V'). However, we do not have enough data to describe their semantics in detail.

The existential *kəwə* is used in the constructions without any person-number marking.

These two constructions (at least on a synchronic level) can be described as symmetric negators in Miestamo's terms (2005): "affirmative + NegEx." It is very atypical for standard negation systems in Nanaic languages (as well as other Tungusic languages): most of the forms are asymmetric.

6.3 Kur-Urmi

Kur-Urmi also displays two standard negation constructions with the basic present or past tense form + the negative existential (*aba*):

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[14]These are CVB.SIM + *kəwə* for the past and the synthetic form V-CNG-PRS.NEG-PERS for the present; see sections 4 and 5.4.

(30) Kur-Urmi

Ēma fud'im-nə-ni   wa-i-t=da   aba.
what beauty-ACC-3SG kill-PRS-3PL=EMPH NEG.EX
'They aren't killing any girl.' (Sunik 1958: 141, text)

These constructions are not mentioned in the grammatical sketch by Sunik (1958). On the basis of five examples found in the texts, we can assume that the negative existential *aba* cannot take person-number markers, unlike *aba* in the construction CBV.SIM + *aba*. Person-number markers may be attached to the main verb, see example (30).

All available text examples comprise the emphatic particle *=dA*. The past tense construction and the present tense one are structurally symmetric to each other.

6.4 Naikhin Nanai

In the texts (Avrorin 1986), we also found one example in which *aba* is used together with an affirmative finite verb, forming a standard negation construction:

(31) Naikhin Nanai

Ǯōk-či   močo-go-j   aba.
house-DIR come-REP-PRS NEG.EX
'I won't come back home.' (Avrorin 1986: 192, text)

This construction is similar to the Ulch and Kur-Urmi constructions described in sections 6.2 and 6.3.

The impression is that in Naikhin Nanai, this construction (if it exists at all) is much more marginal in comparison to Ulch and Kur-Urmi. It is notable that: a) it is attested only once in our quite large text sample, and b) it is not mentioned in the very detailed grammar by Avrorin.

6.5 Summary: Possible paths of grammaticalization

As was shown in this section, *aba* and *kəwə* can be used in the standard negation system beyond the CVB.SIM + NegEx construction in Kur-Urmi, Bikin and Naikhin dialects and Ulch. The case of Bikin differs from the other ones, and it was discussed in detail in §6.1. Kur-Urmi and Ulch display similar constructions: the affirmative finite verb form + NegEx. One occasional example of such a construction is also attested in Naikhin Nanai. For an overview of these constructions, see Table 11.

The diachronic development of such constructions presumably implies a reinterpretation of a rhetorical question-answer or self-correction structure:

(32) Ulch (= 28)

Nat mimbə tunč-i-n=də(?)   kəwə.
3PL 1SG.ACC touch-PRS-3SG=EMPH NEG.EX

lit. 'Will they attack me? No.' or: 'They will (probably) attack me… No.'

Such a path of evolution implies that the negative existential does not enter into the SN-system directly, but through the use in the no-answer or pro-sentence function (the same assumption was proposed for Bikin Nanai above, for Sino-Russian pidgin in Veselinova 2016: 155–156, for Palenquero, a Spanish-based creole, in Croft 1991: 21, who cites Schwegler 1988, and for Swahili varieties in Bernander et al. 2022 [this volume]), see also Krasnoukhova & van der Auwera 2019 [this volume].

The hypothesis is supported by Ulch data. All Ulch constructions of this type occur in emphatic contexts, and this agrees with the hypothesis on the origin from some rhetorical structure. In Kur-Urmi, these constructions seem to be used in neutral contexts (however, there are too few text examples available to make confident conclusions).

7 Summary and concluding remarks

Table 11 presents a brief overview of negative existentials across Nanaic varieties.

Negative existentials attested in Nanaic varieties are lexically different (*aba, kəwə, kəukə, anči, ana*) but structurally similar (they all behave syntactically as reduced nouns, such as 'absence, non-existence'). Some of them reveal similar patterns of evolution into standard negators. The following options are attested:

(a) negative existentials with only proper uses: Hezhe (see, however, footnote 2 in §2), Orok, Gorin Nanai, Dzhuen Nanai;

(b) negative existentials which are integrated into one standard negation construction: Naikhin Nanai, Sikachi-Aljan Nanai;

(c) negative existentials which form several standard negation constructions: Kur-Urmi, Ulch;

(d) negative existentials, which are used consistently in the whole standard negation system: Bikin Nanai.

See the scale of integration of negative existentials into the SN-system in (33):

Table 11: Negative existentials in standard negation systems across Nanaic varieties

variety	NegEx	CVB.SIM + NegEx past tense SN-construction	other SN-constructions with NegEx
Hezhe	*anči*	not attested	not attested
Orok	*ana*	not attested	not attested
Dzhuen Nanai (Amur)	*aba*	not attested	not attested
Gorin Nanai (Amur)	*kəukə*	not attested	not attested
Bikin Nanai (*ab*) NEG.PRS, *ab* NEG.PRS *o-/bi-*	*aba*	not attested	attested in all SN-constructions: (*ab*) NEG.PST,
Naikhin Nanai (Amur)	*aba*	marginal, perfect contexts	(PRS *aba*)
Sikachi-Aljan Nanai (Amur)	*aba*	default past tense SN-negator	not attested
Kur-Urmi	*aba*	one of the main past tense SN-negators	PST/PRS *aba*
Ulch	*kəwə*	default past tense SN-negator	PST/PRS *kəwə*

(33)   Hezhe, Orok, Gorin Nanai, Dzhuen Nanai – Naikhin Nanai, Sikachi-Aljan
       Nanai – Kur-Urmi, Ulch–Bikin Nanai

All the patterns b)–d) present the intermediate type B>C of Croft's cycle of
NegEx-evolution (1991): that is, no systems with a total replacement of "old"
SN-markers with "new" NegEx-markers (type C) are attested across Nanaic va-
rieties. The pattern d) (Bikin Nanai) placed on the right edge of the scale (33)
is not the case either. This system presents the reinforcement subtype of B>C:
though NegEx is attested across the whole SN-paradigm, it does not replace the
old SN-markers, being used together with them within one and the same SN-
construction. This result fits well in cross-linguistic generalizations, as proposed
in Veselinova (2016). According to Veselinova's data, the intermediate type B>C
is well attested in the languages of the world: 14.9% in the worldwide sample
and 26.7% in the sample of Uralic languages, which are geographically and struc-
turally close to Tungusic. In contrast, type C is twice as rare: 7.9% in the world-
wide sample (only attested in Dravidian and Polynesian); see Veselinova (2016:
150).

The SN-constructions with the negative existential attested in Nanaic varieties
are of three types:

(a)   The cross-Nanaic type construction cvb.sim + NegEx. It is attested in four
      out of eight varieties (Naikhin Nanai, Sikachi-Aljan Nanai, Ulch, and Kur-
      Urmi). They reveal different degrees of expansion of this construction,
      from a very marginal one (Naikhin Nanai) up to the default one (Ulch,
      Sikachi-Aljan Nanai). According to our assumption, the negative existen-
      tial is involved in this construction directly from its proper uses and over-
      all preserves its initial morphosyntactic properties ('X did not V' is lit. 'the
      absence of X while doing V'). Originally, it could function as a negative
      counterpart to the imperfective affirmative construction with the verb 'be'
      (lit. 'X is present while doing V').

(b)   The Ulchaic-type construction prs/pst + NegEx. It is used in only two
      varieties (in Ulch and in Kur-Urmi, also sporadically attested in Naikhin
      Nanai). There is no clear evidence of its diachronic development. One of
      the possible assumptions is that this construction goes back to the rhetor-
      ical question-answer or self-correction structure ('Does he V?! – Oh no!';
      'He does V... Oh, no!'). In this case, the negative existential is integrated
      into the SN-system not directly but via an intermediate stage of the no-
      answer or the pro-sentence.

(c) The Bikin-type series of constructions, which is specific to Bikin Nanai. In this dialect, the negative existential is used in the whole negative paradigm. In this case, the negative existential completely loses the initial morphosyntactic structure and semantics in the SN-function and becomes a bleached, frozen and phonetically reduced particle.

In (34), we present a scale that shows the degree of expansion of the negative existential into the domain of standard negation for each type of the constructions under consideration.

(34)   (NegEx proper) – CVB.SIM + NegEx – PRS/PST + NegEx – Bikin-type constructions

Patterns in the evolution of NegEx show variation which also reveals a slight correlation with the current geographical distribution of Nanaic varieties (see Map 1). The construction CVB.SIM + NegEx is attested in neighboring Kur-Urmi, Sikachi-Aljan and Naikhin varieties, as well as in Ulch. The absence of such a construction in Dzhuen and Gorin corresponds to the hypotheses on the origin of populations speaking these dialects. The Gorin population is supposed to have come from Siberia along the Bureya and Amgun Rivers, see Maltseva (2019: 135). The area of Bolon Lake where the Dzhuen population lives used to be a contact area of the Siberian and Amur Tungusic peoples; see Maltseva (2019). The origin of the Dzhuen and Gorin Nanai speakers could influence the grammar structure of their varieties. It might also explain the absence of the construction CVB.SIM + NegEx in Dzhuen and Gorin.

Thus, we observed the use of negative existentials in the system of standard negation in different Nanaic varieties: Ulch, Amur Nanai dialects, Bikin Nanai and Kur-Urmi. Three different types of integration of negative existentials into standard negation constructions have been discussed: 1) The cross-Nanaic type construction "converb + negative existential", 2) the Ulchaic-type construction "present/past indicative finite verb + negative existential", and 3) the Bikin-type series of constructions in which the negative existential functions as a pleonastic negative marker.

We proposed possible grammaticalization paths of the constructions in question. All the constructions refer to the same stage (B>C in Croft's cycle), which is cross-linguistically very widespread. At the same time, these constructions, all attested within a very small genealogical group, demonstrate very different ways of reaching this stage. The most interesting case is the first, converbial construction. We argue that this construction in some aspects goes beyond Croft's cycle.

According to our hypothesis, it integrates into the SN system "legally", being a counterpart to an affirmative imperfective construction with the existential verb. Later, it loses the initial connection to the affirmative construction and changes its tense-aspect properties. Other constructions with use of a NegEx marker in a SN system could evolve with the reinterpretation of rhetorical questions and no-answer structures.

Abbreviations
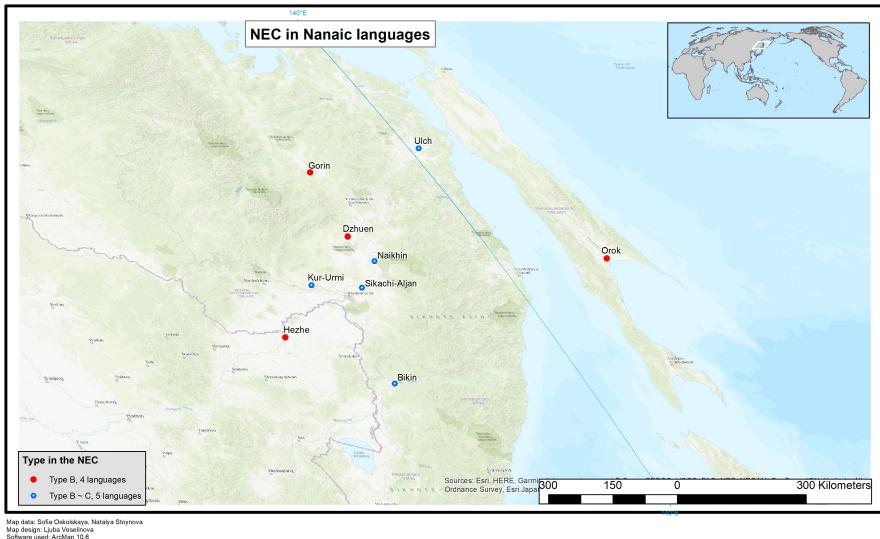
1, 2, 3	1st, 2nd, 3rd person
ACC	accusative
CNG	connegative
COP	copula
CVB	converb
DAT	dative
DECAUS	decausative
DIR	directional
EMPH	emphatic
EX	existential
FUT	future
IMP	imperative
IMPS	impersonal
NEG.EX	negative existential
NEG	negative

NUM	numeral
PERS	personal
PL	plural
PROH	prohibitive
PRS	present
PST	past
PURP	purposive
QUOT	quotative
REFL	reflexive
REP	repetitive
SBJV	subjunctive
SG	singular
SIM	simultaneous
SN	standard negation
V	verb

Language index

Ulch	(ISO) ulc
Nanai	(ISO) gld
Orok	(ISO) oaa
Kili	(glottolog) kile1243
Oroch	(ISO) oac
Udihe	(ISO) ude

Jurche	(ISO) juc
Manchu	(ISO) mnc
Xibe	(ISO) sjo
Even	(ISO) eve
Evenki	(ISO) evn
Negidal	(ISO) neg
Oroqen	(ISO) orh
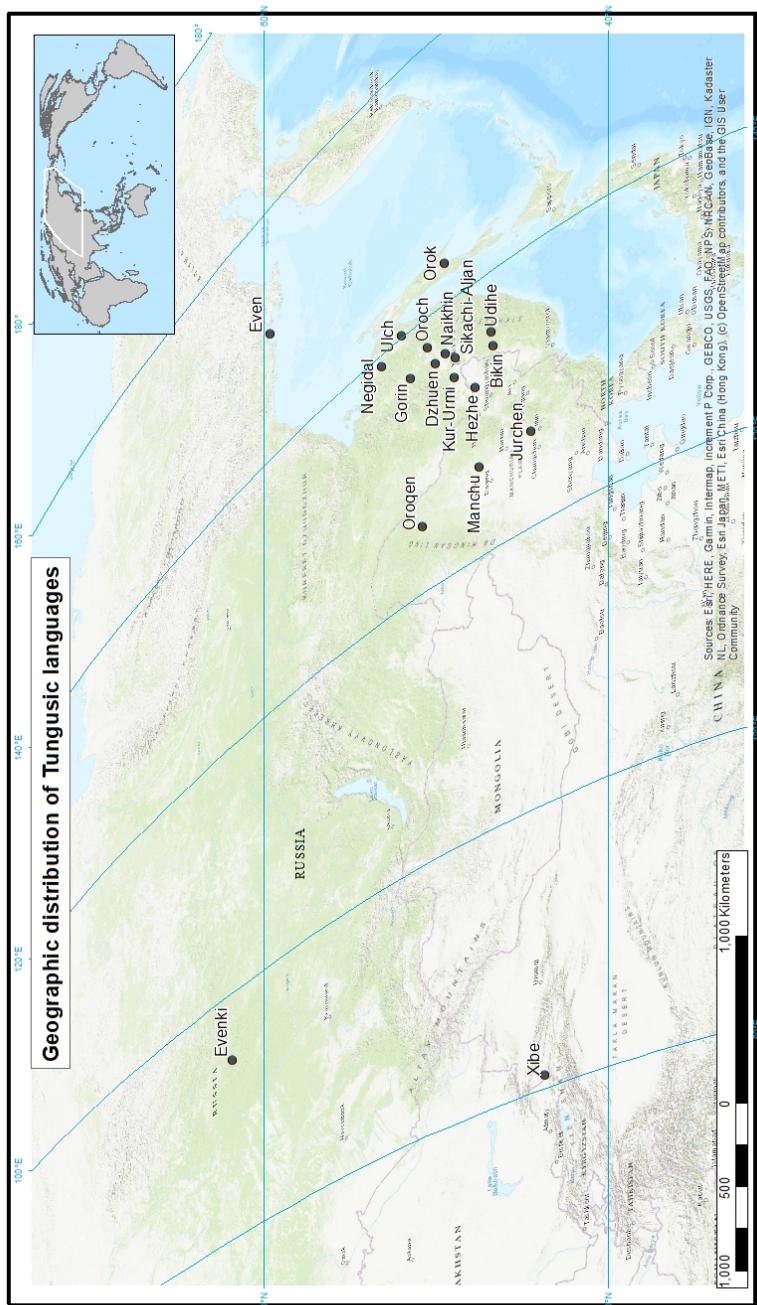
Sofia Oskolskaya & Natalia Stoynova

Acknowledgements

Map 1: NEC in Nanaic languages

Coordinates for dialects from GoogleMaps

Naikhin	49.2796, 136.4759	Gorin	51.2910, 136.5909
Sikachi-Aljan	48.7515, 135.6474	Bikin	46.5398, 135.3583
Dzhuen	49.8538, 136.2503	Kur-Urmi	48.7996, 134.2543

Map 2: Geographic distribution of the Tungusic languages (compiled by E. Koile)

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Part III

Other parts of the world

Chapter 12

Privation and Negation: Semantic change in the negative domains of three Australian (Pama-Nyungan) language groups

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On the basis of comparative data in three Pama-Nyungan subfamilies (Thura-Yura, Yolŋu Matha and Arandic), this chapter brings comparative data from the Aboriginal languages of Australia to bear on the Negative Existential Cycle (NEC, see Croft 1991, Veselinova this volume a.o.). I propose a formal semantic analysis of the Cycle, where the, a grammatical category described in many Australian languages (e.g. Dixon 2002), is taken to realise the semantics of a negative existential. Diachronically, I show that erstwhile privatives generalise into sentential negators: an instantiation of the NEC.

Keywords: negation, privatives, existentials, semantic change, Australian languages, quanti ication

1 Introduction

This chapter brings the observations of the "negative existential cycle" (see Croft 1991, Veselinova 2013, 2016, this volume among others) to bear in the context of the Aboriginal languages of Australia. The Australian language ecology is a fertile area for comparative typological work, given its striking linguistic diversity and small, non-sedentary, frequently exogamous populations (Bowern 2010). Some 90% ($N \approx 290$) of the languages spoken on the Australian mainland have been reconstructed to the Pama-Nyungan family (see also O'Grady et al. 1966,

Wurm 1972, Bowern & Atkinson 2012), with a common ancestor spoken in Northern Australia almost 6,000 years before present (Bouckaert et al. 2018).

Taking the negative domains of three Pama-Nyungan subgroups as an empirical testing ground, this chapter describes the relationship between so-called "standard" (SN) and "existential" negation in an investigation of predictions made by a postulated cyclic change: the Negative Existential Cycle (NEC). Here, explicit markers of existential negation[1] emerge (stage $A \rightarrow B$), encroach into the semantic domain of an erstwhile general negative marker (stage $B \rightarrow C$), and finally displace the latter, becoming a standard negation marker without the formal or functional features of an existential negator (stage $C \rightarrow A$; see Croft 1991, Veselinova 2016 a.o.) The Pama-Nyungan data provided here give further evidence for the cross-linguistic validity of the NEC, although, we will also see evidence of contact-induced change in the negative domains of some languages which are not clearly captured by the Cycle.

This chapter is organised as follows: §2 provides an overview of typological generalisations that can be made of negation marking in Australian languages with particular attention paid to the semantics of the category of the so-called "privative case." §3 investigates evidence of change, replacement and renewal of negative markers in the Thura-Yura language group of South Australia. §4 compares the negative domains of three Yolŋu languages, particularly evidence of expansion in the domain of privative marking in a number of varieties. §5 describes standard negation in Upper Arrernte, situating arguments made elsewhere in the literature (particularly Henderson 2013) that, in this language (and related Arandic varieties), synchronic SN strategies are a result of reanalysis of an erstwhile nominal suffix. Ultimately, a primary upshot of this comparative work trades on an insight, only briefly discussed in work on the NEC (e.g. Croft 1991: 17), that this process (at least insofar as it is actualised in these Australian languages) can largely be understood and predicted with reference to existing work on semantic change (sc. diachronic developments in the meaning of a given lexical item) and work that formally seeks to generalise over grammaticalisation pathways and cycles (e.g. Deo 2015a,b, 2018).[2] This is discussed in §6.

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[1]For the purposes of this paper, similarly to others in the current volume, "existential negation" is understood as a linguistic strategy for predicating the *absence* of some entity at a certain location (adapting from Creissels' (2014: 2) typology of existential constructions, consonant with the approach taken in Veselinova 2013: 139. McNally also points out the relevance of "noncanonical sentence types", distinguished syntactically or lexically, serving to "introduce the presence or existence of some individual(s)" (2016: 210). See also Freeze 1992 for an analysis that explicitly relates existential to LOCATIVE and POSSESSIVE predications.

[2]See also the distinction drawn between "functional" and "formal" cycles as applied to the Jespersen's cycle in Ahern & Clark (2017).
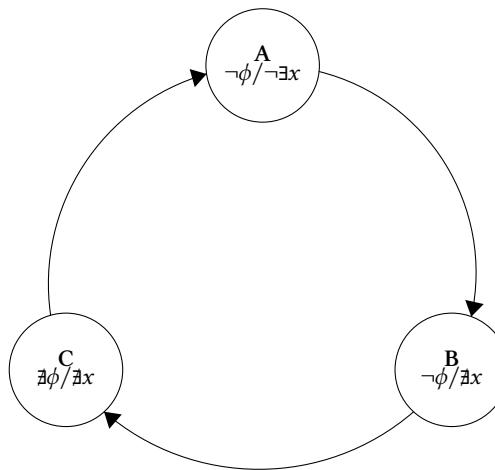
Figure 1: The "Negative Existential cycle" – a typology of standard and existential negation according to the analyticity of these markers (Croft 1991, see also Veselinova 2016.) Standard negators ¬ are used to negate both verbal ϕ and existential $\exists$ predicates in stage A, a suppletive "negative existential" $\nexists$ arises in stage B and this marker comes to mark standard negation in stage C. "Transitional" stages are assumed to occur between each of the labelled stages.

2   Negation and Australia: a typological snapshot

Strategies that natural languages deploy to mark negation have long attracted the attention of philosophers and linguists (see Horn 1989 for a comprehensive investigation of these questions). More recent work (e.g. Miestamo 2005 a.o.) seeks to propose a typology for the behavior of "standard negation" marking strategies across a sample of world languages (including 40 Australian varieties.) *Standard negation* (SN) is understood as those language-specific mechanisms whose function is the inversion of the truth value of a proposition associated with a given (declarative) clause. Drawing a distinction between SN and "special negation" is warranted in view of the empirical fact that many languages have distinct formal mechanisms for the negation of nonverbal (e.g. copular, existential) predications, imperatives and other types of "subclausal" negation (Miestamo 2007, Horn & Wansing 2017, Veselinova 2013, van der Auwera & Lejeune 2005).

Some 300 Australian languages have been reconstructed to a single family, Pama-Nyungan, spoken across Australia except for some regions in the north of the continent. The most recent common ancestor of these languages is esimated to have been spoken roughly five to six thousand years BP (a similar timedepth
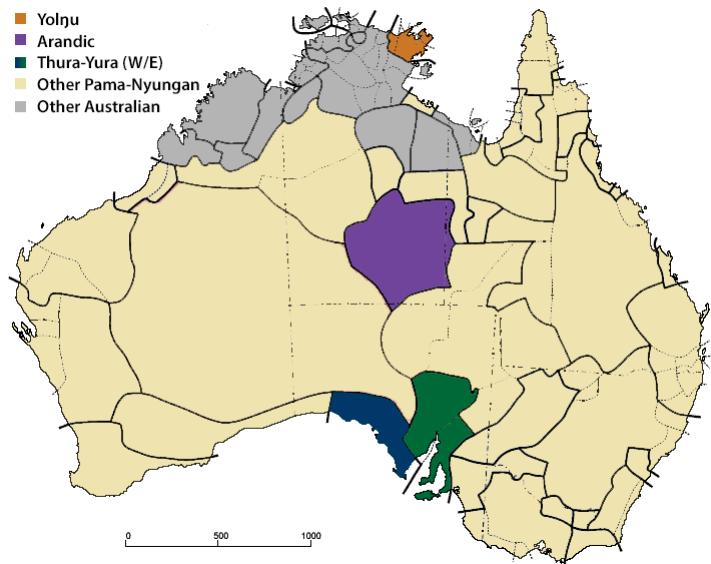
Figure 2: Subgrouping of Australian languages. Pama-Nyungan family is tan, with Yolŋu subgroup given in in ochre, Arandic in purple and Thura-Yura in blue (Western/Nangga varieties) and green (Eastern varieties.) Map adapted from Dixon (2002: xxviii), colourised by author.

to Indo-European, see Bouckaert et al. 2018: 742). Many of these languages remain underdescribed, and consequently, typological and comparative work detailing the expression of negation across Australian languages is underdeveloped. Exceptions to this include Dixon 2002 and Phillips (forthcoming): surveys that have turned up some generalisations about the formal and functional expression of negation in these languages. Based on the insights of these works, we might divide the "negative semantic space" so to distinguish four macro-categories of negator: (1) negative imperatives/prohibitives, (2) clausal/standard negators and (3) nominal negators, including specialised negative existentials and a commonly occurring "privative" category, and (4) negative interjections. There is a substantial amount of variation in the formal exponence of each of these functions, some varieties distinguishing all four categories (e.g. Bidjara [bym]), some with a single syncretic marker for all four (e.g. Dyirbal [dbl], according to Dixon 2002: 84–table 3.3).

An exceptionful (but otherwise fairly robust) formal tendency across Australian languages is for clausal negation to be marked with a particle pre-verbally and for privative case to be encoded as a nominal suffix. We will explore the implications of this generalisation and its exceptions below. The remainder of this

section constitutes a brief survey the exponence of negation strategies in Australian languages, partially summarising insights from Phillips (forthcoming).

2.1 "Standard" negation

This section briefly provides some generalisations about clausal negation strategies in Australian languages. For a more comprehensive discussion of exceptions and significant interactions between SN and other aspects of the verbal complex in Australian languages, the reader is referred to Phillips (forthcoming).

Dixon (2002: 82) claims that "almost every Australian language marks 'not' by a non-inflecting particle which goes before the verb." He notes that this generalisation extends also to the most synthetic non-Pama-Nyungan languages spoken in the north of the continent. Negation in the Arandic subgroup of Pama-Nyungan, which provides a major exception to this formal generalisation, and is particularly relevant for current purposes, is discussed in more detail in §5. The data from Ngiyambaa ([wyb] Pama-Nyungan: Wiradhuric) below clearly demonstrate this generalisation with the preverbal SN particle *waŋaːy*, which has scope over the entire sentence in (1a) and just the second predicate in (1b).

(1)   Preverbal standard negation in Ngiyambaa (Donaldson 1980: 239)

    a. **_Waŋaːy_** *yiŋgalaː-dhi=dju=na   girimiyi-la.*
       NEG   same-CIRC=1.NOM=3.ABS wake.PST-THEN
       'It wasn't because of that I woke her then.'

    b. *Yiŋgalaː-dhi=dju=na   **waŋaːy** girimiyi-la.*
       same-CIRC=1.NOM=3.ABS **NEG**   wake.PST-THEN
       'Because of that I didn't wake her then.'

2.2 The "privative case" and existential predications

The privative case (PRIV) is a very robustly attested category in Australian languages.[3] Broadly speaking, it predicates the absence of some property denoted by the noun that it associates with, although the precise semantic domain associated with this category varies considerably across languages (cf. arguments for the predicative status of negative existential markers in Veselinova 2013: 139). In Nyangumarta ([nna] Pama-Nyungan: Marrngu), for example, *-majirri* 'priv' can be used to predicate absence, i.e. as a negative existential, see (2a). Muruwari

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[3]Morphological cases with similar semantics are referred to as *abessive* and/or *caritive* in other literatures (e.g. for Uralic in Hamari 2011, 2015, Tamm 2015). "Privative" is ubiquitous in Australian language description and will be used here throughout.

([zmu] Pama-Nyungan: SE) similarly makes use of a form *-kil~-til~-tjil*, shown in (2b-c).[4] PRIV case markers are frequently antonymous to another case suffix, frequently occurring in Australian languages, usually glossed as the comitative (COM), proprietive (PROP) or '*having*' case. Uses of this marker are given in (3). The apparent synonymy of (2b) and (3b) show the antonymous relation between comitative and privative predications.

(2)   Negative existential function of PRIV

    a. Nyangumarta
       *mungka-**majirri** karru-**majirri**-pa paru-**majirri** jungka jakun*
       tree-**PRIV**   stream-**PRIV**-CONJ spinifex-**PRIV** ground only
       'There were no tree, creeks, or spinifex; only the ground (in that
       country.)'   (Sharp 2004: 140)

    b. Muruwari
       *palanj   mathan-**kil***
       nothing stick-**PRIV**
       '(There are no) sticks [...nothing]'   (Oates 1988: 77)

    c. Muruwari
       *ngapa-**kil**-pu-n*
       water-**PRIV**-3sg-NMLZ
       'He has no water.' (lit. 'he-waterless')   (Oates 1988: 78)

(3)   Existential function of COM

    a. Muruwari
       *thuu   kuya-**yita** wartu*
       much fish-**COM**   hole.ABS
       'The river has a lot of fish in it.' (=There's a lot of fish in the river)
                                                                 (Oates 1988: 73)

    b. Muruwari
       wala mathan-pira
       NEG limb-**COM**
       '(There are) no sticks.'   (Oates 1988: 74)

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[4]Oates (1988: 77) describes this suffix as the ABESSIVE: "the opposite of the comitative in that it signifies 'lacking' or 'being without' some person of thing." She glosses it throughout as 'lacking.'

Australian languages have a number of strategies to express existential and non-existence (absence) predications. (2a) shows the Nyangumarta privative marker functioning as an existential negator: it predicates the absence of streams, trees and spinifex (a culturally important tussock grass) of a particular location. Additionally, *contra* a prediction made by Croft (1991: 19), there are many Australian languages for which it is the case that "an existential sentence [can] consist solely of the noun phrase whose existence is predicated." An example of bare NP existential predication is also given in (2a), where the existence of *jungka* '[bare] ground' is predicated.[5] These facts immediately present a challenge to the (formal) negative existential cycle as formulated: if existence predicates are frequently verbless, there is no way to formally distinguish between stages **A** and **C** on the basis of synchronic data. I know of no Australian language with a *reserved* existential verb; like copular clauses, existence predications appear to frequently make use of a stance or motion verb (most frequently one that primarily means 'sit' or 'lie' and often polysemous with 'stay, live'), or are otherwise verbless.[6]

Relevantly for current purposes, the semantics of the privative suffix can be instructively captured by adapting existing analyses of existential propositions (e.g. Francez 2007, McNally 2011). These analyses generally characterise existential predication as containing obligatorily that thing whose existence is being predicated (the PIVOT) and some restriction (perhaps locative) on its existence (the CODA; see Francez 2007). Adapting Francez's analysis would mean treating privative noun phrases as generalised quantifiers of nonexistence. This is consonant with Croft's (1991: 18) observation about the privileged status of existential predication (as a logical quantifier as opposed to the one-place predicates of other stative verbs), which forms the basis for a functionalist explanation of the "constant renewal" of negative existentials at stage *B* of the NEC (see also Veselinova 2016: 173). A truth-conditional analysis of one privative-marked noun from (2a) is provided in (4) below; each step is spelled out in prose.

(4)   a.   *mungka-majirri*
          tree-PRIV

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[5]Such constructions have also been reported elsewhere in the literature, e.g. for Māori [mao] where ""existence" statements have no copula or existence verbs" (Bauer 1993: 78, cited by Chung & Ladusaw 2004 a.o). Similarly, sign languages tend to allow bare-NP existential predication (see de Weert 2016: 26ff on Flemish and Finnish sign languages.). Even Marra [mec] (a language cited in Croft 1991: 14) appears to permit bare NP existentials, if Heath's (1981: 364) translations are to be trusted.

[6]Notable, however, is the fact that these stance/motion verbs often lend particular semantic nuances to the copular and existential predications in which they participate (see e.g. Wilkinson 1991: 610–611).

b. **no** $= \lambda P_{\langle e,t \rangle} \lambda Q_{\langle e,t \rangle}.P \cap Q = \varnothing$ (e.g. Barwise & Cooper 1981: 169)
The function **no** takes two properties P, Q and returns a "true" if there is nothing in the domain which is in the intersection of those two sets.

c. $\llbracket \textit{mungka-majirri} \rrbracket = \lambda P_{\langle e,t \rangle} \big[\textbf{no}(\lambda x[\textbf{Tree}(x)], P) \big]$
The privative-marked NP *mungka-majirri* 'tree-PRIV' is a generalised quantifier: it states that there exists nothing in the domain in the intersection of the set of trees ($\lambda x.\textbf{Tree}(x)$) and some other property that is provided by the context of utterance (sc. Francez's *contextual domain d_α* (2011: 1838)).

d. $\llbracket \textit{mungka-majirri} \rrbracket^{c} = \textbf{no}(\lambda x[\textbf{Tree}(x)], \lambda y[\textbf{loc}(st_c, y)])$
In the absence of an explicit/linguistically-encoded "coda" (i.e. locus/restrictor) for the privative (i.e. a "subject" NP of whom the privative-property is being predicated), the context of utterance provides an additional restriction as the second argument to **no**. This restriction may take the form of a function that returns a set of things related to some spatiotemporal parameters indicated by context [viz. the contextually salient place and time being predicated about, some particular "country" in the past according to Sharp's translation].
$d_{st_c} = \lambda y_e.R(\text{'that country'}, y)$

If we treat privative marking on NPs as a type of negative existential predicate, a consequence of the NEC is the prediction that these markers ought to eventually generalise, displacing an erstwhile standard negator (i.e. PRIV markers will participate in the NEC.) Phonological identity between privatives and SN is indeed well-attested in Australia (e.g. Bardi [bcj] (Bowern 2012) and Warrongo [wrg] (Tsunoda 2011).) In these languages, negative existential/privative predication may be syntactically distinguished from standard clausal negation by placing the general NEG particle post-nominally instead of preverbally (see 5, 6a–b below.) A possible example of a postnominal existential negator acquiring the function of clause-initial standard negator is found in Wirangu ([wgu] Pama-Nyungan: Thura-Yura). This case is described in §3 below along with a discussion of its potential import for theories of the NEC.

(5) Negation in Warrongo ([wgu] Pama-Nyungan: Maric)

   a. Sentential negation with initial *nyawa* 'NEG'
     nyawa *ngaya*   *balga-lgo banjo-lgo.*
     NEG   1sg.ERG hit-PURP   ask-PURP
     'I will not hit [him]. [I] will ask [him].'   (Tsunoda 2011: 363)

b. Existential negation with postnominal *nyawa* 'NEG'

*nyawa, yarro walwa yamba. yori   **nyawa**, gajarra **nyawa***
NEG   this bad   country kangaroo NEG   possum NEG

*worriba   **nyawa**, barrbira **nyawa**, jagay   **nyawa***
sugarbag.bee NEG   echinda NEG   sand.goanna NEG

'No, this country is no good. There are no kangaroos, no possums, no bees, no echidnas, no sand goannas [in my country].'
(Tsunoda 2011: 661)

3 Thura-Yura: change and renewal in the negative domain

Thura-Yura is a Pama-Nyungan language family, with nine documented varieties historically centered on and around the South Australian coast. The Western varieties of these languages abut the Wati (Western Desert) family. Figure 3 describes the familial relations of the described Thura-Yura languages whereas Table 1 compares their negative lexica (including a possible reconstruction). Examples of Wirangu negative predications are given in (6) below.[7]
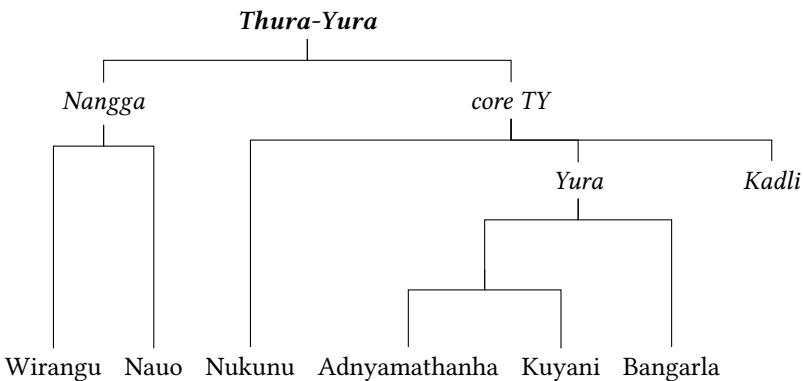
Figure 3: A selection of the internal structure of the Thura-Yura family (spoken in South Australia) following Simpson & Hercus 2004: 183.

Table 1 shows (colour-coded) four of the negative-associated lexical items in the Thura-Yura family, each of which will be discussed here. It allows for a probable reconstruction of a standard negator (or nominal negator) **maka* and/or

---

[7]Note that Hercus (1999: 57) describes a number of other markers with negative import in her Thura-Yura grammar (including two other lesser-used privatives, which she regards as older. Cf. Veselinova's (2016: 173) "constant renewal of the negative existentials."

Table 1: Reported partitions in the negative semantic space (data adapted from Hercus 1999, 1992, Schürmann 1844, Hercus & Simpson 1996, Black 1917.) Colouring reflects hypothesised cognacy of lexical items across Thura-Yura. Dashed arrows represent borrowings from neighbouring languages, full arrows semantic (functional) change.

	(WATI)	NEG.EX/PRIV	SN	'cannot'/'not yet'
Wirangu [wgu]		*-yudu* *-maga*	*-maga*	*guda*
Nauo [nwo]		?	*makka*	
Bangarla [bjb]		*-maga*	*makka*	*kutta*
Adnyamathanha [adt] Kuyani [gvy]		*pari-*	*(g)uda*	–
Nukunu [nnv]		*-wakanha*		
proto-TY			***maka**/**guda*	
DIYARI? ([dif] Karnic)				

SN **guda* in the ancestral language. Of Wirangu [wgu], Hercus (1999: 57) claims that privative morpheme *-yudu* has entered the language as a borrowing from the Kokata language, a Western Desert dialect spoken in neighbouring territories to the North ([ktd] Pama-Nyungan: Wati). *-yudu* has largely displaced *-maga* as the form of the privative. The recruitment of a distinctive privative form (from lexical resources of a neighbouring, unrelated language) may well be taken as evidence of pressure for the privileged marking of negative existentials that is taken to motivate the beginning of the NEC (sc. stage transition A → B).

(6)   Examples of Wirangu negation strategies (from Hercus 1999)

    a.   **maga** SN
        Warlba marnaardu-nga **maga** *wina-rn!*
        wind   big-LOC   **NEG** go-PRS
        '(I am) not going out in a gale!' (142)

    b.   *-**maga*** privative
        Nganha gidya-maga.
        1sg   child-PRIV
        'I haven't got any children.' (57)

c. *-yudu* **privative** ("most commonly used")
    Nganha barnda-yudu.
    1sg   money-PRIV
    'I haven't got any money.' (57)

d. *guda* **SN (modalised)**
    Ngadhu guda   wangga-rn.
    1sg.ERG NEG.IRR speak-PRS
    'I can't talk (about this; it's too embarassing.)'   (143)

Similarly, Adnyamathanha [adt] and Kuyani [gvy] have recruited *pari-* as a negative existential/predicator of absence (Hercus 1999: 141). This may also be a borrowing from the Karnic lanugages that abut Eastern Thura-Yura (e.g. Diyari [dif] *pani* 'PRIV', (Austin 2011, C. Bowern p.c.).[8] *maga* retains its function as the primary standard negator particle in Wirangu (and Bangarla [bjb]), whereas *guda* (the standard negator in Adnyamathanha and Kuyani), is restricted to a subset of negative meanings 'cannot' and 'not yet' (note that, particularly in northern Australia, the form of negative marking is often conditioned by speaker mood/ reality status, see Miestamo 2005: 225, Phillips forthcoming.)

A potential cognate in the southern Thura-Yura (Kadli) language, Kaurna [zku] (not represented in Figure 3 for a lack of available data) *wakka-* is found (possibly fossilised) in lexical items *wakkarendi* 'err, stray, be lost', *wakkariapendi*, 'forget, not think of, leave behind', *wakkariburka* 'ignorant person, simpleton' (Schürmann & Teichelmann 1840: II–52).[9] All three of these words appear to be analysable; *wakka-* contributing some notion of emptiness, characteristic of an erstwhile nominal negator/privative category.[10]

There are insufficient available data to adjudicate between competing hypotheses that (a) **guda* has been largely displaced by erstwhile nominal negator *maga*

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[8]This remains to be demonstrated, but *pari-* may otherwise be cognate with Wirangu *bal-* 'die', elsewhere described as a lexical source for negators (Veselinova 2013, van Gelderen 2022 [this volume]). An argument potentially in favour of this is found in a possibility of an example of lexical renewal likely born of euphemism; Adnyamanthana *inta-* 'die' appears to be cognate with Wirangu *inda-* 'spill'.

[9]Note attested stems in *pia-rendi* 'scattered, stray', *pia-riappendi* 'scatter, disperse', **burka** 'adult, man' (Schürmann & Teichelmann 1840: II–4,38).

[10]Data for Kaurna (and other extinct varieties) is scarce, effectively limited to the lexicon published by nineteenth-century missionaries, Schürmann & Teichelmann (1840). A possible reflex of **guda* is found in items like *kudmunna* 'ignorant, not knowing' (II–12). Other negative lexical items reported here are *yakko* which appears to function as a SN marker and *-tinna* which is given as the most frequent form of 'without' (i.e. the privative).

in Wirangu or (b) *guda* has replaced **maka* in Adnyamathana/Kuyani. Nevertheless, an analysis informed by the insights of the NEC favours and supports (a).

Under such an analysis, Wirangu – the Thura-Yura outlier – provides a particularly clear example of a language, the negator forms of which are transitioning through the NEC. The erstwhile negative existential *-maga* has entered the domain of standard, clausal negation, adopting the morphosyntactic properties of a preverbal negative (stage $B \rightarrow C$), and triggering the recruitment of a new privative marker from the lexical resources of a neighbouring language *-yudu* which is now in competition with the old marker (stage $A \rightarrow B$). The ostensible simultaneity of these changes also provides further evidence for competition between functional and formal pressures for generalisation and recruitment (sc. Veselinova's "constant renewal of the negative existential" (2016: 173)).

Additionally, if the directionality of change described here is indeed on the right track, Wirangu can be shown to resist classification into any unique NEC "stage", transitional or "cardinal" (in which case the NEC as described in previous work does not represent a complete linguistic typology for negative existential marking strategies.)

4 The Yolŋu negative domain

The Yolŋu languages, a Pama-Nyungan grouping of at least six dialect clusters (roughly coterminous with sociocultural groupings) are spoken through Eastern Arnhem Land (in the far north of the continent) by some 12,000 Aboriginal inhabitants (see Wilkinson 1991: 18ff, Bowern 2009). Yolŋu are strictly exogamous – each cultural group (clan) being associated with a distinct dialect, a situation that has led to a significant amount of stable linguistic variation (and undetermined internal classification, see Schebeck 2001, Bowern & Atkinson 2012: 836).

This section compares the negation systems of three distinct Yolŋu varieties: Djambarrpuyŋu [djr], Ritharrŋu [rit] and Wangurri [dhg] in view of making inferences about change in marking strategies over time. A pattern not dissimilar to that observed in Thura-Yura is shown. The key findings are tabulated in Table 2 below. The final subsection (§4.4) comprises a discussion of privative case semantics with particular reference to Yolŋu.

4.1 Djambarrpuyŋu

Djambarrpuyŋu [djr] appears to provide an example of Croft's $B \sim C$ transitional-stage language. Wilkinson (1991: 356) describes the coexistence of two markers:

Table 2: Partitioning of the negative space in some Yolŋu languages. 'PROH' negates imperatives. 'PRIV' is taken to denote a suffix of the type described above. 'NEG.EX' (Wilkinson's NEG.QUANT) are independent words that appear to quantify over the NP which they precede.

	PROH	SN	NEG.EX	PRIV
Djambarrpuyŋu [djr]	*yaka*	*yaka bäyŋu*	*bäyŋu*	*-miriw*
Ritharrŋu [rit]	*yaka*	*-'may'*	*yakaŋu*	*-miriw*
Wangurri [dhg]	*yaka ŋangawul bayaŋu*	*?yaka ŋangawul ?bayaŋu*	*ŋangawul bayaŋu*	*-nharra*

yaka 'NEG' and *bäyŋu* 'NEG.QUANT' (negative quantifier): claiming that "both occur as propositional negators," demonstrated in the data in (7) below, from Wilkinson (1991).

(7) a. *yaka* as (full) clausal negator
     yaka *ŋayi dhu ga   ŋutha-n ŋaṉḏi-wal   bäpa-wal*
     NEG 3sg FUT IPFV.INFL grow.I mother-OBL father-OBL
     'They don't grow up with (their) mother and father.'
                                              (Wilkinson 1991: 691)

     b. *yaka* as negator in copular construction
     yaka *dhuwali ŋatha, dhuwali ŋula nhä-n   dhuwali botjin*
     NEG MED   food   MED   INDF what-SEQ that   poison
     'That isn't food, that's something else, that's poisonous.'
                                              (Wilkinson 1991: 560)

     c. *yaka* as negator in possessive construction
     *warrakan limurruŋ   **yaka** dhuwal*
     animal   1pl.INCL.DAT NEG   PROX
     'This meat isn't ours/for us.' (author's fieldwork; AW20190505)

     d. *bäyŋu* as clausal negator
     bäyŋu   *ŋarra gäthur ŋorra-nha manymak-ku-nha munhawu*
     NEG.QUANT 1sg   today lie-INFL good-TR-INFL   night
     'I didn't sleep well last night.'   (Wilkinson 1991: 357)

The distributional difference between these two markers is twofold. According to Wilkinson, *yaka* is ungrammatical in quantificational contexts and that *bäyŋu* does not appear in imperative (i.e. prohibitive) contexts. It seems, then, likely, that in Djambarrpuyŋu, *bäyŋu*, an erstwhile negative existential has begun to encroach further into the negation space, entering into competition with *yaka*. *bäyŋu*, with reflexes in other Yolŋu languages, derives from (fairly productive) verbal root *bäy-* 'leave'.[11] Examples of negative existential uses of *bäyŋu* are given in (8) and prohibitive uses of *yaka* in (9).

(8) Djambarrpuyŋu negative quantification

    a. (**yaka/*)***bäyŋu***   *ŋarra-ku gi ŋorri ŋula dhiyal*   *wäŋa-ŋur-nydja*
       *neg/**neg.quant** 1sg-dat IV lie:IV indf prox.loc place-loc-foc
       'I don't have any here.' (lit. 'at this place lie (are) none of mine')
                                         (Wilkinson 1991: 691)

    b. *bili*   (#*yaka/*)***bäyŋu***   *limurruŋ*   *dhuwal bäwarraṉ*
       because #neg/**neg.quant** 1d.incl.dat prox   animal
       Intended reading: 'Because there's no meat for us.'
       (Wilkinson 1991: 560, infelicity judgment aw20190505, cf. 7c)

(9) Djambarrpuyŋu imperative negation (prohibitive, see also §4.4)
    yaka(/******bäyŋu***)   *waŋi!*
    neg(/***neg.quant**) talk.II
    'Don't talk!' (Wilkinson 1991: 360)

There are multiple arguments for a reconstruction of **yaka* to proto-Yolŋu. First, the fact that it is reported as a negative particle in all Yolŋu languages (Schebeck 2001: 31).

Secondly, possible lexical cognates are reported in likely sisters to Yolŋu in the Western Pama-Nyungan subfamily (a monophyletic branch reconstructed in Bowern 2012: 838). Sharp (2004: 226) and O'Grady (1963: 67) both report a Nyangumarta ([nna] W. Pama-Nyungan: Marrngu) verb *-yaka-* meaning 'leave, quit'. McKelson (1974: 35) additionally gives *yaga* as an alternative (potentially emphatic) negative particle in Mangala ([mem] Marrngu). It is very possible that these Marrngu verbs are cognate with the Yolŋu negator, despite Marrngu and Yolŋu having been distantly separated for centuries. Dixon (2002: 85) lists other potential cognates to negative *yaka* from a number of other dispersed Pama-Nyungan languages.

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[11]Note also that *-Thi* 'inch' derives absence-associated change-of-state readings: *bäy-thi* 'be left over/behind'; *bäyŋu-thi* 'be/have none, pass away, die' (Wilkinson 1991: 378).

Thirdly, the generalisations of the NEC as formulated by Croft (1991) and Ve-
selinova (2016) a.o. provide a principled typological basis through which an erst-
while negative existential construction arises in a language and begins to en-
croach upon the functional domain of a standard (clausal) negator (transitional
stage *B ∼ C*). If this diachronic analysis is on track it may have implications for
our understanding of the characteristics of stage *B ∼ C*: negative imperatives
(prohibitives) being one of the last "holdouts" for an erstwhile SN marker that is
threatened by competition from a negative existential or quantifier. Dixon's ty-
pology (2002: 84) indeed entails an implicational relationship: if there is formal
syncretism between privative and prohibitive marking, then these will be syn-
cretic with the SN marker as well. Gumbaynggir ([kgs] Pama-Nyungan: South-
east; Eades 1979) and Nyawaygi ([nyt] Pama-Nyungan: Dyirbalic; Dixon 1983)
are given as examples of a languages for which the prohibitive patterns distinctly
from all other negative functions (a datum which is a potential indicator of a lan-
guage in NEC stage *B ∼ C*). The Ritharrŋu data presented in §4.2 below raise a
potential counterexample.

4.2 Ritharrŋu

The facts outlined in Heath's (1980) description of **Ritharrŋu** [rit] diverge in a
number of significant ways from the Djambarrpuyŋu situation described above.
Further, they appear to pose a potential problem for the generality/predictive
power of the NEC as formulated.[12] While a form *bayŋu* has been retained in the
language (glossed as 'nothing'), there is an additional suffixal form *-'may'* used
as the "basic" (Heath 1980: 101) general negator alongside *yaka* (the latter form
is the standard means of forming prohibitives in Ritharrŋu, shown in 11).

(10)   Standard and copular negative suffixation of *-ʔmayʔ* in Ritharrŋu

  a.   *wäni-na-'**may**' napu*
       go-PST-**NEG**   1pl.EXCL
       'We didn't go.'

  b.   *munaŋa-'**may**'   rra*
       white.fellow-**NEG** 1sg
       'I'm not white.'   (Heath 1980: 101)

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[12]Data provided from Heath (1980) has been standardised to an Australianist (Yolŋu) orthography
    from his original IPA transcription.

(11) Prohibitive formation with *yaka* in Ritharrŋu
      yaka *nhe baŋgurl'-yu-ru*
      NEG 2sg return-*them*-FUT
      'Don't come back!'   (Heath 1980: 76)

Existential negation, however, is introduced by the complex form *yaka-ŋu* (shown in (12) below). This form is clearly related to the Djambarrpuyŋu SN particle described above, with archaic Yolŋu suffix *-ŋu* (described as an "adjective ⇒ substantive" derivation by Schebeck 2001: 34, see also Wilkinson 1991: 174ff, Heath 1980: 24.) Heath glosses *yakaŋu* as a particle meaning 'absent' (1980: 102).[13] Recalling the possible lexical sources of pan-Yolŋu form (Table 2 supra) **yaka* discussed in the foregoing section, this is an appropriate translation.

(12) Existential negation with *yakaŋu* in Ritharrŋu
      a. **yakaŋu** *ŋay dhäŋgu*
          NEG.EX 3sg meat
          'There's no meat.'   (Heath 1980: 102)
      b. **yakaŋu** *ŋay* (*yaŋ'ŋara*)
          NEG.EX 3sg (here)
          'He isn't here.' (Heath 1980: 102)

While it may be tempting to relate *bäyŋu*, as found in other Yolŋu languages, to a possibly lenited form *-'may'*, as Heath (1980: 102) points out, it is much more likely to be a borrowing from the geographically neighbouring language Ngandi [nid], an unrelated, non-Pama-Nyungan language also spoken in southeastern Arnhem for which *-ʔmay* is a fusional negative-cum-present tense suffix. Given the structure of the negative domain in Ritharrŋu (i.e. the use of *-'may'* in (zero-)copular clauses (10a) and its apparent unavailability to quantificational/existential predication) provides support for the borrowing account, which is considerably more parsimonious than an account by which the syntax, semantics, phonology and perhaps morphology of *bäyŋu* were radically reorganised into a SN suffix. If this is indeed the case, it provides counterevidence to the hypothesised unidirectionality of the NEC (e.g. Veselinova 2016: 146) given that an

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[13]Note that Heath also points out that stance predicates with copular/existential readings can also receive negative marking as in (13) below.

(12b′) *nhiena-**'may'** ŋay yaŋ'-ŋarṛa*
        sit.PRES-NEG 3sg here
        'He isn't (sitting) there.'   (Heath 1980: 102)

innovative *standard negator* has been recruited into Ritharrŋu's negative space, whereas the so-called "special negators" have retained an older form (Figure 4).
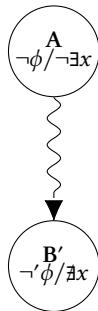
Figure 4: Not predicted by the NEC, Ritharrŋu appears to have recruited an innovative clausal negator ¬′ into negative space. This is likely to be an effect of extended contact with an unrelated non-PN language (Ngandi [nid]).

Whatever the providence of -*'may'*, this is the marker of standard clausal negation whereas existential negation appears to be obligatorily marked by *yakaŋu*. Incidentally, on the basis of the limited data presented here, Ritharrŋgu, a language closely related to Djambarrpuyŋu, might *synchronically* be described as a stage *B* language *per* the negative existential typology described in this volume, although such a description plasters over the likely diachronic trajectory of Ritharrŋu negative marking.

4.3 Wangurri

Finally, negation in **Wangurri** [dhg], a northern Yolŋu dialect, appears to make use of an additional particle with the semantics of a general negator, *ŋangawul* in addition to *yaka* and *bayaŋu*. McLellan (1992: 195) claims that *ŋangawul* and *bayaŋu* can be used in all negative contexts and that *yaka* cannot be used as a "negative quantifier." These data are exemplified in (13) below, all adapted from McLellan (1992).

(13)   a. Negative existential use of *ŋangawul*
            *gulitj-ma **ŋangawul**-nha ŋanapiliŋgura ŋapa-ŋa   gayŋa   nyena*
            true-DP   **NEG**-DP   1pl.EXCL:LOC   back-LOC IPFV.IV sit.IV
            'No true ones at our backs are living (i.e. descendants.)' (246)

b. Clausal negation use of *ŋangawul*
   ga **ŋangawul** *ŋaya barpuru nhawun ŋunhuŋ yolŋu-wuŋ ŋäku*
   and NEG   1sg   recently like   that.ABL person-ABL hear.IV
   dhäwu
   story
   'I didn't recently hear the story about that person.' (136)

c. Negative imperative with *yaka*
   Yaka *dhaŋu ŋäpiki'-murru   garruwa*
   NEG this   white.person-PERL speak.IMP
   'Don't talk through white (language)!' (195)

d. Negative imperative with *ŋangawul/bayaŋu*
   Ŋangawul/bayaŋu *ŋäpaki'-murru-m   garrun,*
   NEG/NEG   white.person-PERL-DP speak.INFL[14]
   bayaŋu/ŋangawul!
   NEG/NEG
   'Don't talk through white (language), no!' (195)

e. Potential ambiguity between standard and negative existential readings with *ŋangawul*
   Ŋangawul-*nha ŋaya rakaran nhangul*
   NEG-DP   3sg   tell.PFV 3sg.ALL
   (i)   'I told him nothing.' (≈ 'There is no thing such that I told him that thing.')
   (ii) 'I didn't tell him'(≈ 'It's not the case that I told him [that thing.]') (196)

The Wangurri data show competition between three separate markers and provide a series of interesting insights and questions in view of predictions the NEC would make. The domain of *bayaŋu* (cognate with *bäyŋu* as described above) has further expanded into the prohibitive domain, behaviour that, taken in isolation, may suggest that this marker has moved further along the cycle drawing Wangurri further towards a *C*-type system (characterised by the availability of ambiguous readings shown in 13e).

Nangawul appears to be an innovation, it has an unclear etymology and stands in no obvious relation to a potential cognate in any related or borrowing from

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[14]It is unclear whether the difference in verb inflection between *yaka*- and *ŋangawul*-/*bayaŋu*-prohibitive is categorical. If it is, this may be construed as additional evidence that the use of *ŋangawul/bayaŋu* for prohibitive formation is a more recent innovation (and consequently does not trigger the relatively infrequent imperative inflection).

any neighbouring language. Given its wholesale entry into the negative domain – that is, this lexical item's ability to negate verbal clauses, existential clauses and imperatives, it is unlikely that the grammaticalisation of this item taken in isolation can be marshalled as evidence of the NEC. Further research on Northern Yolŋu has the potential to shed light on the change in available readings associated with *ŋangawul*, but until that point, our best hypothesis may be one of lexical replacement, where *ŋangawul* analogistically replicates the domain of the (likely older) negator *bayaŋu*, whose emergence in Yolŋu was described in §4.1.

The manifestation of the NEC in Yolŋu is further nuanced below, when we consider additional competition from privative morphology in these languages.

4.4 The PRIVative in Yolŋu

All Yolŋu languages make regular use of a *privative* suffix 'PRIV'. For most languages, the phonological form of this marker is *-miriw* (see Table 2). The only exceptions to this are found in Dhaŋu-Djaŋu ([dhg], including Wangurri), for which the form is *-nharra* (Schebeck 2001: 34) and Yan-nhaŋu [jay] *-nharraŋu* (C. Bowern, p.c.). This latter form may be cognate with the Warluwarra [wrb] and Bularnu [yil] (Pama-Nyungan: Warluwaric) privative *-nharra(ŋu)*. Warluwaric is given by Bowern & Atkinson (2012) as the most likely closest sister node to Yolŋu in Western Pama-Nyungan. If this is the case, then ***nha-* can be reconstructed as a WH-particle to these subgroups' most recent common ancestor (cf. Breen n.d.: 576). It is used as the basic root WH-words and indefinites (e.g. *nhä*$_{[dhg]}$; *nhangarli*$_{[yil]}$ 'what, something') in Yolŋu and Warluwaric. *yarraba* shows up in Bularnu in some contexts as a word for 'nothing' (Breen n.d.: 626, 690) – the univerbation of ***nha* and ***(y)arra* into some type of negative indefinite is therefore a possible source for the *-nhärra* privative.[15]

The etymology for *-miriw* is unclear (although it possibly stands in some relation to *miḏiku(?)* 'bad'$_{[rit]}$, 'rubbish (incl. a sororal kinship relation)'$_{[DJR]/[GUF]}$ and appearing in words like *miḏik-uma* 'make.badly' *miḏik-irri* 'go.badly', *noy-miḏiku'ŋu* 'feel-sad' *etc.*) In view of the facts above, we have reason to reconstruct a proto-Yolŋu privative **-nharra*, replaced by innovative *-miriw* in the bulk of contemporary (viz. non-Northern) varieties.

In §2.2 above, we saw a potential semantics for canonical uses of privative marking. This semantics, which understands the privative as a quantifier that

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[15]Further support for this etymology comes from Wakaya ([wga] Warluwaric) *-nhawerru* 'PRIV' (Brammall 1991: 36). *-werru* is the Wakaya proprietive marker (<Proto-Warluwaric **-warra* 'PROP'); consequently, *-nha-* seems to have acquired some type of negative semantics.

predicates nonexistence of the NP in its scope, restricted to a domain that is provided elsewhere in the discourse, suitably captures nonexistence, absence, and non-possession readings of privative NPs. This semantics for the "canonical privative", however, papers over the significant degree of semantic variation in markers described as "privatives" in the Australianist descriptive tradition. Djambarrpuyŋu *-miriw* appears felicitous in the broad range of contexts shown in (14) below.

(14) A broad range of meanings available to Djambarrpuyŋu [djr] *-miriw* 'PRIV'

    a. *-miriw* predicating non-possession
       *weyin muka ŋarra dhuwal nhinana-ny   yothu-**miriw***
       long   okay 1sg   PROX   sit.-INFL-FOC child-**PRIV**
       'for a long time I lived here without children'   (Wilkinson 1991: 445)

    b. Privative use of *-miriw*; synonymous with *bäyŋu* 'NEG.EX'
       *yolŋu-ny   gan   nhinan warraŋul bala'-**miriw**, **bäyŋu***
       people-PROM IPFV.IV sit.INFL outside   house-**PRIV** **NEG.QUANT**
       bala'
       house
       'People used to live outside without houses, there were no houses.'
       (Wilkinson 1991: 443)

    c. Negative existential use of *-miriw*
       *bili   yätjkurr ŋunha wäŋa warralŋur-nydja gapu-**miriw***
       because bad   DIST   land NAME-FOC   water-**PRIV**
       '...because the place is bad. (It's) without water.' (= there's no water)
       (Wilkinson 1991: 443)

    d. *-miriw* predicating the absence of a de-verbal property
       *maŋutji ŋorra-nha-**miriw** ŋunhayi wäŋa*
       eye   lie-INFL-**PRIV**   DIST.LOC place
       'It's impossible to sleep at that place.'   (Wilkinson 1991: 448)

    e. Privation of a de-verbal relation
       *ḻuka-nha-**miriw** ŋayi nunhi dharpa-ny*
       eat-INFL-**PRIV**   3sg TEXD tree-PROM
       'That tree is not edible.'   (Wilkinson 1991: 446)

    f. Privation of an eventive de-verbal relation
       *djamarrkuḻi-y' marrtji lakaram baḏatju-na-**miriw***
       children-ERG go.I   speak.I make.mistake-INFL-**PRIV**
       'The children were speaking without making mistakes.'   (Wilkinson 1991: 449)

g. *-miriw* in a subordinate clause: privation of a de-verbal property/disposition
*...ga yolŋu-wal-nha   ŋuri-kal-nha   wäŋa nhä-nha-**miriw**-wal-nha*
and person-OBL-SEQ ANAPH-OBL-SEQ place see-INFL-**PRIV**-OBL-SEQ
miltjiri-wal-a
blind-OBL-SEQ
'...and to the person who cannot see the place, the blind.'   (Wilkinson 1991: 448)

h. Negative predication (locative)
Context: A response to the question 'is it inside?'
*yaka, djinawa'-**miriw***
NEG,   inside-**PRIV**
'No, it isn't inside.'   (Wilkinson 1991: 445)

i. Prohibitive use
*ḻuka-nha-**miriw**-nha dhuwali-yi-ny   dhulŋuŋu-n   ŋatha*
eat-INFL-**PRIV**-SEQ   there-ANAPH-PROM assigned-SEQ food
'Don't eat it, that food is for someone else.'   (Wilkinson 1991: 446)

The data in (14) are extremely relevant for current purposes. They show how the semantic domain of the PRIV, a lexical item with the semantics of canonical negative existential, has expanded (such uses of PRIV are reportedly ungrammatical in other varieties, including Yan-nhangu [jay], Claire Bowern, p.c.). Whereas these markers are generally thought of as quantifying over a domain of individuals (a-c) above, the remaining examples (d-i) all show *-miriw* ranging over a domain of *eventualities*. Morphologically, *-miriw* is suffixed to a verbal root in the fourth inflection *-∅~-na~-nya~-nha* 'IV', ostensibly the strategy for deriving eventive nominals from verbal predicates (sc. nominalisation, see Lowe 1996: 103). In (g), for example, *-miriw* seems to actually scope over an eventive nominal whose semantics derive from an entire VP: 'the person such that that person engages in no event of 'seeing places'.[16] Similarly, (h) appears to mark the absence of a co-location relation between two objects. This verbless sentence gets

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[16]Provisionally adapting the formalism from page 483 such that *-miriw* is able to range over D_ε, the domain of eventualities (here I use $\mathfrak{x}, \mathfrak{y} \in \mathcal{E}$ as variables of eventualities), the meaning of *yolŋu wäŋa nhänha-miriw* person place see.IV-PRIV 'person who doesn't see places' might be translated as follows:

$$\llbracket \text{yolŋu wäŋa nhänha-miriw} \rrbracket = \mathbf{no}(\lambda \mathfrak{x}_\varepsilon.\mathbf{see}(\text{place})(\mathfrak{x}), \lambda \mathfrak{y}_\varepsilon.\mathbf{char}(\delta_{\text{person}}, \mathfrak{y}))$$

That is, the intersection between the set of *eventualities of seeing places* and *the contextual domain of eventualities* $\mathbf{char}(\delta_{\text{person}}, \mathfrak{y})$ – perhaps those that might be predicated of/taken to be

its negative force from the privative suffix. Our common conceptions of privative marking certainly do not predict this function.[17]

Also notable is the use of privative constructions in forming prohibitives, shown in (14i). Wilkinson (1991: 446) notes that here, privative-marked eventive NPs express "a complete negative predication…stronger, less polite than regular imperatives." This strategy indeed seems analogous to English utterances of the type "no smoking" and "no eating", which indeed do carry imperative force and are constructed in a manner that appears to quantify over "smoking" and "eating" events in the utterance context.

This subsection has marshalled data about an evident expansion in the semantic domain of the privative marker in Djambarrpuyŋu; from predicating *absence of "things"* to predicating the *nonactualisation of events* in a given context. This consequently points to the apparent generalisation of a lexical item out of the semantic space of traditional "negative existentials" into functions that are normally asociated with standard (or other special types of) negation. The following section on Arrernte negation will investigate an ostensibly similar phenomenon further along the cycle; one that has rendered these languages outliers with respect to typological generalisations about negation strategies in Australian languages. This section should shed further light on the "bleaching/generalisation" pathways of special negators.

5 Arandic: the nominal status of negated verbals

Along with a number of other Arandic varieties, Mparntwe (Alice Springs) Arrernte ([aer] Pama-Nyungan: Arandic) is spoken in the Central Australian desert. It is one of several of Australian languages that marks negation with a verbal suffix, fused into the verbal complex and diverging from the broad characterisation of Australian languages deploying preverbal SN marking made at the beginning of this chapter. According to Wilkins (1989: 71), this negation suffix *-(t)yekenhe~-*

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characteristic of the disposition of a (blind) person (δ_{person}) – is empty.

Note that the apparent introduction of a modal component in (14d–i) can be easily accommodated by Francez's (2007) formalism as the contextual retrieval of a relation ($\mathcal{R} = \textbf{char}$) that retrieves information about the disposition of the pivot.

[17]Note however, that Tamm (n.d., 2015) reports the parallel use of abessive suffixes and a preverbal negator in Estonian. She suggests a difference between the two strategies that is anchored in some shade of modal meaning (i.e. "a presupposition about a plan, a standard or an expectation considering a normal state of affairs"). See §6 (note 26) for more.

tyange[18] "replace[s] tense [marking]" in this language; that is, the main verb of a negated clause carries none of the tense/mood/aspect information that it does in a positive Arrernte clause. An inflection-bearing auxiliary from the *"existential-positional" class* (predicates with stance or motion semantics which are grammaticalised in copular and existential constructions), is then optionally introduced to encode this information as shown in (15a). (15b) gives an example of temporal information (viz. pastness) being (presumably) supplied by the nonlinguistic context.

(15)   Upper Arrernte ([aer] Pama-Nyungan: Arandic)

    a.   *Anwerne-k-artweye mape-le pmere   kurn-ile-**tyekenhe** ne-**ke**.*
        1pl-DAT-custodian PL-ERG country bad-CAUS-NEG   be-PST
        'Our ancestors didn't (ever) hurt the country.'   (Wilkins 1989: 235)

    b.   *Kweye, the   ng-enhe aw-**etye**=**akenhe**.*
        oops   1sg.ERG 2sg.ACC hear-NEG
        'Sorry, I didn't hear you.'   (Henderson 2013: 412)

Wilkins (1989: 235, fn 17) suggests that the negative suffix is historically derivable from "the nominalising suffix -(*n*)*tye*", to which a possibly erstwhile negative form *kenhe*,[19] with reflexes in other Arandic varieties, attaches (see also Yallop 1977: 275). Support for this semi-complete univerbation is found in the fact that a number of formatives can be inserted at the boundary between the negative inflections two postulated components (see Wilkins 1989: 378ff), shown in (16). Seizing on this argumentation, Henderson (2013: 411–426) goes to some lengths to demonstrate the nominal status of verbal roots inflected with *-etye=akenhe*; some of these arguments are rehearsed here in view of better understanding the diachrony of Arrernte negation, although the reader is referred to his work for more evidence in favour of this analysis.

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[18]The form of this suffix is given as *-ety(e)=akenhe~-etayng* in Henderson 2013. I have not changed the orthography in example sentences cited here, rather opting to replicate the orthographic forms and glossing decisions of each author. The sole exception to this is standardisation to Leipzig glossing conventions and Henderson's VNeg$_{(1/2)}$ to NEG.

[19]A particle *kenhe* is also reported by Wilkins (1989: 372) which is glossed as BUT and indeed appears to have the syntax of a coordinator. While the semantics may contain some element of negative/subtractive meaning, it is unclear what relation this particle bears to the verbal negator (including questions about possible directionality of semantic change or whether this is merely an example of homonymy.) In related Arandic language Kaytetye [gbb], this form is translated as 'might' (Kaytetye people 2012: 424).

(16) The status of negative inflection in Eastern/Central varieties of Arrernte [aer]

    a. En(do)cliticisation of adverbial particles in the verbal negator
       Re=atherre untyem-eke~untyeme an-err-eme
       3d.NOM   facing.away-DAT=RED sit-d-PRS
       *angk-err-**etye**«**arlke**»**akenhe**.*
       speak-RECP-**NEG**«also»
       'The two of them are sitting down and not talking to each other.'

                                      (Henderson 2013: 417)

    b. Apparent ergative suffixation in cases of secondary predication (obligatory *iff* the main predicate is transitive)
       *Re   il-eke   arlkw-**etye**=**akenhe**-ele.*
       3sg.ERG cook-PST eat-**NEG**-ERG
       'S/he cooked without eating.'   (Henderson 2013: 418)

    c. Negated verb form taking nominal negator
       *Angk-**etye**=**akenhe**-kwenye; irnterre   anthurre angk-eke.*
       speak-NEG-NomNEG   intensely INTS   speak-PST
       '(She) wasn't *not* talking; she was talking a lot.' (Henderson 2013: 416)

The sentences in (16) suggest some convincing arguments for the emergence of a standard negation strategy out of an erstwhile special nominal negator. (a) provides formal evidence of the complex status of *-tyekenhe*: a set of adverbial particles (including *=arlke* 'also', *=nthurre* 'really', *=ante* 'only' *etc.*) appear to be able to intervene between the "nominalising formative" *-etye* and the "negating formative" *=akenhe*. It should be noted that cross-linguistically, this appears to be a set of (adverbial) operators that associate with focus (e.g. Jackendoff 1972, Rooth 1985). According to Wilkins (1989: 381), the locus of insertion of these particles indeed has scopal implications, compare *(ayenge) arlkwe-**tyekenhe**=ante* '(I) <u>only</u> didn't eat' and *(ayenge) arlkwe-ty«ante»kenhe* '(I) didn't <u>only</u> eat.'[20]

Ex. (16b) shows the negated verb receiving ergative marking when participating in secondary predication alongside a transitive verb. In this sense, the negated verb again behaves morphosyntactically identically to nominals (and unlike positive verb forms).

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[20] A complete analysis of this phenomenon is outside the scope of this paper, although assuming a standard semantics for *only* (e.g. Horn 1969), the correct truth conditions can be derived by understanding *=ante* as taking wider scope over the negated predicate in the first case ("not eating" is the only thing I did), whereas it scopes narrowly in the second case ("eating" is the only thing I didn't do').

Interestingly, (16c) shows a verb form with negative marking occurring with the privative[21] *-kwenye* in what is likely an example of metalinguistic negation (see e.g. Horn & Wansing 2017: 19 for a discussion of this phenomenon). Further work remains to be done on this topic, but this provides striking evidence for both the (semi-)nominal status of the negated verb and the renewal of a special nominal negator in Arrernte. Additionally, Veselinova (2016: 171) points out that nominalisation of lexical verbs is a component of the most common cross-linguistic 'pathway whereby negative existentials break into the domain of SN (i.e. $B \rightarrow C$, see also §6 for further discussion).

Data for related Arandic languages is sparse, it is therefore not possible at this time to reliably reconstruct the trajectory of negative marking in the the Eastern and Central dialects reported on here. Nevertheless, Katyetye, the sole Arandic outlier (see Hale 1962, Koch 2004), is also reported to make use of a suffix *-wanenye* to negate "actions" and to mark privative relations (Kaytetye 2012: 826). That verbal suffixation, a standard negation strategy otherwise atypical of Australian languages (I am aware of no Pama-Nyungan outside of Arandic that makes use of a similar strategy),[22] is found at both ends of this subgroup, suggests a scenario in which privative markers came to displace other strategies of standard negation relatively early in its history. If this analysis is on track, then we can infer that the Arandic languages have undergone a full cycle of the NEC, and that, in view of the renewal of the privative form (*-kwenye*) described in various Upper Arrernte varieties above (a likely characteristic of stage *B*), we can

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[21]*-kwenye* is glossed by both Henderson 2013, Wilkins 1989 as a "Nominal Negator" 'NNᴇɢ', although at least Wilkins (1989: 158) treats this term as synonymous with 'ᴘʀɪᴠ'.

[22]Note however that (some) Wati varieties (including Pitjantjatjara [pjt]) express standard negation by way of a nominalised verbal predicate (note that the nominaliser *-nytja* is also phonologically very similar to the Arandic nominaliser described above) and postverbal negator *wiya*, pointing to a similar trajectory (Sasha Wilmoth, p.c.). This negator *wiya* is also used in privative constructions.

(i) a. *wiya* + nominalisation for sentential negation in Yankunytjatjara [kdd]

      ngayulu kati-nytja wiya, Anti-lu kati-ngu
      1sg.ᴇʀɢ take-ɴᴍʟᴢ ɴᴇɢ Andy-ᴇʀɢ take-ᴘʀs

      'I didn't take it. Andy took it.'   (Goddard 1983: 244)

  b. *wiya* + noun for negative existential in Yankunytjatjara

      mitjini wiya-ngka panya, iriti...
      medicine ɴᴇɢ-ʟᴏᴄ ᴀɴᴀᴘʜ long ago

      '(That was) in the old days, you know, when there was no medicine.'

      (Goddard 1983: 39)

further postulate the recommencement of the cycle.[23] This diachronic trajectory is summarised in Figure 5. Consequently, it appears that the generalisation of a nominal negator in Arandic seems to have effected a wholesale restructuring of standard negation strategies and, consequently, the negative domain in these languages.[24]

6 Discussion

The data presented above demonstrate a robust, grammaticalised sensitivity to a distinction between "standard" clausal negation and the negative existential predication (i.e. predications of absence) in three distinct subgroups of Pama-Nyungan. We have also seen evidence of an ostensible diachronic tendency to flatten this distinction, as the conditions of use for negative existentials appear to relax, at which point they encroach into the domain of an erstwhile verbal negator (e.g. Yolŋu). By hypothesis, it is these two processes that underpin the NEC as described. This section attempts to situate the NEC – as it appears to have been instantiated in these Australian languages – in the context of broader work on the cyclical nature of meaning change.

6.1 Semantic change and grammaticalisation pathways

The notion of "grammaticalisation" – that process whereby grammatical categories arise in languages by way of the recruitment and reanalysis of lexical content – is one that has attracted a good deal of functional typological work (e.g. Bybee et al. 1994, Bybee & Dahl 1989, Traugott 1980, Dahl 1985, Heine & Kuteva

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[23]Note that a possible implication of this is the instantiation of a direct $C \to B'$ stage where a language with homophonous standard and existential negation directly recruits a new existential negator into the system. Given the tendency in Australian languages towards existential predication by bare NP (contra Croft 1991) or stance verb, discussed in §2.2 supra, this may be expected.

   An alternative analysis, informed by the NEC, may involve treating the "nominalising element" in Arandic negative suffixes as a (further) grammaticalised existential. Note for example the plausible phonological similarity between "existential-positional" verbs *-ne-* 'sit', *-nte-* 'lie' and the Kaytetye and Mpwarnte Arrernte nominalising elements *-nge, -tye*. Far from determined, such an analysis bears further research: a full diachronic account of Arandic verbal derivation is out of the scope of the current work.

[24]I make no particular claim about the form of these markers, although by hypothesis, the form of the privative in some common pre-proto-Arandic ancestor is a reflex of present day Arandic *=kenhe*.

**pre-p-Arandic

$**B \rightarrow C$

*p-Arandic

$*C \rightarrow B'$

Kaytetye   core Arrente

i) By hypothesis, pre-proto-Arandic conforms with "standard average Australian" preverbal SN strategies with a distinct post-nominal privative (**kenhe) *B*

ii) In proto-Arandic (most recent ancestor to documented varieties), nominalisation plus privative suffix is repurposed as a productive negative strategy *C*

- This strategy has likely been retained in Kaytetye [gbb]

iii) A new nominal negator (*-kwenye*) emerges in core Arrernte varieties*B'*

- Currently, there is insufficient evidence for an intermediating *A'* stage in Arrernte.

Figure 5: Summary of reconstructed changes in the Arandic negative domain in terms of NEC stages (A, B, C)

2003 a.o.). Of particular importance is the finding that, cross-linguistically, these grammatical categories evolve along diachronic pathways that appear to be constrained and unidirectional. This observation is the explicandum at the heart of contemporary work on meaning change and one that is of significant importance for our understanding of semantics and language change. In recent years, bringing formal tools for describing the "interpretation of functional expressions" to bear on these questions has been fruitful (see Deo 2015a for a detailed overview of this enterprise).

Deo (2015b) provides a framework to understand the general structure of – and motivating forces behind – a cyclical change. This is shown in Figure 6 (as will be discussed below, note that this diagram is not isomorphorhic to the one in NEC diagrammatisation in Figure 1).

Insofar as the NEC is concerned, Deo's "context dependent" (CD) stage corresponds to Croft's "relatively unstable" stage **C** (i.e. that state of a language where negative existential markers are identical to the standard negator). Croft (1991: 19) claims that the motivation for this stage is the idea that "[for] predication in general, existential predication is analogous to a verbal predication." His suggestion
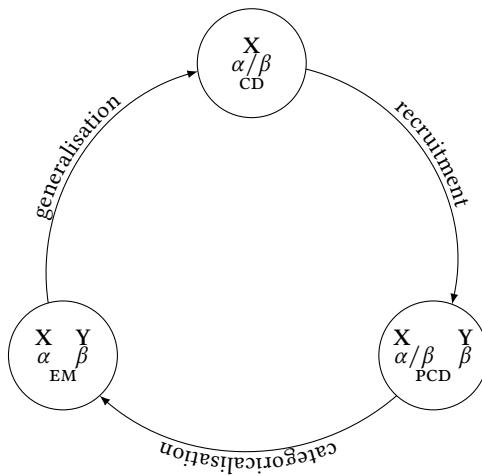
Figure 6: The structural properties of cyclical meaning change as formulated by Deo (2015b a.o.) A marker (form) **X** is ambiguous between two readings α, β at the context-dependent stage (CD), a marker **Y** is recruited to encode β at the partially context-dependent stage (PCD), whereupon it categoricalises, such that **X** can no longer be used to encode β: now the distinction between the two meanings is explicitly marked (EM). Eventually, the domain of use for **Y** generalises, at which point **Y** is now ambiguous between α, β (CD′).

that "the analogy is strengthened if there is formal parallelism" underpins formal pressure to innovate an existential predicate, returning the system to stage **A**. Additionally, as has been shown elsewhere (e.g. 13e above), stage **C** negative predications can be ambiguous between the two readings; another likely source of functional pressure for the recruitment of new strategies.

The discussions of Yolŋu and Arandic above have provided some evidence for the trajectory of negative existential/privative marking as they generalise, encroaching into the functional domain of an erstwhile standard negator (transitions from A/B into stage C). For example, as shown, while privative marking initially appears to be restricted to absence predications of individuals, they seem to gradually become available to eventive nominals. Strong evidence of this was provided from Arrernte, where all negative predicates have the syntax of non-derived nominal predications, at the expense of inflection of tense, mood and aspect categories. Additionally, on the basis of comparative evidence, Djambar-rpuyŋu *bäyŋu* shows signs of having been a negative quantifier that now has acquired the general semantics of a verbal negator (8–9) supra. The following subsection further motivates this generalisation phenomenon.

6.2 Generalisation: the notion of "indexicality" and expanding domains

The expansion of the domain of the negative existential construction predicted by the NEC ($B \rightarrow C$) can be understood as a diachronic *generalisation* in its semantics. Generalisation refers to that stage in a grammaticalisation cycle where "[a functional expression] is diachronically reanalyzed as instantiating a broader, more general functional expression at a later stage...involv[ing] a systematic expansion in the domain of application [for that expression]" (Deo 2015a: 187). The treatment of the privative given above, for example, has shown how, in multiple language groups, the domain of this marker has expanded. Broadly speaking, whereas at an initial state, PRIV seems to quantify over a domain of properties of individuals, it comes to quantify over properties of eventualities and, in some instances, further generalises to quantify over propositions (sc. properties of worlds; the domain of modals, and possibly, negative operators, see Horn & Wansing 2017: 34ff.) Importantly, even if restrictions on the type of the sets is relaxed, the *relation* (ⲛⲟ) that is taken to hold between the sets being quantified over is identical (i.e. ⲛⲟ $=_{\text{def}} \lambda\mathcal{P}_{\langle\sigma,t\rangle}\lambda\mathcal{Q}_{\langle\sigma,t\rangle}.\mathcal{P} \cap \mathcal{Q} = \varnothing$).[25] [26]

In a 2018 paper, Deo suggests that grammaticalisation trajectories in general are characterisable by the loss of *(discretionary) indexical content* (e.g. Perry 2012: 68ff). That is, reanalysed forms lose their dependence on context for retrieving discourse reference.[27] Deo appeals to this notion in describing grammaticalisation pathways in which (distal) demonstratives gradually lose their indexical force to become markers of definiteness, specificity and eventually noun class markers (see also Greenberg 1978, de Mulder & Carlier 2011, Stevens 2007: 61).

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[25]Hamari (2011) gives evidence of a possible similar expansion of the functions available to Uralic abessive suffixes. It is hoped that beginnings of a treatment proposed here may provide momentum towards reconsidering the "differences...in semantics [between the nominal and verbal abessives.]" (79). Kiefer (2015: 609) observes that the Hungarian cognate does attach to verbal bases but is restricted to transitive stems with eventive semantics. This is an observation with potential implications for future work on the grammaticalisation pathway for privative marking.

[26]Similarly, Tamm (2015: 416) observes that "abessive negation" in Estonian is a strategy that (unlike the distribution of cognates elsewhere in Uralic) also permits of clausal-type negative (SN-like) uses and carries a "presupposition of an intention [to instantiate the abessive-marked predicate.]" In view of potential modal analyses of negators mentioned here, the emergence of this reading is extremely interesting.

[27]Perry's (2012: 68ff) 2×2 typology of indexicals contrast those that: (A) depend on notions of (i) "wide" vs. (ii) "narrow" context to designate and (B) on the basis of context, either designate (i) "automatically" or otherwise (ii) require appeal to "speaker intentions". Those indexical items that require appeal to speaker intention are "discretionary" indexicals (cf. Kaplan's "true demonstratives", see Braun 2017 for a general discussion of this literature.)

The progressive to imperfective shift can also be fruitfully understood as the relaxation of a requirement, peculiar to the progressive aspect, for a specific, discourse salient reference interval that relies on pragmatics ($\approx$ discretionary content provided by some construal of "speaker demonstration") for evaluation. The newly emergent "imperfective" does not have this indexical/context-dependent content.

An interesting parallel in terms of thinking about the recruitment of formal mechanisms for existential predication is the observation that existential *there* in English is homonymous with deictic *there* (a discretional indexical par excellence). This is suggestive of some functional connection between existential propositions and notions of indexicality as described above (and indeed, formal similarities between locative/existential predications have been observed elsewhere). Francez's 2007 treatment of existential predications, adapted in (2c) above, crucially makes reference to their context dependence (formally represented as a contextual parameter d_α). This captures the intuition that the utterance of an existential proposition relies on wide construals of context for domain restriction and evaluation: that is, the proposition *there are no sticks* cannot be evaluated without reference to the speaker's intentions: the contextual parameters of utterance (most likely (but not necessarily) those spatiotemporal conditions under which it was uttered).

Nevertheless, d_α can also be supplied by way of a "coda" – i.e. that (optional) phrase that, rather than relying on speaker intentions (the defining property of a *discretionary indexical*), *explicitly* restricts the domain of an existential predication. Examples are given for Djambarrpuyŋu in (18), where the "coda" is underlined.

(17) Privatives in Djambarrpuyŋu: CODA underlined

    a. <u>*Gapuwiyak*</u> *guya-miriw*
       PLACE   fish-PRIV
       'There are no fish in Gapuwiyak. / Gapuwiyak is fishless.'

    b. *Bäyŋu* *guya* <u>*Gapuwiyak (guḻun-ŋur)*</u>.
       NEG.EX fish   PLACE waterhole-LOC
       'There are no fish in Gapuwiyak.'

The availability of coda phrases additionally provides a syntactic location for the subject in the "eventive-privative" sentences that have been described above. In (18), the privative phrase predicates that *events* of a particular type (viz. that event described by the privative-marked verb form) are not characteristic of whichever entity (18a) or location (18b) is specified in the coda position.

(18)   "Eventive-privatives" in Djambarrpuyŋu: CODA underlined

    a. *ḻukanha-**miriw** ŋunhi dharpany*
      eat.NMLZ-PRIV   TEXD tree.FOC
      'That tree is not eaten/edible.'

    b. ***bäyŋun***   *dhaḻakarr marrtjinyara-w*
      NEG.EX.FOC space   move.NMLZ-DAT
      'There's no space to move≈there's no moving in the space.'

Finally, these markers generalise to the point that they are entirely context-independent and serve, effectively, as truth-functional operators (i.e. standard/sentential negators, inverting the truth value of their prejacent (sc. that proposition that they modify)).[28] Djambarrpuyŋu *bäyŋu* and the apparent trajectory of Arrernte standard negator *-tyekenhe*, described in §5 are likely examples of the (near-)complete instantiation of this pathway. Table 3 spells out this hypothesised trajectory, where the transition from NEC stage *B* to *C* can be understood as a generalisation in the domain over which the relevant marker is able to quantify.

Table 3: Change in the domain over which a marker with negative meaning quantifies
$(\mathcal{P}_{\langle\sigma,t\rangle} \cap \mathcal{Q}_{\langle\sigma,t\rangle} = \varnothing)$

NEC Stage	Function	Domain	Type
B	PRIVATIVE	Properties of individuals	$\langle e,t\rangle$
B~C	EVENTIVE PRIVATIVE	Properties of events	$\langle \varepsilon,t\rangle$
C	(STANDARD) NEGATOR	Propositions	$\langle s,t\rangle$

6.3 Conclusion

This chapter has provided diachronically- and comparatively-informed discussion of change and variation in the negative domain from three geographically distant and temporally deep subgroups of the Pama-Nyungan family of Australian languages. Each of these case studies suggests nuances and provides further insights into the formulation of the Negative Existential Cycle as discussed

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[28]Although, as mentioned above, a unified formal account might treat standard negation as a modal operator where the domain of the negative form is reanalysed. A full defense of this perspective is outside the scope of this chapter.

in the work of Croft (1991) and Veselinova (2016 a.o). Of particular interest is the relationship between the privative case – which I have argued represents the morphologisation of a negative existential predicate – and standard negation.

The discussion of Thura-Yura (§3) shows a likely trajectory where a privative suffix appears to have become a preverbal standard negator *maga*. In Wirangu, this appears to have created the conditions for the recruitment-by-borrowing of lexical material from an unrelated neighbouring language as a new privative.

The section on Yolŋu (§4) shows competition and structured variation between two markers, *yaka* and *bäyŋu* – the latter previously having been restricted to "negative quantifier" functions. Additionally, we have seen comparative evidence that suggests that the privative marker *-miriw* has expanded out of its traditional domain, to the extent that it is now showing signs of also being in competition with preverbal negative particles. Conversely, the Ritharrŋu data show how a distinct negative suffix *-'may'* appears to have been borrowed from a neighbouring language; a finding not predicted by (unidirectional) accounts of the NEC.

Finally, §5 provided a discussion of SN strategy of negative suffixation in Arrernte verbs, typologically unusual for Australian languages. We recapitulated several morphosyntactic arguments that negated clauses in Arrernte are actually derived (de-verbal) nominal predicates. In view of the peculiarity of this system, this fact of Arrernte appears to provide strong evidence in favour of a trajectory where the standard negation strategy in this language is an erstwhile privative (negative existential) marker *-tye=kenhe* that has completely displaced an older form (and then triggered the recruitment of a new special negator for negative existential predications *-kwenye*).

The negative domains of Australian languages provide an opportunity to nuance our understanding of the NEC, and perhaps grammaticalisation paths more generally. In view of how robustly Australian languages draw a formal distinction between clausal negation (overwhelmingly with a pre-verbal particle) and absence predications (overwhelmingly with a nominal suffix), deviations from this tendency are likely indicators of systemic formal and functional change in the negative domain. To the extent that a diachronic relationship can be drawn between the lexical material used to encode each of these categories, semantic change can likely be inferred from deviations from this pattern. Furthermore, in view of the strikingly distinct morphosyntactic properties of pre-verbal particles and nominal suffixes, the displacement of standard negation markers by negative existentials (esp. privatives) calls for an account of this "functional" cycle, one that foregrounds the possibility of semantic reanalysis and meaning similarity between these categories: indeed as has been suggested in the foregoing

discussion, there is good reason to conceive of a subset relation between existential and standard negation.

Acknowledgements

Language index

Muruwari (Pama-Nyungan: Southeast NSW)	zmu
Ngiyambaa (Pama-Nyungan: Wiradhuric)	wyb
Wakaya (Pama-Nyungan: Warluwaric)	wga
Wangurri (Pama-Nyungan: Yolŋu (Dhaŋu))	dhg
Wirangu (Pama-Nyungan: Thura-Yura)	wgu
Yan-nhaŋu (Pama-Nyungan: Yolŋu (Nhaŋu))	jay
Warluwarra (Pama-Nyungan: Warluwaric)	wrb
Warrongo (Pama-Nyungan: Maric)	wrg

Abbreviations

1	first person		
2	second person	NOM	nominative case
3	third person	NP	noun phrase
ABS	absolutive case	OBL	oblique
ANAPH	anaphoric	PERL	perlative
COM	comitative	PL	plural
DAT	dative	PRIV	privative
DIST	distal (demonstrative)	PROH	prohibitive
DP	discourse particle	PROM	prominence marker (≈ focus)
ERG	ergative case		
EXCL	exclusive	PROP	proprietive case
FOC	focus	PROX	proximal (demonstrative)
FUT	future	PRS	present tense
INCH	inchoative	PST	past tense
INCL	inclusive	QUANT	quantifier
INDF	indefinite	RECP	reciprocal
INFL	inflection (verbal)	RED	reduplicant
INTS	intensifier	SEQ	sequential
IPFV	imperfective (aspect)	SG	singular
LOC	locative	SN	standard negation/negator
MED	medial (demonstrative)	TEXD	textual deictic (endophoric demonstrative)
NEG	negator		
NEG.EX	negative existential		
NMLZ	nominaliser (derivation)		
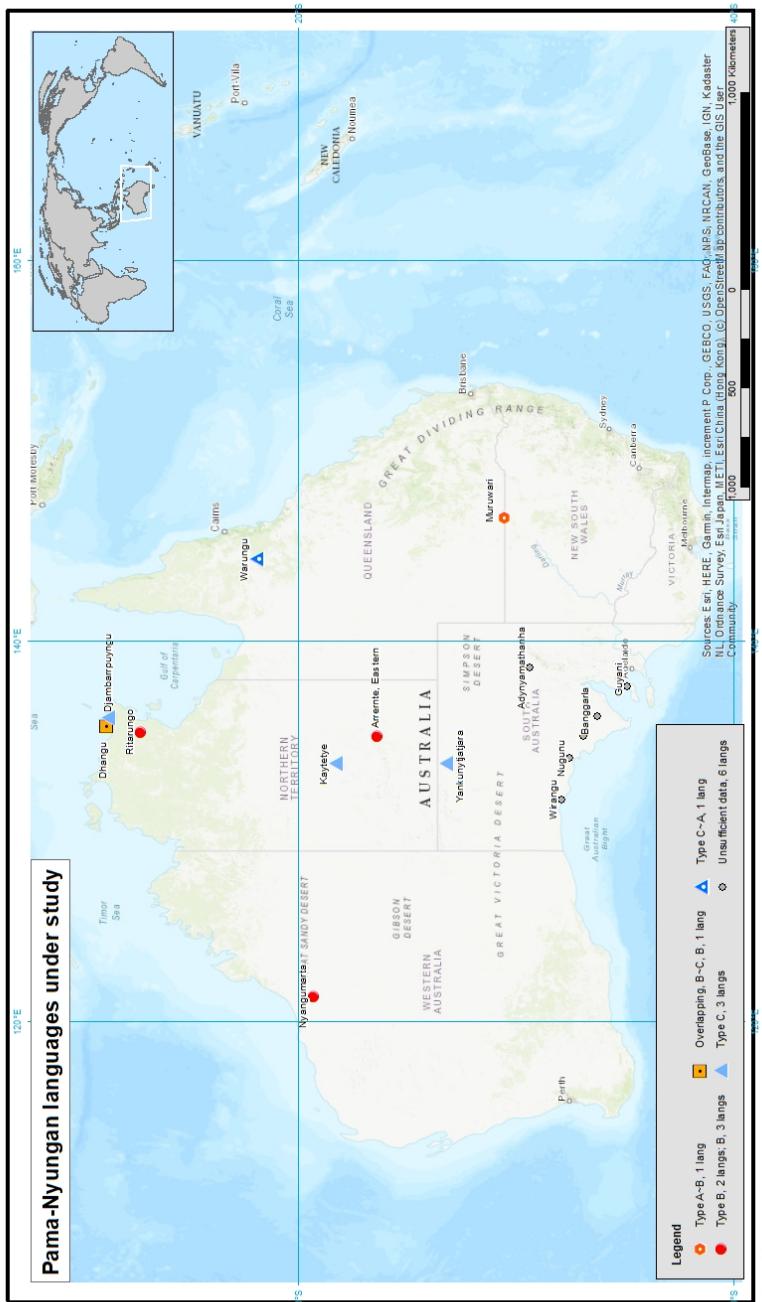
Figure 7: NEC in Pama-Nyungan

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Chapter 13

Negation in Tacana (Amazonian Bolivia): Synchronic description and diachronic reconstruction

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The goal of this paper is to provide, for the first time, a synchronic description and diachronic reconstruction of negation in Tacana, a critically endangered language of the small Takanan family in the Amazonian lowlands of Bolivia and Peru. One significant contribution of the paper is the reconstruction, for a standard negation marker, of an etymology (stand-alone negation word 'no') and type of Jespersen Cycle (from the right of the verb to the left of the verb) that are not commonly reported in general studies on negation. The proposed reconstruction also contributes to current studies on the interactions between standard negation and the Negative Existential Cycle (the general theme of the volume) in arguing that the Tacana stand-alone negation word 'no' originated in a negative existential predicate. In so doing, the paper adds to the diachronic literature on languages where a negative existential breaks into the verbal domain through a stand-alone negation stage.

1 Introduction

Tacana is one of the five extant languages of the small Takanan family from the Amazonian lowlands of Bolivia and Peru (together with Araona, Cavineña, Ese Ejja, and Reyesano). The language is critically endangered, being only spoken by a few dozens of essentially elderly people, and basically undescribed, except in the form of a tagmemic grammar (Ottaviano & de Ottaviano 1965, 1967).

This paper is the first study of negation in this language. It is mostly based on a corpus of firsthand data (texts and elicitations) from the Tumupasa dialect

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that I collected during four months of fieldwork conducted on four field trips between 2009 and 2013. The data are complemented by second-hand materials published by the Summer Institute of Linguistics, consisting of a number of texts (de Ottaviano 1980) and sentences that illustrate their dictionary entries (Ottaviano & de Ottaviano 1989). Ultimately, some data from the mid-19th century are also presented in the section on diachrony (Lafone Quevedo 1902). Note that no controlled elicitation with native speakers was conducted specifically on the topic of negation, which means that the study relies exclusively on my own interpretation of the available corpus.

The goals of this paper are twofold: (1) to provide a detailed description of a wide range of negation constructions in Tacana and (2) to attempt a historical reconstruction of some of the negation markers and patterns. One significant contribution to the field of diachronic typologies of negation is the reconstruction for one of the Standard Negation (hereafter SN) markers of an etymology (stand-alone negation word 'no') and type of Jespersen Cycle (from the right of the verb to the left of the verb), which are not commonly reported in general studies on negation. The proposed reconstruction also contributes to the current studies on the interactions between SN and the Negative Existential Cycle (the general theme of the volume) in arguing that the Tacana stand-alone negation word 'no' originated in a negative existential predicate. In doing so, the paper adds to the diachronic literature on languages where a negative existential breaks into the verbal domain through a stand-alone negation stage (Croft 1991: 10, 13–14, Veselinova 2013: 127ff, 2016: 155–156).

In the literature, the grammaticalization of stand-alone negation words (also known as "absolute negators," "pro-sentence words no!," "negative replies to polarity questions," "short answers no!," "negative interjections," etc.) as SN markers through a reinforcement/strengthening process (Jespersen Cycle) is well documented. The phenomenon is attested, for instance, in languages such as Brazilian Portuguese, Caribbean Spanish dialects, northern Italian dialects, Dutch, Africaans, Swedish and Sino-Russian (see, among others, Schwegler 1988, van der Auwera 2009: 49, Veselinova 2013: 127ff, 2016: 155–156). As illustrated, for instance, in Brazilian Portuguese (1), a word meaning 'no,' originally used outside of a negative clause (stage 2), ends up replacing the original SN marker inside of the clause (stage 5).

(1) Brazilian Portuguese (evolutionary path based on discussion in Creissels
    2006: 149–150)

> stage 1   ***Não*** *sei.*
> stage 2   ***Não*** *sei,* (***não!***)
> stage 3   ***Não*** *sei* ***não***.
> stage 4   (***Não***) *sei* ***não***.
> stage 5   *Sei* ***não***.

In all these languages, however, the cycle operates from the left of the verb to
the right of the verb, in other words from a preverbal to postverbal SN marker.
In Tacana, as I argue here, the same type of etymology and grammaticalization
pathway holds, but the direction of the cycle is the opposite. Here, a postverbal
SN marker is in the process of being replaced by a negative stand-alone word
in preverbal position. This results in the phenomenon called a Jespersen Cycle
"in reverse" by van der Auwera & Vossen (2016) and Vossen (2016); according to
these authors, it appears to be common in South American languages.

The paper is organized in two main parts. The first part is descriptive, with
a short introduction on Tacana clause structure and verbal predication (§2) and
a presentation of six negation constructions: (1) Standard Negation (SN), which
applies, by definition, to declarative main clauses with a finite verb predicate (Mi-
estamo 2005) (§3) but also, in Tacana, to non-verbal clauses expressing equation,
proper inclusion, attribution relations (§4) and (in rare cases) existence or loca-
tion (§5); (2) negation of existential/locative adjective predicates; (3) negation of
declarative clauses with a non-finite predicate with two subtypes (§6); (4) non-
clausal stand-alone negation (§7); (5) non-clausal constituent negation with two
subtypes (§7); and (6) negation of command (hortative and imperative) clauses
with two subtypes (§8).[1] A summary table of all the constructions is provided in
section §9. The second part of the paper is diachronic, engaging in a reconstruc-
tion of the declarative clause negation markers and patterns: SN and negation of
declarative clauses with a non-finite predicate (§10). A summary and a conclu-
sion are provided in §11.

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[1]Essentially, two other types of negation are not discussed in the paper: negation of indefinites
and quantifiers and negation in dependent clauses.

2 Basic facts on Tacana clause structure and verbal predication

Main clauses in Tacana consist of an obligatory predicate[2] and optional arguments and/or obliques and/or adjuncts. When overtly expressed, the arguments, whether NPs or pronouns, display a (split)[3] ergative case-marking system, as illustrated in (2a), with an ergative marked A NP and absolutive (unmarked) O NP, and (2b), with an absolutive (unmarked) S NP.[4]

(2) transitive and intransitive declarative main clauses

                O   A   V

  a. *Jiawe =da id'eti biwa=**ja**   y-abu-ta-(a)ni.*

     now =PRT sun spider_monkey=ERG IPFV-carry-3A-IPFV(.SITTING)

     'Ahora lo está cargando el marimono.' so007

     'Now the spider monkey is carrying the sun.'

     S   V

  b. *Biwa   =da kema [tsakwa   echa=su] bade-ti-a.*

     spider_monkey =PRT 1SG.DAT mapajo(tree) branch=LOC hang-GO-PST

     'Mi marimono se colgó en gajo de mapajo.' (elicited)

     'The spider monkey (that I shot) went to hang on the branch of a mapajo (Ceiba pentandra) tree.'

The arguments, especially when expressed by NPs, do not have strict ordering restrictions and can appear in any position in the clause depending on their discourse-pragmatic status. Pronominal arguments, on the other hand, tend to occur either in first position in the clause (when contrastive) or second position (when refering to continuing topics).

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[2]Note that the term "predicate" used here does not make reference to any participant of the clause.

[3]The case system is conditioned by the type of referent: strictly ergative with 1SG/2SG pronouns, optionally ergative with 3SG pronouns and NPs, and neutral with all non-singular pronouns (Guillaume 2016, forthcoming).

[4]The Tacana consonant phonemes are *p*, *b*, *t*, *d* [ɖ], *d'* [d͡ʈ/ˀd͡ʈ], *dh* [ð], *ts* [tʂ], *ch* [tɕ], *s* [ʂ], *sh* [ɕ], *k*, *kw* [kʷ], *r* [ɾ], *m*, *n*, *j* [h], *w* [w/ß] and *y* [j]. The vowel phonemes are *a, e, i* [i/j] and *u* [ʊ/w]. Stress falls on the 3rd mora (i.e., vowel or semi-vowel [j] or [w]) counting from the left. Note that the illustrative examples include the free translation in local Bolivian Spanish that was given by the native speakers who helped me transcribe and translate the texts. The codes that follow the translation lines (e.g., so007) correspond to the place of the example in my (Toolbox) database. Unless explicitely specified, the examples come from texts.

Verbal main clauses can be headed by two types of predicates without semantic differences: a finite verb predicate, where the verb takes the inflectional morphology, as illustrated in (2), and a non-finite verb predicate, where the verb does not take the inflectional morphology, which is optionally carried by a generic auxiliary (light verb). Both types are illustrated in (3) with the same verb root *tutua* 'spill,' used in the finite verb construction in the first clause and in the non-finite verb construction in the second.

(3) *Dapia =da   etse beu se   **e-tutua**. E-jemi-tsua   =da   etse beu*
     there =prt 1du prt fish fut-spill fut-take_out-go.up =prt 1du prt
     tutua** =da   etse **y-a.
     spill   =prt 1du fut-do
     'Ahí ya lo vamos a vaciar los peces. Lo vamos a alzar (la trampa para peces) entre los dos y lo vamos a vaciar.' em044–045
     'There we are going to spill the fish (on the ground). We are going to lift (the fish trap) up and then spill them (on the ground).'

There is no difference in (at least propositional) meaning between finite verb constructions and non-finite verb constructions. The reasons motivating the use of one construction or the other is not fully understood yet, although it might have to do with the discourse status of the event or some specific discourse genres.[5]

Finally, both types of predicates do not have any impact on the way the arguments are expressed. When negated, however, they require distinct constructions. The construction used to negate finite verbal main clauses is also used to negate a number of non-verbal clauses. It will be called Standard Negation (SN) and discussed first, as it applies to verbal clauses (§3) and non-verbal clauses (§4 and §5). The construction used to negate non-finite verbal main clauses will be discussed in a separate section (§6).

3 Negation of declarative clauses with a finite verb predicate (Standard Negation)

In clauses with a finite verb predicate, the lexical verb stem, with or without derivational morphology, directly and obligatorily bears the inflectional mor-

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[5]I noticed, for instance, that non-finite verb constructions are often used when an event is repeated, as is the case in two consecutive sentences from the same text in (4). I also found that non-finite verb constructions are used more often in informal style and hardly ever in elicited material.

phology (basically TAM and 3rd person indexation), as illustrated in (2a,b) above, in the first clause of (3) and (4a,b), and in Table 1 below, which shows the morphological structure of the predicate. In the examples and the Table, the inflectional affixes are in bold and underlined.

(4) transitive and intransitive main clauses with a finite verbal predicate

                        A   O V

  a. *Dapia =da   etse beu se   **e**-tutua.*
       there =PRT 1DU PRT fish FUT-spill
       'Ahí ya lo vamos a vaciar los peces.' em044
       'There we are going to spill the fish (on the ground).'

                  V   S

  b. *Beu =pa   ja-mesia-ti-**(i)dha**   jida deja, mawi*
       PRT =RPRT MID-let_go_of-MID-REM.PST that man almendrillo
       echa=jenetia.
       branch=ABL
       'Ya dice se largó del gajo del alamendrillo.' ch083
       'He let go of himself from the almendrillo branch.'

Table 1: Morphological structure of verbal predicates

−3	<u>**TAM**</u>
−2	valency change
−1	compounded/incorporated noun
0	**verb root**
+1	compounded/incorporated verb
+2	valency change
+3	"adverbial-like"
+4	**3rd person indexation**
+5	<u>**temporal distance -*iti*-**</u>
+6	<u>**"back" -*iba*-**</u>
+7	"adverbial-like"
+8	<u>**TAM**</u>
+9	iterative -*yu*

Negation of declarative (and interrogative) main clauses containing a finite verb predicate is realized through a discontinuous embracing construction in-

volving two particles: the preverbal independent ***aimue*** [ajmue] ~ [ajmwe][6] and the postverbal enclitic *=**mawe*** [maẞe] (with a variant *=mue* [mue] ~ [mwe]). The construction is illustrated in (5a) with a transitive predicate, and in (5b) with an intransitive clause.

(5) a.   O   A

   Aimue *ejije=kwana yama*
   NEG jungle=PL 1SG.ERG
   V
   <u>*e*</u>*-shanapa-eni-**(i)nia**=**mawe**.*
   IPFV-know-well-IPFV(.SITTING).1/2A=NEG
   'Ya no conozco estos montes bien.' ch132
   'I don't know these jungles well anymore.'

           S V

  b. ***Aimue*** *=da ema* <u>*e*</u>*-siapati-yu=**mue**.*
   NEG =PRT 1SG FUT-come_back-ITER=NEG
   'Ya no voy a regresar.' na191
   'I'm not going to come back again anymore.'

The preverbal particle *aimue* is phonologically stressed and syntactically free, occurring anywhere before the verb. It is often the first word of the clause, as in (5a,b); see also (7a,b) further below. But this is not an absolute requirement, as in (6a,b), where *aimue* is preceded by several clausal constituents. The exact motivations for placing *aimue* in different positions before the verb remain to be investigated.

(6) a.   A

   Jade, [*ye=base=ja*] *=mu* ***aimue**, sai-da*
   let's_see this=DEPR=ERG =CNTR NEG well-ASF
   V
   <u>*y*</u>*-a-**ta-(a)ni**=**mawe**.*
   IPFV-affect-3A-IPFV(.SITTING)=NEG
   'A ver, este no lo hace bien.' bu092
   'Let's see, this damned one doesn't do it well.'

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[6]As will be seen later, *aimue* is a contracted variant of *aimawe* [ajmaẞe] which shows up in some examples of the SN construction when applied to non-verbal clauses.

           S

   b. [*Piada deja*] *=pa,*   [*mesa,*   *d'aki=neje*],   **aimue** *sai-da*
        one   man =RPRT 3SG.GEN brother_in_law=ASSOC NEG   well-ASF
        V
        *jadusuti-**(i)na**=**mawe**.*
        get_along-HAB.PST=NEG
        'Un hombre, dice, que con su cuñado no se llevaba bien.' ch003
        'There were a man and his brother-in-law who did not get along well.'

The postverbal particle *=mawe*, by contrast, is a phonologically unstressed enclitic with a rigid position. It can only attach to the verb. If the verb of the negated clause is followed by one or more clausal constituents, *=mawe* necessarily remains on the verb, as in (7a,b).

               V   A

(7)   a. **Aimue _e_-*juseute*-_ta_=mawe,** *beni=ja.*
       NEG   FUT-fell-3A=NEG   wind=ERG
       'No los va a tumbar el viento.' bu072
       'The wind will not fell (the trees).'

                             V   S

    b. *Bute-ke!*   **Aimue** *=da* **_e_-*kwinana*=mawe,** *dukei.*
       go_down-IMP NEG   =PRT FUT-go_out=NEG   deer
       '¡Bájate! No va salir el venado.' du018
       'Go down! The deer will not go out.'

In my corpus, very few examples of negation of interrogative clauses can be found. The ones that are available, such as (8), suggest nevertheless that they are negated by means of the same pattern as in declarative clauses.

(8)   *Jukwajasu =da*   **aimue** *dasu **_e_-*nubi*-_ani_=mawe**   [*yawi*
    why   =PRT NEG   then IPFV-enter-IPFV(.SITTING)=NEG water
    tipa=su]*?*
    bottom=LOC
    '¿Porque pues no entra debajo de agua?' bo080
    'Why does it (the caiman) not go underneath the water?'

In the available corpus, *aimue* is never omitted. As for *=mawe,* I found a couple of examples where it is left out, as in (9) and (10), which suggests that *=mawe* might not be obligatory. It is reminded that no controlled elicitation with native speakers was conducted on negation constructions.

(9) [*Ena   dume=su*] **aimue *e*-*nubi-ti-*ani**.
     stream inside=LOC NEG   IPFV-enter-GO-IPFV(.SITTING)
     'No entra dentro del agua.' bo081
     '(The caiman) does not enter into the water.'

(10) **Aimue *e*-*kwina-yu*.**
      NEG   PST-arrive-ITER
      'No llegó.' ch037
      'He didn't arrive.'

From the perspective of Miestamo's (2005, 2007) typology of negative constructions, the Tacana negative construction under discussion is symmetric. Apart from the addition of the negative markers, there do not appear to be any obvious morphosyntactic differences, with the same argument-coding system (split ergative case-marking and constituent order flexibility) and same morphological possibilities on the verbal predicate (derivational and inflectional).

4 Negation of non-verbal clauses (1): equation, proper inclusion, attribution

The SN construction is also used for negating non-verbal clauses. The negation of equation, proper inclusion and attribution clauses is discussed in this section. The negation of existential and locative predication is discussed in the next.

In affirmative equation, proper inclusion and attribution clauses, the predicate consists of an NP or an adjective optionally followed by the inflected copula verb *pu* 'be,' as illustrated in (11a-d). The S NP is expressed like the S NP of any other intransitive verbal clauses, being optional and, when expressed, not subject to any ordering restrictions.

(11) a. proper inclusion (with copula)
          S   NP   COP
          [*Tueda edeje*]   [*a'una deja*] *pu-ina*.
          that   youngster bear   man be-HAB.PST
          'Ese joven era joven (lit. hombre) oso.' au004a
          'That youngster was a bear-man.'

      b. equation (without copula)
          S   NP
          [*Mike   ebakepuna*] [*kema   kwara*].
          2SG.GEN daughter   1SG.GEN mother
          'Tu hija es mi madre.' au155
          'Your daughter is my mother.'

c. attribution (with copula)

    S   ADJ   COP

Id'eti =di tuche-da e-pu-eti.

sun   =PRT strong-ASF IPFV-be-IPFV(.STANDING)

'El sol también estaba fuerte.' lp078

'The sun was very hot (lit. strong).'

d. attribution (without copula)

    S   ADJ

Te   =mu ai-da   beju...

garden =CNTR grande-ASF PRT

'Ahora el chaco es grande...' gu054

'The garden is big...'

When negated, these non-verbal clauses require the SN construction through the discontinuous embracing construction with the predicate-preposed independent *aimue* and the predicate-postposed enclitic =*mawe*, as illustrated in (12). Both have the same properties as when applied to clauses with a finite verb: ordering flexibility for *aimue*, as long as it appears before the predicated NP or predicative adjective; strict position for =*mawe*, directly attached to the copula verb (if present) or to the predicated NP or predicative adjective (if the copula is absent). As can be seen in (12a), the predicate-preposed negation marker can show up in a longer (more conservative) form *aimawe* [ajmaße]. As for =*mawe*, I have too few examples of SN applied to non-verbal clauses to know if it displays the shorter variant =*mue* found in SN applied to verbal clauses.

(12) a. proper inclusion (with copula)

    S   NP   COP

[*Tueda edeje*] ***aimawe*** [*kristianu eni*] *pu-ina=**mawe**.*

that   child NEG   person   real be-HAB.PST=NEG

'Ese joven no era humano.' au003

'That youngster was not human. [lit. 'That youngster was not a real person'.]

b. equation (without copula)

                              S   NP

Aimue *=jia maida* [*ye deja*] [*kema y-awe*]=***mawe**?*

NEG   =DUB PRT   this man 1SG.GEN NPF-husband=NEG

'¿No es mi marido este hombre?' (Ottaviano & de Ottaviano 1989: 4)

'Is this man not my husband?'

c. attribution (with copula)

    S   ADJ   COP

[*Kea*   *tata*] *=mu* ***aimue*** *sai-da*   *pu-ina=**mawe**.*

1SG.GEN father =CNTR NEG   well-ASF be-HAB.PST=NEG

'Mi papá no era tan bueno (renegaba / pegaba).' ps058

'My father wasn't nice.'

d. attribution (without copula)

          ADJ   S

Aimue *sai-da=**mawe*** [*mike*   *e-bakwa*].

NEG   well-ASF=NEG 2SG.GEN NPF-child

'No es bueno tu hijo.' au222

'Your child is not nice.'

Note finally that I do not have examples in the whole corpus where =***mawe*** (or *aimawe ~ aimue* for that matter) are omitted. More research is, however, needed to confirm whether this is also a possibility, as in clauses with finite verbs, especially since I have very few examples of negation of non-verbal clauses in the current dataset.

5 Negation of non-verbal clauses (2): existential/locative predication

There is no clear formal distinction between existential and locative clauses, whether affirmative or negative. In affirmative existential and locative clauses, the predicate is normally one of four posture verbs, either *ani* 'sit' (13a-e), *neti* 'stand' (14), *sa* 'lie' (15) or *bade* 'hang' (16); less commonly, the predicate can also be the (copula) verb *pu* 'be' (see below). In this function, the posture verbs are inflected but with severe restrictions, with only a few possible TAM affixes: a prefix *e-/y-* 'EX/LOC,' the habitual past *-ina* 'HAB.PST' and the complex past tense *-iti-a* 'TDM-PST'. A locative oblique (or, for that matter, another type of oblique) can be present with no rigid position in the clause. With a dative oblique, the same construction yields the semantics of possessive predication, as seen in (13e), with the possessor encoded by the 3SG dative pronoun *mesa*.

(13) positive: posture verb 'sit'

           LOC V   S

   a. *… dapia **y-ani**   dhududu.*

       there EX/LOC-sit capybara

      '(En los lagos grandes,) ahí hay capihuara.' mc004

      'There (in the big lakes,) there are capybaras (lit. sitting).'

      LOC LOC   V

   b. *Chue [enabaki maje=su] **y-ani**.*

      there stream   border=LOC EX/LOC-sit

      'Allá está (mi mamá) en la banda del arroyo.' au164

      '(My mother) is there (lit. sitting) on the other side of the river.'

      S   V   LOC

   c. *[Beinte familia] **ani-(i)na** Napashi=su [da mara=su].*

      twenty family   sit-HAB.PST Napashi=LOC that time=LOC

      'Veinte familia había en Napashi en ese año.' na003

      'There were twenty families (lit. sitting) in Napashi at that time.'

      S   V   COM

   d. *[Piada deja] **ani-(i)na** [mesa e-wane=sa   kwara=neje].*

      one   man sit-HAB.PST 3SG.GEN NPF-wife=GEN mother=ASSOC

      'Había un hombre que vivía junto a su suegra.' gu003

      'There was a man who was living with his mother-in-law.'

      S   DAT   V

   e. *Ebakwa=chidi mesa   **y-ani**.*

      child=DIM   3SG.DAT EX/LOC-sit

      'Tenía dice su hijito.' ye020

      'He had a small child.' [lit. a small child was sitting to him]

(14) positive: posture verb 'stand'

     S   V   LOC

    *Dukei=base **e-neti**   **ena=su***

    deer=DEPR EX/LOC-stand stream=LOC

    e-(ja-)id'i-ti-neti.

    IPFV-MID-drink-MID-IPFV(.STANDING)

    'Ahí está el venado dentro del agua, está tomando.' hv027

    'There is a deer /the deer is standing in the water and drinking (standing).'

(15) positive: posture verb 'lie'
      LOC S   V
      *Ue   dukei **e-sa**.*
      here deer   EX/LOC-lie
      'Aquí hay un venado echado.' du051
      'Here, there is a deer (lying).'

(16) positive: posture verb 'hang'
                                      V   LOC
      [*Piada semana*] *=pa   beu **e-bade**   [*rara dume=su*].*
      one   week   =RPRT PRT EXIST/LOC-hang hole inside=LOC
      'Así dice (el tigre) estuvo una semana dentro de la cueva.' bu056
      '(The jaguar) was (hanging) inside of the hole during a whole week.'

Instead of a posture verb, the predicate of an existential and locative clause can apparently also be the verb *pu* 'be,' discussed in its copula use in the preceding section. This is suggested by a couple of examples found in the corpus, such as those in (17a) (existential) and (17b) (locative).

(17) positive: verb 'be'
          S   V
      a. *Juishu   beju **pu-iti-a**.*
          judgment PRT be-TDM-PST
          'Había juicio.' (in064_ott; de Ottaviano 1980: 62)
          'There was a judgment.'
          S   LOC   V
      b. *Tueda escuela=su   **pu-ina**.*
          3SG   school=LOC be-HAB.PST
          'El estaba en la escuela.' na205
          'He was in the school.'

When negated, existential and locative clauses display two possible patterns. The first, illustrated in (18) and very scarcely attested in the corpus, is through the same discontinuous embracing SN construction with the preverbal independent **aimue** and the postverbal enclitic **=mawe**. This first pattern is illustrated with the posture verb *ani* 'sit' in (18a) and (18b) and with the copula verb *pu* 'be' in (18c). Note that due to a lack of sufficient examples, I am unable to say if the pattern is attested with the other posture verbs, 'stand', 'lie' and 'hang', and if *aimue* and/or *=mawe* display the variants they have in SN when applied to other clause types (*aimawe* [ajmaᵬe], *=mue* [mue] ~ [mwe]).

(18)   S   V

a. [*Da tiempo*] **aimue** *sapato ani-ina=**mawe**.*
that time   NEG   shoe sit-HAB.PST=NEG
'En ese tiempo no había zapato.' ci024
'At that time, there were no shoes.'

                V   S

b. ***Aimue** ani-iti-a=**mawe*** *Rurrenabaque.*
NEG   sit-TDM-PST=NEG Rurrenabaque
'(En los tiempos antiguos), no había Rurrenabaque.' tu002_ott,
(de Ottaviano 1980: 8)
'(In the old days) Rurrenabaque did not exist.'

LOC   S   V

c. *Upia =mu   =da* **aimue** *ejude ekene pu-iti-a=**mawe**.*
here =CNTR =PRT NEG   village first be-TDM-PST=NEG
'Aquí no había nada/pueblo / no era pueblo todavía.' hi020
'Here at first there was no village.'

The second pattern, illustrated in (19a-e) and found in many examples in the corpus, consists of **aimawe** [ajmaße] or variant **aimue** [ajmue] ~ [ajmwe] used alone with a predicative function, with or without the inflected copula verb *pu* 'be.' In this use, I analyze *aimawe/aimue* as a lexical negative existential/locative adjective in an attributive clause construction, as described in §4. In the examples provided below, one can see negation of existence in (19a), (19b) and (19c), negation of location in (19d) and negation of possession in (19e) (possessor encoded by the 3SG dative pronoun *mesa*).

                                        ADJ   COP   S

(19) a. [*Biawa tiempo*] *=mu =da* **aimue**   *pu-iti-a   ejude=kwana.*
old   time   =CNTR =PRT nonexistent be-TDM-PST village=PL
'En tiempos antiguos no habían pueblos.' tu001_ott, (Ottaviano &
de Ottaviano 1989: 8–9)
'In the old days, there were no villages.' [lit. villages were nonexistent]

S   ADJ

b. *Kwati   =mu* **aimue**   *=tsu'u.*
firewood =CNTR nonexistent =STILL
'La leña todavía no hay.' ci104
'There is no firewood yet.' [lit. firewood was nonexistent]

ADJ   S   ADJ

c. ***Aimue***   *beu se.* ***Aimue***   *beu.*
nonexistent PRT fish nonexistent PRT

'Ya no hay pescado, ya no hay.' em075

'There were no fish. There were no (fish).' [lit. fish were nonexistent]

S   ADJ   LOC

d. *Ema =mu*   ***aimawe***   *beu* [*kema*   *tawi-jude=su*].
1SG =CNTR nonexistent PRT 1SG.GEN sleep-PLACE=LOC

'(Me buscaron ya) yo no estaba en mi cama.' du101

'(They searched for me but) I wasn't in my bed.' [lit. I was nonexistent in my bed]

ADJ   DAT   S

e. ***Aimue***   *mesa*   *aicha…*
nonexistent 3SG.DAT meat

'No tenía carne…' ye006

'He didn't have meat.' [lit. the meat was nonexistent to him]

6 Negation of declarative non-finite verbal main clauses

We now turn to the negation of main clauses with a non-finite verbal predicate. As noted in §3, main clauses with a non-finite verbal predicate express the same propositional content as those with a finite verbal predicate, but here the predicate has a different structure. The lexical verb stem, with or without derivational morphology, does not directly bear the inflectional morphology. The inflectional affixes (the same ones used in finite verb constructions and listed in Table 1 – i.e., TAM and 3rd person indexation) are either carried by a generic auxiliary (light verb), which in this construction is specifically used for this (inflection-carrying) purpose or, more commonly, altogether absent.

The examples in (20a,b), based on the same transitive and intransitive verb stems *tutua* 'spill' and *ja-mesia-ti* 'let go of oneself' used in finite verb constructions in (4a,b), illustrate non-finite verb constructions with inflections carried by a generic auxiliary.

(20)   transitive and intransitive declarative main clauses with a non-finite verb
and an overt auxiliary

                                              V   A   AUX
                                              [tuʔtwa]

a.   *E-jemi-tsua*   *=da   etse, beu **tutua** =da   etse **y-a.***
    FUT-remove-go_up =PRT 1DU PRT spill   =PRT 1DU FUT-do
    'Lo vamos a alzar (la trampa para peces) entre los dos y lo vamos a
    vaciar.' em045
    'We are going to lift (the fish trap) up and spill them (the fishes) (on
    the ground).'

                    V   S   AUX
                    [haʔmesjati]

b.   *Beu, **ja-mesia-ti**   ema **pu-ana.***
    PRT MID-let_go_of-MID 1SG be-REC.PST
    'Ya me largué.' lp033
    'Then I let go of myself.'

As one can see, there are two auxiliaries, the use of which depends on the
transitivity of the predicate: *a* 'do' when the predicate is transitive (20a) and *pu*
'be' when the predicate is intransitive (20b). The auxiliaries are etymologically
related, respectively, to the independent transitive lexical verbs *a* 'affect, make, do
(tr.), say (tr.),' illustrated in (21a), and the intransitive verb *pu* 'be/exist, be located,
do (itr.), say (itr.),' which can serve, among other things, as the copula predicate
in equation, proper inclusion and attribution clauses (§4) and (less commonly)
the predicate of existential/locative clauses (§5), as illustrated in (21b) (repeated).

(21)   a.   *Upia [mike   ete],   ekwanaju **y-a.***
        here 2SG.GEN house 1PL.EXCL   FUT-do
        'Aquí te lo vamos a hacer tu casa.' au313
        'Here we are going to build your house.'

    b.   *Tueda escuela=su **pu-ina.***
        3SG   school=LOC be-HAB.PST
        'Él estaba en la escuela.' na205
        'He was in the school.'

In the non-finite verb constructions, the auxiliary must follow the lexical verb,
whether contiguously or not; in (20a,b), for instance, the auxiliary is not contigu-
ous with the lexical verb, being separated from it by a pronoun in both exam-
ples, and also by a particle in (20a). As for the lexical verb in this construction,

whether the auxiliary is present or not, it receives a specific intonation contour, with a non-phonological prosodic glottal stop [ʔ] in 1ˢᵗ syllable coda position (see phonological inventory in Footnote 4) and apparently a different stress pattern.[7]

As stated above, the inflection-carrying auxiliary is not compulsory, and in fact it is left out most of the time; in this situation, the TAM and identity of 3ʳᵈ person subjects have to be recovered from the context. This is illustrated with the transitive and intransitive verb stems *nubi-ame* 'make enter' in (22a) and *pue-yu* 'come again/back' in (22b).

(22)   transitive and intransitive declarative main clauses with a non-finite verb and no overt auxiliary

	O	A			V
					[nuʔbjame]

a. *Beu etseju   gringo=ja   beu, cuarto=su **nubi-ame**.*
PRT 1DU.EXCL gringo=ERG PRT room=LOC enter-CAUS

'Ya a nosotros el gringo al cuarto nos metió e hizo entrar.' tm057
'The gringo made us enter into the room.'

	S		V
			[pweʔju]

b. *Pero,* [*mesa   emetse*] =*mu,   ekene **pue-yu**.*
but   3SG.GEN owner   =CNTR first   come-ITER

'Pero su dueño primero se vino.' ha017
'But his owner came first.'

At the level of the clause, predicates with a non-finite verb and predicates with a finite verb do not require different clausal constructions: the argument-coding system remains the same, with an identical split ergative case-marking system and the same constituent order flexibility.

However, when it comes to negation, clauses with a non-finite verbal predicate are negated differently from clauses with a finite verbal predicate; the SN construction is not used for their negation. Here, two additional negation constructions are available, both of which only involve a single negation marker, which occurs before the verb. The form of the marker is what distinguishes the constructions, with all other properties being identical. In the first construction, the negation marker is the independent morpheme **aimue** (as in SN) while in the second it is the proclitic **mué=** (segmentally identical to one of the variants of =*mawe* in SN). Unlike in SN, here the lexical verb (or the inflection-carrying

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[7]See Footnote 4 on the stress system in Tacana.

auxiliary, if expressed) is never followed or accompanied by a second negation marker.

The negative construction with ***aimue*** is illustrated in (23a,b) with an overt auxiliary and (24a–c) with no overt auxiliary. In both cases, examples of both transitive and intransitive clauses are provided. Note that unlike in the affirmative counterpart, the lexical verb does not receive a specific intonational contour (glottal stop in 1st syllable coda position), whether marked by *aimue*, as illustrated here, or *mué=*, as illustrated further below.

(23) negative clauses with ***aimue*** and auxiliary

                            V   AUX

    a. *Biame*   ***aimue** =da* ***dia a-ta-ina***.
       on_the_contrary NEG   =PRT eat do-3A-HAB.PST
       'Pero no lo comió.' qu004
       'But (the jaguar) would not eat it.'
                   V   AUX

    b. ***Aimue beu, kwinana-yu pu-idha***.
       NEG   PRT emerge-ITER be-REM.PST
       'Ya no salió más.' qu033
       'He didn't leave again.'

(24) negative clauses with ***aimue*** without auxiliary

                A   O   V

    a. ***Aimue** yama d'aki*   ***ba***.
       NEG   1SG.ERG brother_in_law see
       'No le he visto al cuñado.' ch028
       'I didn't see my brother-in-law.'
                  S   V

    b. ***Aimue**, ema **kwinana-puda***.
       NEG   1SG go_out-FAST
       'No he salido rápido.' ch152
       'I didn't go out fast.'
                            V

    c. *Enekita =pa*   ***aimue** beu **ja-tibi-ti***.
       really   =RPRT NEG   PRT MID-detach-MID
       'En verdad dice que no se soltó.' ch082
       'Really, (the vine) didn't break.'

The behavior of *aimue* here is the same as that of *aimue* in SN, being phonologically stressed and free to occur in any position as long as it is before the predicate.

The negative construction with ***mué=*** is illustrated in (25) with an overt auxiliary and (26a–c), with no overt auxiliary.

(25)   negative clause with ***mué=*** and auxiliary

               V   AUX   *O*

Mué=*pa* ***teje-ti-yu*** ***a-ta-idha***   [*jida mesa*   *e-wane*] *beu.*
NEG=RPRT find-GO-ITER do-3A-REM.PST that 3SG.GEN NPF-wife PRT

'Dice que no lo ha ido hallar ese su mujer.' os043

'He didn't find his wife.'

(26)   negative clauses with ***mué=*** without auxiliary

           A   V

                    [mwéshánapa]

  a. *Yama* *=mu* ***mué=shanapa*** [...] [*mesa*   *ebakʷa*] *manu-iti-a.*
    1SG.ERG =CNTR NEG=know   3SG.GEN child   die-TDM-PST

    'Yo no me he dado cuenta que ha muerto su hijo.' su130

    'I didn't realize that his child had died.'

           O   V

           [mwéemahéutsu]

  b. ***Mué=****ema* ***jeutsu****.*
    NEG=1SG   respond

    'No me contestó.' ch033

    'He did not answer me.'

                          V

                        [mwé:manu]

  c. *... rusu-ta-idha*   *doctor=ja.* ***Mué=manu****.*
      sew-3A-REM.PST doctor=ERG NEG=die

    'Se lo costuró el doctor (el cuero de su cabeza). No ha muerto.'
    ti041–42

    'The doctor stitched (the scalp of his head). He hasn't died.'

As one can see from these examples, *mué=*, like *aimue*, does not have a specific position as long as it occurs before the predicate. It can attach to the predicate, as in (26a, c) or to any preverbal host, as in (25) and (26b); note that in (25), *mué=* attaches to a second position clitic, the reportative *=pa*. The two markers *mué=* and *aimue* only differ in their prosodic status, *mué=* being prosodically dependent while *aimue* has prosodic independence. Note that phonological words formed by *mué=* and its following host have a peculiar stress pattern where stress falls on *mué=*, as can be seen in the phonetic transcriptions in (26b–c).[8]

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[8]As already mentioned in Footnote 4, the rule in Tacanan is that stress falls on the 3rd mora (i.e., vowel or semi-vowel [j] or [w]) counting from the left. Evidence that the normal rule does not apply here can be seen in (26c), where one should obtain [mwemánu] and not [mwé:manu].

From a functional perspective, it is not fully clear what motivates the use of *aimue* versus *mué=*, although it is likely that they differ in encoding different degrees of emphasis; if so, the longer form, *aimue*, is the more emphatic of the two.

From the perspective of Miestamo's (2005, 2007) typology of negative constructions, negation of clauses with non-finite verbs, like the SN, is symmetrical, as it does not result in any obvious morphosyntactic differences. The argument-coding system and the morphological possibilities on the verbal predicate remain the same. The only difference that was noted is, in relation to the lexical verb, the absence of the prosodic glottal stop [?] in 1st syllable coda position, which is otherwise characteristic of the lexical verb in affirmative non-finite verb constructions.

7 Non-clausal negation

In this section, I describe two types of non-clausal negation: stand-alone negation and constituent negation. Stand-alone negation is realized by way of *aimawe* or *mawe*, whether negation consists in answering a polar question, as in (27), or rectifying a false statement, as in (28) and (29).

(27)   response to a polar question

Authority: *Corregidor=ja =mi, e-kisaba-me-ta-(a)ni   apa*
             judge=ERG   =2SG IPFV-ask-CAUS-3A-IPFV(.SITTING) if
             =mi   acompaña   a-kwa, misha,   Semana_Santa
             =2SG accompany do-POT church_service Holy_Week
             *misha=su,   awa **mawe**?*
             church_service=LOC Q   no
             'El corregidor te hace preguntar si puedes acompañarles a la misa de Semana Santa o no?' su026
             'The corregidor asks whether or not you could accompany them to the Holy Week Mass.'

Sub-prefect: ***Mawe!** Aimue =da   ema e-puti=mawe.*
             no   NEG   =PRT 1SG FUT-go=NEG
             'No, no voy a ir.' su028
             'No! I won't go!'

(28)   rectification of a false statement

Mother: *Manuame-pe-ta-kwa tse   ekwana.*
   kill-COMPL-3A-POT   MAYBE 1PL

   '¡(Tu padre) nos puede matar a toditos!' au064
   '(Your father) can kill us all!'

Son: **Aimawe!** *Ema ebiasu tuche-da.*
   no   1SG a_lot strong-ASF

   'No, yo tengo más fuerza que él.' au066
   '<u>No</u> (he can't kill us)! (Because) I'm stronger (than him).'

(29)   rectification of a false statement

Jaguar: *Jiawe =mida yama   e-dia.*
   now   =2SG   1SG.ERG FUT-eat

   'Ahora te voy a comer.' bu028
   'Now I'm going to eat you.'

Fox: **Mawe** *tiyu! Be   =tsu ema dia-ji!*
   no uncle IMP.NEG =YET 1SG eat-IMP.NEG

   'No tío, no me comas todavía!' bu029
   'No, Uncle! Do<u>n't</u> eat me yet!'

Constituent negation is realized by way of the enclitic *=mawe* or its variant *=mue*, which is attached to the constituent to be negated. It is attested as a derivation process with nouns (privative negation), as in (30), and adjectives (adjectival antonym negation), as in (31).

(30)   privative negation

 a. *Pero pisa=**mue** =da   ema.*
   but   gun=PRIV =PRT 1SG
   'No tengo arma.' co046
   'I don't have a gun (lit. I am <u>without</u> a gun / gun-<u>less</u>).'

 b. *Dapia lugar=su   kristianu=kwana escuela=**mawe**.*
   there place=LOC person=PL   school=PRIV
   'En este lugar, no tiene escuela la gente.' na073
   'There, in that place, the people don't have schools.' (Lit. are <u>without</u> a school / school-<u>less</u>)

(31)   adjectival antonym negation
      S   ADJ   S   ADJ
      *Tueda sai-da=**mawe**, ema =mu   sai-da=kita.*
      3sg   nice-asf=neg 1sg =cntr nice-asf=ints
      'El es malo y yo soy bueno.' (Ottaviano & de Ottaviano 1989: 81)
      'He is bad (lit. <u>not</u> nice) and I am nice.'

8 Negation of hortative and imperative clauses

Finally, to close the synchronic description of negation strategies in Tacana, we here provide a brief description of negation in commands. The first type is hortative clauses (1ˢᵗ and 3ʳᵈ person imperative), which in the affirmative polarity are headed by a finite verb marked by a prefix *pa-* instead of TAM inflectional affixes, as illustrated in (32a). When negated, hortative clauses require a preverbal independent particle *be*, which is simply added to the positive construction without further morphosyntactic modifications (same 3ʳᵈ person indexation, same hortative prefix, same argument-marking and constituent order flexibility).

(32)   a.   positive
         O   V   A   V
         *Tueda **pa**-dia-ta   señora=ja, **pa**-id'i-ta.*
         that   hort-eat-3A wife=erg hort-drink-3A
         '¡Ese (caldo de gallina) que coma la señora! ¡Que tome!' pa044
         'Let the woman eat this (chicken soup)! Let her drink it!'

      b.   negative
         A   V   O
         *Tueda =mu   **be** **pa**-dia-ta   [jida aicha]!*
         3sg   =cntr neg hort-eat-3A that meat
         '¡Que él no coma esa carne!' n2.0138 (elicited)
         'Don't let him eat that meat!'

The second type of command clauses is 2ⁿᵈ person imperative clauses, which in affirmative polarity are headed by a finite verb marked by the suffix *-ke*, as in (33a). When negated, the same preverbal independent particle *be* must be used. However, the head verb cannot carry *-ke* anymore, which is now replaced by a suffix *-ji*, as in (33b). With regards to the other morphosyntactic properties of the clause, they are the same as in the affirmative.

(33)   a.   positive

*"Dia-**ke** =tsu   empanada, kupari!"   ema a-ta-idha.*

eat-**IMP** =YET empanada compadre 1SG do-3A-REM.PST

'"¡Come todavía empanada, compadre!" me dijo (mi comadre).' su057

'"Eat some more 'empanada,' compadre!," (my comadre) said to me.'

b.   negative

*Mawe tiyu.   **Be**   =tsu   ema dia-**ji**!*

NEG   uncle IMP.NEG =YET 1SG eat-IMP.NEG

'No tío, ¡No me comes todavía!' bu029

'No, uncle, don't eat me yet!'

9 Summary of negation constructions

The negation constructions described above are summarized in Table 2 on the next page. For practical reasons, in the schematized constructions I provide the most commonly attested variants of the negation markers, *aimue* and *=mawe*.

10 Reconstructing the origin of negation markers and constructions

The goal of this section is to identify, on the basis of internal reconstruction, possible etymologies and evolutionary pathways for the rise of the different negative markers involved in the negation of declarative or interrogative clausal constructions: the SN construction (§3–5) and the construction (with its two subtypes) used to negate clauses with a non-finite verbal predicate (§6), repeated in Table 3.

The negative markers in these constructions are all formally very similar and therefore likely to be historically related; such is not the case with the negative markers involved in negation of command clauses (*be*, *-ji*), the reconstruction of which will not be attempted in this paper.[9] The markers all consist of either ***mawe ~ mue*** used on its own or in combination with a preposed element ***ai***, forming ***aimawe ~ aimue***. Note that *ai* can be used independently of *mawe ~ mue*, as an indefinite noun "person/thing, someone/something" (34), suggesting

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[9]One might speculate that *be* is related to *mawe*, which manifests reduced variants such as the clitics *=mue* and *mué=* that come closer to the form of *be*. I will leave this issue for further investigation.

Table 2: Summary of negation constructions in Tacana

Type	Construction		Symm.	Type
Clausal declarative finite verbal main clauses	[... *aimue* ... V-ɪɴꜰʟ(=*mawe*) ...	]	yes	1
non-verbal clauses:				
equation, inclusion	[... *aimue* ... NP... (be-ɪɴꜰʟ)=*mawe* ...]		yes	
attribution	[... *aimue* ... ADJ... (be-ɪɴꜰʟ)=*mawe* ...]		yes	
existential/locative	[... *aimue* ... Vᴘᴏsᴛ-ɪɴꜰʟ=*mawe* ...	]	yes	
	[... *aimue* ... be-ɪɴꜰʟ=*mawe* ...	]	yes	
Clausal non-verbal clauses: existential/locative	[... *aimue*... (be-ɪɴꜰʟ)	]	no	2
Clausal declarative non-finite	[... *aimue* ... V ... (be/do-ɪɴꜰʟ) ...	]	(yes)	3
verbal main clauses	[... *mué*= ... V ... (be/do-ɪɴꜰʟ) ...	]	(yes)	
Non-clausal stand-alone	[*aimawe*	]	N/A	4
	[*mawe*	]	N/A	
Non-clausal constituent negation:				
privative	[N=*mawe*]		yes	5
adjectival antonym	[ADJ=*mawe*]		yes	
Clausal hortative	[... *be* ... ʜᴏʀᴛ-V ...	]	yes	6
prohibitive	[... *be* ... V-*ji* ...	]	no	

Table 3: Summary of negation constructions for verbal main clauses in Tacana

Type of negated constituent	Construction	Symmetrical
clauses with finite verbal predicate or with non-verbal predicates	… ***aimue*** … predicate(=***mawe***) …	yes
clauses with non-finite verbal predicate	… ***aimue*** … V … (be/do-INFL) …	yes
	… ***mué=*** … V … (be/do-INFL) …	yes

that *aimawe ~ aimue* may be an erstwhile univerbation of this indefinite pronoun and *mawe* (as in English 'nothing,' for example).

(34) *Enekita beu =pa   **ai**=kwana ja-ba-ti-ana.*
      really   PRT =RPRT thing=PL MID-see-MID-REC.PST
      'En verdad dice se alistó sus cosas (para el viaje).' co080
      'Really, he prepared his things (for the trip). (lit. saw for himself)'

Depending on the construction, the negation markers *mawe* or *aimue* have different degrees of grammatical or phonological freedom (e.g., *mawe* can be a clitic); they can occupy different positions in the clause (e.g., preposed or postposed to the negated constituent); they can be used alone or in combination with each other (forming an embracing negation construction); and possibly, in the case of the embracing construction, one marker can be optional.

If one looks for possible internal cognates, it is notable that *mawe* and/or *aimue* are also used in many other negative constructions described earlier in this chapter, such as the second existential/locative negation construction (§5), stand-alone negation (§7) and constituent negation (§7).

On the basis of these preliminary observations, we will now proceed to reconstruct at least parts of the history of the two negative constructions. We start with the SN construction in §10.1 and then move on to the reconstruction of negation of clauses with a non-finite verb in §10.2.

10.1 Evolutionary pathway: SN construction

The embracing preposed marker ***aimue*** and postposed marker ***=mawe*** that are used in SN have quite distinct grammatical and phonological properties, which suggest that *=mawe* is historically older than ***aimue*** in this construction. Evidence for the likely older status of *=mawe* is to be found in its shorter form (*mawe*

~ *mue*), phonological dependence (clitic status) and rigid position. These proper-
ties are all diagnostics of an advanced grammaticalization stage and they can be
contrasted with the distinct properties of *aimue*, with its longer form (*aimawe ~
aimue*), phonological independence and free position (before the predicate).

One can therefore hypothesize that originally SN was expressed by a single
marker, the postposed marker *=mawe*, and that the preposed marker *aimue* was
introduced later for reinforcement. If we search for a likely etymology for this
newly introduced marker *aimue*, the negative stand-alone word *aimawe* 'no!'
(27), (28) and (29) – (28) is repeated in (35) below – and the negative existential/
locative adjective *aimue* 'nonexistent' (19) – (19a) is repeated in (36) below – im-
mediately come to mind, and there is little doubt that the three negation forms
(new SN marker, stand-alone negation word and negative existential/locative ad-
jective) are all historically related.

(35) Stand-alone negative ***aimawe***

Mother: *Manuame-pe-ta-kwa tse   ekwana.*
        kill-COMPL-3A-POT   MAYBE 1PL
        '¡(Tu padre) nos puede matar a toditos!' au064
        '(Your father) can kill us all!'

Son: ***Aimawe!** Ema ebiasu tuche-da.*
        no   1SG   a_lot strong-ASF
        'No, yo tengo más fuerza que él.' au066
        '<u>No</u> (he can't kill us)! (Because) I'm stronger (than him).'

(36) Negative existential/locative adjective in an attributive construction
      [*Biawa tiempo*] *=mu =da **aimue**   pu-iti-a   ejude=kwana.*
      old   time   =CNTR =PRT nonexistent be-TDM-PST village=PL
      'En tiempos antiguos no habían pueblos.' tu001_ott (Ottaviano &
      de Ottaviano 1989: 8–9)
      'In the old days, there were no villages.' [lit. villages were nonexistent]

With regards to the evolution of their use, the hypothesis pursued here is that
the negative existential/locative adjective is older, that it later extended its use
to a stand-alone negation word, and that this use made it possible to develop
a new SN marker. In other words, the immediate etymology of the SN maker
aimue is a stand-alone negation word, *aimue*, which itself can be traced back
to a negative existential/locative predicative adjective *aimue*. According to this
scenario, which is schematized in Table 4 with the verb 'go' as an illustration in
English, the evolutionary trajectory followed by the Tacana stand-alone *aimue*

Table 4: Evolutionary pathway of Tacana stand-alone negation *aimue* into the marking of SN

stage 1	predicate=***mawe***	'I will **not** go'	hypothesized
stage 2	(***aimue***), predicate=***mawe***	'(**No**,) I will **not** go'	hypothesized
stage 3	***aimue*** (,) predicate=***mawe***	'**No**(,) I will **not** go'	synchronic use
stage 4	***aimue*** predicate(=***mawe***)	'**No** I will (**not**) go'	(synchronic use)
stage 5	***aimue*** predicate	'**No** I will go' (= I will **not** go')	hypothesized

would be similar to that of the Brazilian Portuguese stand-alone negator *não* illustrated in (1). A clause-external stand-alone negator, originally used to reinforce a clause-internal negator (stage 2), is reanalyzed as a second clause-internal negator, forming an embracing negation construction (stage 3). Over time, the original clause-internal negator becomes optional (stage 4) and ends up disappearing altogether (stage 5), with the result that it is replaced by the new reinforcing (external stand-alone) negator.

An alternative hypothesis would be that the immediate etymology for the new SN marker is not the stand-alone use of the negator *aimue* but its use as a negative existential/locative adjective. In the context of SN, this hypothesis is much less plausible, due to the lack of a conceivable source construction and evolutionary scenario. Had the direct etymology been the negative existential/locative adjective, the only source construction available in Tacana that I can think of is where *aimue* negates the existence of a nominal referent, as illustrated in (36) ('there were no villages' / ''villages were nonexistent').[10]

However, negating an event by way of this construction (e.g. 'there is no going for me' / 'my going is nonexistent') would require important structural changes in the verb form (for instance, the lack of finite morphology) and argument structure (for instance, a different case frame for the core arguments) which are absent in the negation of finite verb constructions. Moreover, the verb to be negated by way of a negative existential/locative adjective should display affirmative polarity; this is not the case, since the verb is marked by the enclitic negator *=mawe*.

As proposed above, it is of course very likely that the SN negator *aimue* and the negative existential/locative adjective *aimue* are historically related, but the

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[10]According to Veselinova (2016: 157), "the use of negative existentials with nominalized verb forms is cross-linguistically the most widespread pathway whereby they can be shown to expand into the domain of verbal negation."

link is probably an indirect one, involving an intermediary stand-alone nega-
tion stage; cross-linguistically, the move from negated existential predicate to
stand-alone negation is a well-attested pathway (Croft 1991: 10, 13–14, Veselinova
2013: 127ff, 2016: 155–156), and when there is synchronic polysemy between the
two, the evidence generally points to the negated existential predicate being the
source, not the other way around (Croft 1991: 8).

Reconstructing the diachronic development of *=**mawe*** in the SN construction
(stage 1) is a more complex task, for which it will be necessary to resort to com-
parative data from other Takanan languages. That is beyond the scope of the
current paper, and so here I will restrict myself to the observation that the most
likely internal cognate is the negative enclitic *=mawe* used alone in constituent
negation (privative derivation and adjectival antonym negation; §7).

10.2 Evolutionary pathway: negation of clauses with a non-finite verb

We now move to the discussion of the possible diachrony of the negation con-
struction of clauses with a non-finite verb. As a reminder, here negation is real-
ized by way of a single negation marker which is preposed to the lexical verb
and which can be one of two morphemes, *aimue* or *mué=*, giving the following
two constructions: [... ***aimue*** ... V ... (be/do-INFL) ...] and [... ***mué=*** ... V ... (be/
do-INFLECTIONS) ...].

Following the same line of reasoning as above (i.e., taking into account the re-
spective grammatical and phonological properties of *aimue* and *mué=*), it is rea-
sonable to believe that ***mué=*** is older than ***aimue***. This assumption is grounded
in the observation that *mué=* displays a shorter form and less phonological inde-
pendence (being a clitic) than *aimue*; note that in terms of their syntactic distri-
bution, both are free to occur anywhere before the lexical verb. The hypothesis
is also corroborated by philological evidence found in a Christian catechism in
Tacana from the mid-19th century Lafone Quevedo 1902, which only displays a
negation construction that corresponds to that with *mué=*. In the material avail-
able, which goes back about 150 years, we see that all the instances of negation
of verbal main clauses[11] are realized by way of a preverbal marker *mawe* (spelled
mave) that precedes a non-finite verb, as in the three examples in (37), and which
look basically similar to our synchronic construction [... ***mué=*** ... V ... (be/do-
INFL) ...].

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[11] Note that in the affirmative polarity, the catechism shows examples of clauses with both finite
and non-finite verbs.

(37) Old Tacana (mid-19th century)

                                    S   NEG V   AUX

    a. *Quejutcua   mara mi **mave confesa pu***?
        how_many year 2SG NEG   confess be
        'How many years have you not confessed?' (Lafone Quevedo 1902:
        297)

                                    A   NEG V

    b. *Jucuajasu ni   mi **mave ichegua***.
        why   MAYBE 2SG NEG kill
        '¿Y por qué no lo mataste?' (Lafone Quevedo 1902: 310)
        'Why didn't you kill it?'
        NEG V

    c. ***Mave chanapa*** *cuaja miada ema e-ba-nia.*
        NEG know   why 2SG.ERG 1SG IPFV-see-IPFV(.SITTING).1/2A
        'No sé porqué me miráis.' (Lafone Quevedo 1902: 310)
        'I don't know why you are looking at me.'

On the basis of these synchronic observations and the historical data, it is possible to suggest that the negation pattern with *mué=* corresponds to the original construction and that the negation pattern with *aimue* is a more recent development.

Turning to the reconstruction of the development paths, since both patterns only differ in the formal and prosodic properties of their negation marker, it can be suggested that they arose in a similar way but at different times in the past. In terms of likely etymologies for *aimue* and *mué=*, the same candidates are available as those for the *aimue* and *=mawe* negators in SN: the negative stand-alone word *aimue* 'no!' (35) and negative existential/locative predicative adjective *aimue* (36), to which we can add the second negative stand-alone word *mawe* 'no!', illustrated in (38) (repeated from 27).

(38) ***Mawe!*** *Aimue =da ema e-puti=mawe.*
    no   NEG   =PRT 1SG FUT-go=NEG
    'No, no voy a ir.' su028
    'No! I won't go!'

Although *mawe*, unlike *aimue*, is not attested as a negative existential/locative predicative adjective in present-day Tacana, it is plausible that it could have been used in such a way in the past, and that this function fell into disuse.

Although a scenario similar to that proposed for the reconstruction of SN – a Jespersen Cycle reinforcement process by way of a stand-alone negator replacing

a former negator in a clause with a non-finite verb – is not completely inconceivable, here there is no evidence available which would support it. That is, there is no possibility of having the two negative markers *aimue* and *mué=* co-ocurring in the same construction.

An alternative scenario that seems more probable would be one which possibly involved as the source construction for both patterns (that with *aimue* and that with *mué=*) not a clause with a non-finite verb, but a clause with a negative existential/locative predicative adjective of the clause type illustrated in (36) ('there were no villages' / 'villages were nonexistent'). As commented in Footnote 10, this evolutionary pathway is cross-linguistically very common. From this perspective, one could imagine that the transitive and intransitive SN constructions (e.g., in (24a) 'I didn't see my brother-in-law' and (24b) 'I didn't go out fast') come from the reanalysis of clauses with a nominalized verb as the S argument of a negative existential/locative predicate. These are translatable literally as ''the seeing of my brother-in-law is nonexistent to me' for (24a) and 'the fast going out is nonexistent to me' for (24b). An argument in favor of this hypothesis is that here, unlike in the SN construction with finite verbs, the verb does show some similarities with nominal referents in negative existential predicate constructions, in particular by being obligatorily non-finite and in an affirmative form.

Yet, there are several unresolved issues with this hypothesis; in particular, there are divergent properties between the hypothetical negative existential predicate source construction and the target negative construction with a non-finite verb which would remain to be explained. One such property is argument coding. In the negation construction with a non-finite verb, the argument coding is identical to that of basic declarative affirmative clauses (the same split ergative case-marking system). If the negation construction with a non-finite verb had originated in an existential predicate, one would expect a different coding pattern, one which should reflect how the arguments can be coded in nominal predicate construction. Notably, one would expect the S and the A of the SN construction to be marked like an experiencer argument in a nominal predicate construction, with dative(+purpose) case marking, as in (39a,b); note that (39a) is repeated from (19e).

		ADJ	DAT	S
(39)	a.	***Aimue***	*mesa*	*aicha...*
		nonexistent	3sg.DAT	meat

'No tenía carne...' ye006

'He didn't have meat.' [lit. meat was nonexistent to him]

b. ***Aimue***   *beju dhidha* ***kema=puji.***
nonexistent PRT night   1SG.DAT=PURP
'Ya no había noche para mi.'
'The was no night for me (because I could see at night as well as during the day).'

Another problematic property concerns the form and morphosyntactic characteristics of the auxiliaries that can be optionally used in both affirmative and negative clauses with a non-finite verb (to carry the inflectional affixes), namely *a* when it is transitive (e.g., 20a) and *pu* when the SN clause is intransitive (e.g., 20b). An important difference here is that in negative existential predicates, only the intransitive auxiliary *pu*—or better said, its etymological source *pu* 'be/exist, be located, do (itr.), say (itr.)'—can be used; the transitive auxiliary *a*—or better said, its etymological source *a* 'affect, make, do (tr.), say (tr.)'—is never found.' Additional work is needed to investigate further whether this second scenario is supported by the data or if other hypotheses need to be sought.

11 Summary and conclusion

This paper presented for the first time a synchronic and diachronic study of negation markers and patterns in Tacana as applying to clauses (declarative/interrogative and commands) and constituents. The diachronic part focused on two major negation constructions: SN and negation of clauses with non-finite verbs.

Starting with SN, I argued that its embracing pattern likely arose out of a Jespersen Cycle process in which a stand-alone negator 'no,' originally used outside of a negative clause for pragmatic reinforcement, is in the process of replacing the original postverbal SN marker inside of the clause. Taking into account the actual polysemy between this stand-alone word and the negative existential/locative predicative adjective 'nonexistent,' I proposed to ultimately trace the origin of the new SN marker back to a negative existential predicate, thereby adding Tacana negation to the list of cases where the Jespersen and negative existential cycles intertwine.

The reconstructed grammaticalization path is also interesting from a diachronic typological perspective because it goes from the right of the verb to the left of the verb, unlike the more familiar direction from the left of the verb to the right of the verb. As such, the Tacana pattern corresponds to what van der Auwera & Vossen (2016) and Vossen (2016) call a Jespersen Cycle "in reverse".

Continuing with the second construction, negation of clauses with non-finite verbs, I proposed that the two negation markers *aimue* and *mué=* directly arose, albeit at different times, out of a negative existential predicate construction where the original function of *aimue* and *mué=* was to negate the existence of a nominalized (non-finite) verb. However, if this hypothesis is correct, how the original intransitive negative existential predicate construction came to display all the synchronic properties of negated clauses with non-finite verbs, which are the same as in the SN construction (split-ergative case marking and alternation of transitivity-sensitive auxiliaries), remains largely unexplained and calls for further research.

Abbreviations

( )	morpheme that does not appear on the surface (in morpheme line)	INFL	inflection
		INTS	intensifier
		MID	middle
[ ]	multiple-word constituent	NPF	noun prefix
		POST	posture
ASF	adjective suffix	POT	potential
ASSOC	associative	PRIV	privative
COM	comitative	REC.PST	recent past
CNTR	contrastive	REM.PST	remote past
DEPR	depreciative	RPRT	reportative
DUB	dubitative	TDM	temporal distance marker
HORT	hortative		

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Chapter 14

Existential negation in O'dam

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This chapter discusses the properties of existential constructions as well as standard and existential negation in the Uto-Aztecan language O'dam. In terms of the negative existential cycle, O'dam is a Type A language where existential constructions are negated by means of standard negation strategies. We also compare existential negation in O'dam to that of several other Southern Uto-Aztecan languages, most of which appear to be Type B languages. We find that standard negation and existential negation strategies have overall played very little role in each other's development in O'dam and across Southern Uto-Aztecan.

1 Introduction

In this chapter we discuss existential negation in O'dam (Southeastern Tepehuan)[1] and compare the negation strategies used to those of other Southern Uto-Aztecan languages. O'dam uses several strategies to express existential meaning: the existential predicate *jai'ch*, as in (1), positionals and movement verbs such as *daa* 'sit' in (2), and copular constructions, as in (3). All existential predication strategies in O'dam are also compatible with definite subjects, where they express a locative meaning, rather than an existential one.

(1) *Ya'   jai'ch-am gu o'dam.*
     DEM.PROX EX-3PL.SBJ DET O'dam
     'There are O'dam.' (Text_072011_PSC_GG_elcuidadodelamujer1, 15:37)

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[1]We use O'dam here in accordance with the community's preferences.

(2) *Añ   na=ø-gu'   gui'-ñi   mu'-ñi   ja'k daa gu*
1SG.SBJ SUB=3SG.SBJ-ADV DEM.DIST-VIS DEM.DIST-VIS DIR sit.SG DET
dɨ'i'n.
mother.POSSD
'As for me, because the mother is over there (Lit. the mother sits over
there).' (Text_102010_CFC_GGS_Cuandolacuranderaeraniña, 19:57)

(3) *para dhi   balh-cha'm pai'   ja'p pai' jɨ'k   na jir=ki~kcham*
for   DEM.PROX basket-on   where DIR where some SUB COP=PL~house
'for those in The Basket over there where there are houses' (García Salido
et al. 2021)

Existential negation is largely attested as clausal negation, although preverbal
(as opposed to postverbal) constituent negation is also attested. O'dam is a Type
A language[2] because all negation is expressed through one of two particles: *cham*
and *cham tu'*. O'dam contrasts with other Southern Uto-Aztecan languages, which
are largely type B, except Pima Bajo and Guarijío, which are types A and A ~ B,
respectively. The existential negation type, as well as the standard and existential
negation markers of each language examined here are shown in Table 1. We find
that there is little evidence that either negation type played a role in the other's
development. The etymological variety in the standard and existential negators
suggests that both sets of markers emerge, evolve and are replaced along distinct
pathways.

In §2 we briefly lay out some of the characteristics of O'dam, focusing on con-
stituent order and argument expression. In §3 we describe the strategies that
have been attested as expressing existential meaning. In §4 we discuss negation
strategies in the language, beginning with standard negation (§4.1) and ending
with existential negation (§4.2). We then take a broader look at the place of other
Uto-Aztecan languages on the negative existential cycle in §5 and then discuss a
possible pathway of change in standard and existential negation in O'dam in §6.

2 Basic characteristics of O'dam

O'dam is a Uto-Aztecan language and is a variety of Southern Tepehuan. As of
the last census, there are approximately 36,543 speakers of Southern Tepehuan,

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[2]Croft (1991) describes 3 language types, relating to various stages in the development of existen-
tial negation. In Type A, the standard negation strategy is used to negate verbal and existential
clauses. In Type B, existentials are only negated by a special strategy. In Type C, the standard
negation strategy differs from the existential negation strategy, but the existential negator is
regularly used for verbal negation.

Table 1: Southern Uto-Aztecan Existential Negation Cycle

Language	Existential Negation Type	Standard Negation Marker	Existential Negation Marker
O'dam	A	*cham (tu')*	—
Northern Tepehuan	B	*mai*/*tomali*	*tiípu(ka)*
Pima Bajo	A	*im*/*kova*	—
Cora	B	*ka*	*ka + me'e*
Huichol	B	*ka-*	*mawe* or *ka + xuawe*
Guarijío	A ~ B	*ki=*	*ki'te* or *ki=maní*

which consists of three varieties O'dam, Audam (Southwestern Tepehuan) and Central Tepehuan. The majority of Southern Tepehuan speakers speak O'dam and live primarily in the Mexican state of Durango with smaller communities of speakers in Nayarit and Zacatecas (INEGI 2015).

An O'dam clause obligatorily consists of a verb, all other clausal constituents are optional and it is quite rare for multiple DPs to appear in a sentence (Willett 1991, García Salido 2014). The language is V-initial with S and O arguments being freely ordered following the verb, this is shown in (4) and (5) where the subject and primary object appear in opposite orders.[3]

(4) Verb-Primary Object-Subject
     Mummu ja-kukpa-am   [*gu ja'tkam*]$_{PO}$ [*gu sandaarux*]$_{SBJ}$.
     DEM.DIST 3PL.PO-lock.up-3PL.SBJ DET persons   DET soldiers
     'The soldiers lock up people there (in Santiago Teneraca).'
     (E1_32011_IA_GGS)

(5) Verb-Subject-Primary Object
     Ya'   sap   pu=x-maax-ka'   na=m-pai'   daghia' [*gu*
     DEM.PROX RPRT.UI SENS=COP-know-STAT SUB=3PL.SBJ-ADV grab   DET

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[3]S and O orders are equally free in matrix and subordinate clauses.

chio'ñ]*_{SBJ}* [*gu ubii*]*_{PO}*..
man   DET woman
'Here one could tell where they grab her, the man to the woman.'
(Text_082011_CRG_GGS_El mito, 00:11)

DPs are not marked for case, instead grammatical roles are indicated through verbal argument affixes. Subjects are marked with a subject suffix, or preverbal free form as in (7), and a prefix on the verb that agrees with the primary object. By primary object, we mean that only one object is marked on the verb even if the clause contains more than one object.[4] The object that is marked on the verb is generally the most prominent (i.e. human, animate), although the exact factors that determine primary objecthood are still unknown. Both verbs in (6) and (7) realize the same object marking, the 3PL marker *ja-*. The primary object marker in (7) refers to the plural recipient rather than the theme[5] because the recipient is more prominent.

(6) *Ya'*   *ja-ai-ch-dha'-iñ..*
     DEM.PROX 3PL.PO-arrive-CAUS-CONT-1SG.SBJ
     'I brought them.' (Elicitation_032011_IA_GGS)

(7) *Añ*   *tu-ja-maa*   *gu ta~toxkolh gu koi'..*
     1SG.SBJ DUR-3PL.PO-give.PFV DET PL~pig   DET food
     'As for me, I gave food to the pigs.' (E1_032011_IA_GGS)

While O'dam currently exhibits verb-initial order, it maintains elements of the verb-final order of Proto Uto-Aztecan—these are shown in Table 2 (García Salido 2014, García Salido & Reyes Valdez 2015, also see Langacker 1977: 24–26 for a reconstruction of Proto Uto-Aztecan word order).

In the next section we describe the attested strategies in O'dam for expressing existential meaning. First, we consider the non-verbal existential predicate *jai'ch*, then we consider other strategies based on locative constructions and a copular construction.

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[4]Note that the notion here of "primary object language" is somewhat different from the primary object alignment system. Dryer (1986) defines a primary object marking language as that which treats the recipient of a ditransitive sentence in the same way as the object/patient of the monotransitive sentence. However, O'dam primary object marking is somewhat less consistent.

[5]Mass nouns like *koi'* 'food' are morphologically and syntactically singular so 3PL *ja-* can only refer to the overtly plural recipient.

Table 2: O'dam features with respect to order of constituents (García Salido 2014, García Salido & Reyes Valdez 2015)

VO		O'dam	OV
prepositions		X	postpositions
initial question particle		X	final question particle
verb – adpositional phrase	X	X	adpositional phrase – verb
auxiliary verb – main verb	X	X	main verb – auxiliary verb
main clause – subordinate clause	X	X (temporal)	subordinate clause –main clause
noun – genitive	X		genitive - noun
initial adverbial subordinator	X		final adverbial subordinator
initial complementizer	X		final complementizer
noun – relative clause	X		relative clause - noun

3 Existential constructions

Here we consider an *existential construction/existential* to be a construction that expresses a proposition about the existence of some entity (McNally 2011: 1829). In many languages these constructions are atypical in one or more ways: non-canonical subject order, lack of agreement between the subject and predicate, special morphology, specialized negation, etc. However, as we discuss in this section, existential constructions in O'dam do not appear to be encoded differently from non-existentials, therefore we cannot turn to such diagnostics. We also follow other authors in this volume, as well as Veselinova (2014, 2016) in assuming the definiteness restriction, where existential constructions are constrained to indefinite nominals, although see Ziv (1982), Reuland & ter Meulen (1987), Abbott (1997), Beaver et al. (2006), McNally (2016) for further discussion and criticisms.

O'dam uses several strategies to encode existential meaning. The primary strategy is the non-verbal existential predicate *jai'ch*, shown in (8-11). García Salido (2014: 93) analyses *jai'ch* as a non-verbal predicate because it takes morphology that otherwise only appears on non-verbal predicates, such as the stative marker *-ka'* in (11).

(8) *Ya'   jai'ch-am gu o'dam..*
DEM.PROX EX-3PL.SBJ DET O'dam
'Here, there are O'dam.' (Text_072011_PSC_GG_elcuidadodelamujer1,
15:37)

(9) *Na=ø=gu'   xib   makam ba-jai'ch gu kostumbre..*
SUB=3SG.SBJ-ADV today different COMPL-EX DET custom
'because now there is a different custom'
(Text_072011_PSC_GGS_elcuidadodelamujer1, 8:50)

(10) *Jai'ch=aa gu jabook matai mi'-ñi   bibiatam jup-kai'ch gu Juan*
EX=Q   DET light lime DEM.MED-VIS spring   ITER-say DET Juan
pui'-ñ   dho   té-kéé-ka'   na sap   jai'ch jup-kai'ch gu
SENS-1SG.SBJ DIREV DUR-hear-STAT SUB RPRT.UI EX   ITER-say DET
Peegro..
Pedro
'"Is there lime in the spring?" Juan asked. "I have heard that there is" said
Pedro' (Willett & Willett 2015: 76)

(11) *Cham jai'ch-ka' na=m   tu'   jugia'..*
NEG   EX-STAT SUB=3PL.SBJ something eat
'There was nothing to eat.' (Text_072011_PSC_GGS_elcuidadodelamujer1,
9:40)

The *jai'ch* predicate is also used for locative predications, as in (12-13). There is no
clear syntactic difference between locative and existential *jai'ch*. Both take stan-
dard subject marking, as in (8) and (12), and standard V-initial word order. One
possible difference is that in our data existential predications are only attested
with overt DPs. In contrast, *jai'ch* in locative contexts is attested without a DP
referring to the subject. Posture seems to have a cultural significance—in our cor-
pora women tend to be associated with sitting posture *daa*, men with standing
kɨik and we believe that *jai'ch* is possibly used here for things that are bad or
taboo (i.e. they lack posture). In our experience, mestizo doctors (12), as opposed
to Tepehuan *curanderos*, are rarely talked about, and the second reference to *an-
imales* (from Spanish 'animals') in (13) refers to animals under the influence of a
demon. Thus both apparently postureless subjects here appear to be taboo or bad,
although, we must admit that this is tentative and requires further invstatigation.

(12) *Mia'n jaich-am gui' na=m jaroi' jich-rebisar-ka'.*
close EX-3PL.SBJ DEM.DIST SUB=3PL.SBJ who 1PL.PO-check-STAT
'They [mestizo doctors] are close, the ones that check us.'
(Text_072011_PSC_GGS_elcuidadodelamujer1, 04:27)

(13) *Kuantas animales bhɨjɨdɨr ja'p kantar-im-am gio jumai bhɨjɨ ja'p*
cuántas animales DIR DIR sing-PROG-3PL.SBJ and other DIR DIR
kɨɨk gɛ́ ja'ok' kuj-im na=ø-jɨ'k jaich-am gu
stand.SG great demon roar-PROG SUB=3SG.SBJ-some EX-3PL.SBJ DET
animales bhai' ba-kujim-am.
animales DIR COMPL-roar-PROG-3PL.SBJ
'how many animals came singing...the other was standing over there, a great demon came roaring, all the animals came roaring.'
(Text003_Hipolito_los2compadres, 03:13)

Positional verbs in O'dam are generally used for locative constructions (García Salido 2017) but in (14-15) we see them used for existential meaning. Similarly, the verb *oilhia'* 'move'[6] can be used for existential meaning, as in (16).

(14) *Mi' kɨɨk ma'n gu tua bhai'=ñich ji dhaibu.*
DEM.MED stand.SG one DET tree DIR=1SG.SBJ.PFV FOC sit
'There was a tree (Lit. there stands a tree), and I climbed and sat there.'
(Text_092010_HSA_GGS_Los2compadres, 4:51)

(15) *Dai sap ja'm-ni gok am bha daraa gu u'~ub tɨ~tɨya.*
only RPRT PRT-PREC two 3PL.SBJ DIR sit.PL.SBJ DET PL~woman PL~young
'but that there were only two there (sitting), two girls' (García Salido et al. 2021)

(16) *Mi oipo-'am quince gu ja'tkam mi piesta.*
DEM.MED move.PL-3PL.SBJ quince DET people DEM.MED party
'Are there fifteen people at the party?' (Elicitation_082018_MA_ME)

Positional verbs and *oilhia'* 'move' appear to be compatible with both definite and indefinite existential and non-existential locative meanings. The determiner *gu* is underspecified for definiteness and can be pragmatically linked to (in)definiteness based on context or the appearance of certain quantifiers. Notice in (10),

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[6]This is a suppletive verb—*oilhia'* is the form for singular subjects, while *oipo* is the form for plural subjects.

reproduced below, that *gu jabook* is not referring to a definite referent, only the existence of some referent. Later in the same utterance *gu Juan* and *gu Peegro* both have definite and specific referents. For further discussion of O'dam determiners and definiteness see Everdell (2018: 25–28).

(17) *Jai'ch=aa gu jabook matai mi'-ñi   bibiatam jup-kai'ch gu   Juan*
     EX=Q   DET light   lime DEM.MED-VIS spring ITER-say   DET Juan
     pui'-ñ   dho té-kéé-ka'   na sap   jai'ch jup-kai'ch gu
     SENS-1SG.SBJ DIREV DUR-hear-STAT SUB RPRT.UI EX   ITER-say   DET
     Peegro.
     Pedro
     '"Is there lime in the spring?" Juan asked. "I have heard that there is" said
     Pedro' (Willett & Willett 2015: 76)

It is unsurprising that O'dam uses locative predicates for both locative (18-19) and existential meaning (14-16), even though it also has a separate existential predicate. The relationship between locatives and existentials has been well documented, including from a diachronic perspective (e.g. Breivik 1981, Gaeta 2013). The full set of positional verbs is shown in Table 3, because they are suppletive for number, we show their singular and plural forms.

(18) *Añ   na=ø-gu'   gui'-ñi   mu'-ñi   ja'k daa gu*
     1SG.SBJ SUB=3SG.SBJ-ADV DEM.DIST-VIS DEM.DIST-VIS DIR sit.SG DET
     dɨ'i'n.
     mother.POSSD
     'As for me, because the mother is over there (Lit. the mother sits over there).' (Text_102010_CFC_GGS_Cuandolacuranderaeraniña, 19:57)

(19) *Jum-kuidar-ka'   nai' na=m   tu-oipo.*
     MID-take.care-STAT DIR SUB=3PL.SBJ DUR-move.PL
     '(They) need to take care of themselves where they are around.'
     (Text_072011_PSC_GGS_elcuidadodelamujer1, 2:09)

The final existential strategy we find in O'dam is a copular construction with a PP or noun. Copular constructions in O'dam are formed by a copula that appears as a preclitic on the predicate expression. The element derived by the copula is treated as part of the predicate and is not treated as a syntactic object (i.e. it does not receive a coreferenced object prefix). The copula construction is limited to intransitive valency and the aspectual suffixes *-ka* 'stative' and *-t* 'imperfective'. The aspectual restriction García Salido (2014: 88ff) considers to be diagnostic of their status as non-verbal predicates.

Table 3: Positional verbs in O'dam (Everdell & García Salido 2019)

SG	PL	Meaning
kɨɨk	*guguk*	stand animate
kɨɨk	*tut*	stand inanimate
boo'	*bobuk*	lay down animate
kat	*bit*	lay down inanimate
daa	*daara*	sit
sɇ'	*sɇsɇ'*	hang

(20) *Na=p   jir=[xib-kam]-ka'.*
SUB=2SG.SBJ COP=today-from-STAT
'When you were new.' (García Salido 2014: 89)

In existential copula constructions, the nominal appears as either a bare N, as in (21), or as derived with a postposition, as in (22). The most common copula used for existential predication is *jir=*.[7]

(21) *Dhu sap   buimuk   mo bhai=r-piasta-ka' ji bhai'-ñi*
DIREV RPRT.UI tomorrow doubt DIR=COP-fiesta-STAT FOC DEM.MED-VIS
dam-dɨr na-ø-pai'=r-iskuel.
up-from SUB=3SG.SBJ-where=COP-school
'Supposedly, tomorrow there is a party up here where there is a school.'
(Text_092011_MMC_GGS_Elborrachoylamuerte, 14:46)

(22) *Para dhi   balh-cha'm pai' ja'p pai' jɨ'k na=ø*
for   DEM.PROX basket-on   where DIR where some SUB-3SG.SBJ
jir=ki~kcham.
COP=PL~house
'For those in The Basket over there where there are houses.'
(García Salido et al. 2021)

While we generally find the copula construction being used for existential predication, we see in (23-24) that it is also compatible with locative predication. The sentences below are minimally changed from (21) and (22), respectively. We use possessor prefixes to force a locative reading, because attributive possession presupposes possession and existence (Mithun 2001).

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[7]O'dam has a second copula *jix=*, which is related to temporary states, while *jir=* is used for permanent states (Martínez Córdova 2016).

(23) *cham tu' bhai ja'k **jir**=jiñ-**piasta**   jir=bhammu-ñi ja'k*
     NEG   DIR DIR COP=1SG.POSS-party COP=DIR-VIS   DIR
     *na-pai'=**r-jum-iskuel***
     SUB-where=COP-2SG.POSS-school
     'My party is not up there, it is where your school is.'
     (Elicitation_082019_WG_MSE)

(24) *Para dhi   balh-cha'm pai'   ja'p pai'   jɨ'k   na=ø*
     for   DEM.PROX basket-on   where DIR where some SUB=3SG.SBJ
     ***jir**=jiñ-**ki~kcham**.*
     COP=1SG.POSS-PL~house
     'For those in The Basket over there where my houses are.'
     (Elicitation_082019_WG_MSE)

Now that we have discussed the expression of existential predication in O'dam, we turn to negation. First we discuss standard negation strategies in §4.1, then we discuss the use of standard negation in existential predications in §4.2 and an existential negation strategy that does not have an attested positive syntactic counterpart.

4 Negation

4.1 Standard negation

Miestamo (2005: 1) defines standard negation as the negation of "declarative verbal main clauses"; in the following subsections, we show that O'dam uses the same strategy for both standard negation and existential negation. Standard negation in O'dam is marked using the particle *cham tu'* and its shortened form *cham* (García Salido 2014: 109). The two negation strategies are distinguished by the position of the particle, but both can be used for clausal or constituent negation. For clausal negation, the negative particle precedes the verb, as in (25) and (26). For constituent negation, the negation particle follows the negated elements (e.g. DPs), as in (27). The negated element in these examples in underlined. It is rare but there are a few attested examples where *cham tu'* precedes a negated element that is not a verb, like in (28-29), although this is not attested for *cham*.

(25) *Karabiñ-kɨ'n tɨi   pu=p   jiñ-ma'yasa na=ñich   cham <u>oi</u>.*
     carabine-with NRINT SENS=IT 1SG.PO-shoot SUB=1SG.SBJ NEG   go.PFV
     'With a rifle he wanted to shoot me because I did not go.'
     (Text_062011_ESS_GGS_susamores, 04:51)

(26) *Na=ø   cham tu' <u>tu=x-pasarui-dha</u>.*
SUB=3SG.SBJ NEG   DUR=COP-happen-APPL
'So that nothing happens to us.' (Text028/
Text_102010_MCC_GGS_Losmuchachosquebuscabancomida, 07:16)

(27) *Ma'nim dhu gu siman ji na=ñ   chu-bos-ka'   <u>gu</u> <u>nabat</u>*
one.time DIREV DET week FOC SUB=1SG.SBJ DUR-sweep-STAT DET mestizo
cham na=ø-jax   xia'lhi-dha'.
NEG   SUB=3SG.SBJ-how dawn-CONT
'Once a week, I sweep, but the mestiza does not, she sweeps whenever
she wakes up.' (Text_072011_PSC_GGS_elcuidadodelamujer2, 08:10)

(28) *Cham tu' <u>tu'</u>   <u>ja'tkam</u> ja'pi xi'~xbulhi-k.*
NEG   something people but PL~swirl-PNCT
'They were not human, they were swirls.'
(Text_092011_MMC_GGS_Lamujerquenopodiatenerhijos, 12:20)

(29) *Dhu ji xib ji cham tu' kabuimuk.*
DIREV FOC today FOC NEG   <u>tomorrow</u>
'Well today, not tomorrow.' (Text_092011_Varios_GGS_pláticaenlacocina,
05:05)

In addition to clauses and noun phrases, *cham* and *cham tu'* are used to negate
directionals and demonstratives (30) and pronouns (31-32).

(30) *gu chiatnarak ach   <u>ya'</u>   cham ji*
DET Teneraca 1PL.SBJ DEM.PROX NEG   FOC
'The people from Teneraca, as for us, not (the ones from) here.'
(Text_082011_CRG_GGS_Conquistarmujer, 00:12)

(31) <u>Ach</u>   *cham na=ch   jir=o'dam   na=ch-gu'   jix=momgon-ka'*
1PL.SBJ NEG   SUB=1PL.SBJ COP=O'dam SUB=1PL.SBJ-ADV COP=tired-STAT
'We do not, the O'dam people, because we are always tired.'
(Text_072011_PSC_GGS_elcuidadodelamujer2, 08:34)

(32) *Añ   ubii ya'   ai-ch-dha   jumai' cham tu' <u>ap</u>.*
1SG.SBJ woman DEM.PROX arrive-CAUS-APPL another NEG   2SG.SBJ
'I am going to bring another woman and not you.'
(Text045_102010_CFC_GGS_Cuandolacuranderaeraniña, 21:18)

Finally, when negating a dependent clause, *cham* appears inside of the dependent clause but still precedes the verb, as in (33), while *cham tu'* always immediately precedes the subordinator (34).

(33) *no'=ñ*   *git jir=alhii-ka'*   *cham bhammuk-da'-iñ*   *git gio*
       COND=1SG.SBJ SUBJ COP=little-STAT NEG   angry-CONT-1SG.SBJ SUBJ COORD

       [*na=ñ*   *cham jiñ-lokiar-da'*]
       SUB=1SG.SBJ NEG   1SG.MID-crazy-CONT

       'If I were a child, I could not be able to get angry or get crazy.'
       (Text_092010_MSM_GGS_Lavidatepehuana)

(34) *Jix=kako'k-ka'-am*   *cham tu' na=m*   *tu'*
       COP=sick-STAT-3PL.SBJ NEG   SUB=3PL.SBJ something

       jix=kɨkɨ'-ka'-am.
       COP=healthy-STAT-3PL.SBJ

       'They are ill, they are not in good health.'
       (Text_072011_PSC_GGS_elcuidadodelamujer2, 13:42)

Beyond positional differences, it is not clear what the differences in usage are between *cham* and *cham tu'*. The former may be somewhat more emphatic because García Salido (2014: 136–140) finds that negative commands are only formed with *cham + ap* '2SG.SBJ', as in (35). However, we do not have clear evidence that emphaticness distinguishes the two negators otherwise.

(35) a. *gio   sap   bhai'=p ka-xi-juu **cha=p**   dhu=ñ*
          COORD RPRT.UI DIR=ITER PRF-IMP-eat NEG=2SG.SBJ EVID=1SG.SBJ

          kua'da' jiñ-jaduñ   ja'p sap   kai'ch
          eat-CONT 1SG.POSS-brother DIR RPRT.UI say.PFV

          'And he ate again, do not eat me brother, he said.'
          (Text_072011_PSC_GGS_Gokbhabomkox, 28:59)

       b. ***Cha'=p***   *ñiok-da'   tɨɨ   gu-m-taat*
          NEG=2SG.SBJ speak-CONT NRINT DET-2SG.POSS-father

          na=t-jax   dhoda
          SUB=3SG.SBJ.PFV-how do.something.to.person

          'Shut up, you do not know what he did to your father.'
          (Text_092010_HSA_GGS_Elcuento, 04:28)

4.2 Existential negation

In terms of the negative existential cycle, O'dam is a Type A language, where standard negation strategies are used for existential constructions. Notice in (36-

39) *jai'ch* is negated by an immediately preceding negation particle and that the negation strategy is the same regardless of whether the existential occurs in a matrix clause (36-37) or a subordinate clause (38-39). It seems that singular nouns are only used to negate the existence of a singular referent (e.g. the demon), while plural nouns are used to negate the existence of sets (e.g. women, plants). This appears to contrast with O'dam treatment of mass nouns, which are morphosyntactically singular but may have individuated units.[8]

(36) *Bajɨk   dɨr cham tu' jaich-ka' dhu.*
before DIR NEG   EX-STAT DIREV
'That did not exist before.' (Text007/
Text_092010_MSM_GGS_Lavidatepehuana, 11:03)

(37) *Cham jai'ch-am-a'   ba' gu   u'~ub.*
NEG   EX-3PL.SBJ-IRR SEQ DET PL~woman
'Then there are no women (and there will be no women).'
(Text_082011_MMC-MRS_GGS_Conversación, 00:52)

(38) *Ji   chu'ul pu   jii   na=ø-jax   cham ka-jaich xib   gu   ji*
FOC demon SENS go.PFV SUB=3SG.SBJ-how NEG   PRF-EX   today DET FOC
chu'ul.
demon
'The demon went and since then there hasn't been a demon.' (Text013/
Text_092010_HSA_GGS_Elcuento, 07:15)

(39) *Gɛ́' giotɨr pai'   na=ø   cham jai'ch gu   u'~ux.*
Big Plains where SUB=3SG.SBJ NEG   EX   DET PL~plant
'Llano Grande where there are no plants.' (Text_082011_MMC_GGS_La
estrelladelamañana3, 05:47)

Standard negation strategies are also used for existential constructions where the predicate element is other than *jai'ch*. In (40-41), the standard negation strategy is used for the copular existential construction in a subordinate and main clause, respectively.

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[8]For example, tortillas, potatoes and apples are all mass nouns in O'dam but Everdell & Denlinger (2019) find that they can trigger plural state marking on resultatives and statives.

(40) *Mi=ñ*   *jodero no=ñ*   *jim na=Ø*   *cham pai'*
DEM.MED=1SG.SBJ fuck   COND=1SG.SBJ go SUB=3SG.SBJ NEG place
jir=kɨ~kcham   *ja'p sap*   *tɨtda.*
COP=PL~house DIR RPRT.UI say
'He's going to fuck me if I walk around where there are no people, he
said.' (lit. if I walk around in the place where there are no houses)
(Text028_102010_MCC_GGS_Losmuchachosquebuscabancomida, 05:43)

(41) *Cham tu' pɨk mi'*   *jap jir=bailes-ka'*   *mi'*   *ja'p pai'*
NEG   PRT DEM.MED DIR COP=dances-STAT DEM.MED DIR where
dhi'   *juktɨr.*
DEM.PROX Santa_María_de_Ocotán
'Now there are no dances in Santa María de Ocotán.'
(Text007_092010_MSM_GGS_Lavidatepehuana, 19:10)

While constituent negation is well attested in non-existential contexts, in existential constructions we have no attested cases of postverbal constituent negation. Instead, apparently constituent negation must take place before the verb, as in (42) where the demonstrative *ya'* is negated. In (43) and (44) we see examples of negation of preverbal indefinite pronouns, where DPs cannot appear.

(42) *Na=ø-gu'*   *ya'*   *cham pai' jaich gu tu'*   *na=ñ*
SUB=3G.SBJ-ADV DEM.PROX NEG place EX   DET something SUB=1SG.SBJ
chu-tan-da-'   *na-ñ*   *chu-kua-da-'.*
DUR-buy-CONT-IRR SUB=1SG.SBJ DUR-eat-CONT-IRR
'Because this here is not what I'm going to buy to eat.'
(Text005_092010_TSC_GGS_Guasak, 05:56)

(43) *Cham jaroi'*   *bha=jim.*
NEG   someone DIR=go
'Nobody is coming.' (Elicitation_082018_MA_ME)

(44) *Cham tu'*   *nɨi'ñ-iñ.*
NEG   something see-1SG.SBJ
'I do not see anything.' (Elicitation_082018_MA_ME)

We only find examples of non-clausal negation of indefinite pronouns (no + somebody, no + thing, etc.) in existential constructions; we have no examples of negated preverbal subject pronouns. Thus, in O'dam clausal negation appears to rely on the definiteness of the verbal arguments. We show indefinite existential

negation through the clausal negation strategy in (45-46). In both examples, the subordinate clauses expressing the negated referent use the indefinite pronouns *tu'* 'something' and *jaroi'* 'someone', respectively.

(45)   *Cham jai'ch-ka' na=m   tu'   jugia'.*
    NEG   EX-STAT   SUB=3PL.SBJ something eat

    'There was nothing to eat.' (Text_072011_PSC_GGS_elcuidadodelamujer1, 9:40)

(46)   *Na=ø-gu'   sap   cham jai'ch-ka' na=ñ   tu-tɨka-'.*
    SUB=3SG.SBJ-ADV RPRT.UI NEG   EX-STAT   SUB=1SG.SBJ DUR-cover-IRR

    'Because there was nothing to cover me with.'
    (Text_102010_PSC_GGS_Lavidademiesposo, 43:00)

It may be that existential constructions in O'dam entirely disallow postverbal constituent negation or that it is simply unattested. Our findings for O'dam (negative) indefinite pronouns align with typological work showing that negative/negated indefinite pronouns can often function as direct negation markers (Haspelmath 1997, Veselinova 2013, Van Alsenoy 2014). At this point, we do not find any difference in the use of negated *jai'ch* + INDEFINITE PRONOUN versus a negated indefinite pronoun, unlike in Swedish (Bordal 2017). However, our current corpus is relatively small so we do not discount statistical tendencies.

In addition to the use of standard negation on attested existential construction types, we also find several cases where a negative existential meaning arises out of a construction that is not attested in positive existential contexts. The verb *maax* 'see, notice' can express an existential meaning when negated. In (47), *maax* is being used to express that there are no footprints but speakers report that the footprints discussed in the sentence are not visible because they do not exist.[9] However, in positive contexts like (48a) and some negative contexts like (48b), the verb expresses visibility rather than existence.

(47)   *Na=m-gu'   cham maax.*
    SUB=3PL.SBJ-ADV NEG   see

    'Because there are no footprints.'
    (Text_092011_MMC_GGS_elseñorqueperdiósusanimales1, 03:49)

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[9]Our consultants report that (48b) is quite odd if followed up with something like (i) that contradicts the existential negation meaning of the original sentence.

  (i)   *...pero mi=x   jai'ch-am*
     ...pero DEM.MED=COP EX-3PL.SBJ

     'but they are there.'

(48) a. *Ya   ja'p bak buus gu jaroi'   na ba' gamai'-ñi pɨx maax*
           DEM.PROX DIR INFR pass DET someone SUB SEQ DIR-VIS   MIR see
           bɨix   a'nsap.
           along descent
           'It seems that some people passed by here, you can see the tracks on
           the descent.' (Willett & Willett 2015: 120)

      b. *Moo   ja'p cham maax jia   na=ø-jax   dhuu-ka-t*
           doubt DIR NEG   see   RET SUB=3SG.SBJ-how rain-EST-IPFV
           tu-iipuñi-dha'   sia na=r   tu'.
           DUR-grow-CONT EXPS SUB=COP something
           'See how you cannot tell when the plants are sprouting.' (Willett &
           Willett 2015: 120)

In (49-50) we see two cases where the negated existential construction is ex-
pressed through zero-derived denominal verbs, *juuk* 'pine' and *busiñ* 'pass', re-
spectively. This construction type is, thus far, unattested for positive existential
meanings but is attested in negative predicative possession constructions, as in
(51).

(49) *Cham tu' pɨk mo   ka-juku-'*
       NEG   PRT doubt PRF-pine-IRR
       'Then there are probably almost no pines.'
       (Text007_092010_MSM_GGS_Lavidatepehuana, 10:17)

(50) *Cham tu' ka-busiñ.*
       NEG   PRF-pass
       'There is no pass.' (Text_092011_Varios_GGS_Platica, 05:31)

(51) *Gu jax dhui na=ø-gu'   cham tu' bu~pui-ka-t   jia.*
       DET how DIREV SUB=3SG.SBJ-ADV NEG   PL~eye-EST-IPFV RET
       'Well, as he did not have eyes, right?'
       (Text_092010_HSA_GGS_Los2compadres, 4:08)

In addition to overt negation, there appear to be attested cases where the nega-
tive sense is expressed, but there is no overt marker. This comes across with the
adverb *ampɨx* 'only' and the verb *jugia'* 'finish' (52-54). There does not appear to
be a similar construction for positive contexts so that this construction appears
to be restricted to negative meaning when used in existential contexts. However,
this structure is attested outside of existential contexts, where *ampɨx* appears to
add the meaning that 'everything' will be finished, as in (54).

(52) *Ampɨx chu-ju' mi' sudai-chɨr apim chi-jix=bhio' ji ja'p*
only DUR-finish DIR water-of 2PL.SBJ DUR-COP=hungry FOC DIR
sap kai'ch.
RPRT.UI say
'There is nothing in the water, you all will be hungry, he says.'
(Text033_102010_TMR_GGS_Los3hermanos1parte, 03:26)

(53) *Nai' sap ba' pɨx ampɨx ba-tu-ju'.*
DIR RPRT.UI SEQ MIR only COMPL-DUR-finish
'So there's nothing there.' (Text_072011_PSC_GGS_Gokbhabomkox,
08:50)

(54) *Gio na=ø ba=r-taabhak-ka' ampɨx ji chu-m-jugia'.*
COORD SUB=3SG.SBJ COMPL=COP-rain-STAT only FOC DUR-MID-finish
'And when it does not rain (Lit. when rain is done), everything ends.'
(Text_072011_LRF_GGS_Lahistoriadelasmujeres1, 00:28)

Now that we have discussed existential negation in O'dam, we turn to standard and existential negation in several Southern Uto-Aztecan languages.

5 Existential Negation in Southern Uto-Aztecan

O'dam is on the Tepiman branch of Uto-Aztecan, which is a subgroup of the Southern Uto-Aztecan branch (a full tree is shown in the Appendix). Northern Tepehuan is a Tepiman language spoken in Chihuahua and Northern Durango. It appears to be a Type B language where there are distinct strategies for standard and existential negation. Standard negation is indicated through the negative particle *mai* and the negative adverbial *tomali*, as shown in (55-56). As we discuss in §6, it is plausible that *mai* is cognate with the /m/ in O'dam *cham*.

(55) *Mai áágai aánɨ góóvai áágai aánɨ ɨgáa.*
NEG want 1SG.SBJ DEM want 1SG.SBJ other
'I do not want those, I want the others.' (Bascom 2003: 26)

(56) *Tomali ɨmóóko go-ááli mai maátɨ ñioókai oobáí-kɨ-dɨ.*
not one DET-children NEG know speak spanish-VBLZ-NMLZ
'None of those children can speak Spanish.' (Bascom 2003: 32)

Existential negation is indicated by the negative existential *tiípu(ka)*, shown in (57-58). The negative existential is apparently compatible with the negative particle *mai*, as shown in (59), although it is not clear if the construction in (59) is used for emphasis.

(57) *Tiipúka maáxi óodami kiiyɨrɨ.*
      NEG.EX seem person house.inside
      'There seems to be nobody in the house.' (Bascom & Molina 1998: 264)

(58) *Alí ɨɨpídi oidígi vai tiípu kuáági ixtumá naadá-gi dai*
      very cold   weather CNJ NEG.EX wood   thing make.fire-IRR CNJ
      gɨr-uukáda-gi.
      1PL.OBJ-warm-IRR
      'It's very cold and there is no wood to put in the fire to warm us.' (Bascom & Molina 1998: 264)

(59) *Tɨɨ aánɨ ɨmó alí   sáívuli ɨmó uuxí-ána dai ka   mai tiípu*
      find 1SG.SBJ one small hive   one tree-in   CNJ already NEG NEG.EX
      dɨɨ~dídɨ .
      PL~bee
      'I found a little hive in a tree and there were no more bees.' (Bascom & Molina 1998: 15)

Bascom (1982) finds that positive existential predications in Northern Tepehuan are either expressed through juxtaposition (noun-noun, noun-pronoun, question word-noun, adjective-noun, or quantifier-noun), as in (60), or through the verb *oid^yága*, as in (61). Based on Bascom (1982)'s brief discussion, Northern Tepehuan may separate locative from existential predications. Bascom (1982) does not list examples of locative predications with the juxtaposition or the existential verb strategy. Instead, Bascom (1982) only gives examples of locative predications with positional verbs.

(60) a. *Múí-d^yu   kií~ki.*
         many-some PL~house
         'There are many houses.' (Bascom 1982: 281)
      b. *Ši=ɨɨ́ki-du-ka-tadai*
         Q=how.many-QUANT-STAT-PST.CONT
         'How many were there?' (Bascom 1982: 282)

(61) a. *Oid^yága múí-d^y   kií~ki.*
          there.are many-some PL~house
          'There are many houses.' (Bascom 1982: 282)

The positive existential predicate *oid^yága* is related to O'dam *oilhia'* 'move'. The Northern Tepehuan form is from Proto-Tepiman **oida* 'to follow', while the O'dam form is from the related form **oimɨrai* 'to walk about' (Hill 2014). Bascom (1982: 281) notes that the positive existential *oid^yága* can co-occur with the standard negation particle *mai*. However, he does not offer examples nor does he explain possible differences between the negative existential *tiipú(ka)* and *mai + oid^yága*.

Pima Bajo, a Tepiman language spoken in Sonora, appears to be a Type A language. Estrada Fernández (2014: 149) finds that Pima Bajo has two suppletive existential forms that are probably historically related: one for existential predicates of plural or mass entities (62) and another for singular existential predicates (63). In addition, Estrada Fernández (2014: 154) lists several other verbs used for existential meaning: *maasi* 'seem, be, exist', *tu'ig* 'stay', and *is* 'be'.

(62) *I'i si'ik   amig.*
      LOC PL~deer exist.PL
      'Here, there are deer.' (Estrada Fernández 2014: 149)

(63) *Ai-m   kii   in-ki-ga.*
      exist.SG-CONT house 1SG.NSBJ-house-AL
      'My house is that.' (lit. 'There is a house, my house.') (Estrada Fernández 2014: 150)

Standard negation in Pima Bajo is expressed by means of the negative particle *im* (64-65) or by the emphatic negative particle *kova* (66), both in preverbal position (Estrada Fernández 2014).

(64) *Im   hɨɨp.*
      NEG cold
      'There is no cold.' (Estrada Fernández 2014: 162)

(65) *Tia im gɨɨs-im.*
      hail NEG fall-CONT
      'It is not hailing.' (Estrada Fernández 2014: 163)

(66) *Kova-in   gɨɨg-ia uus-kar ha'a.*
      NEG.EMPH-IMP hit-PROB stick-INS pot
      'Do not hit the pot with the stick!' (Estrada Fernández 2014: 132)

Standard negation is also used for existential predications (Estrada Fernández 2014: 155). Notice in (67) that the standard negation marker *im* is used so that existential negation is accomplished through the same means as standard negation.

(67) *As hɨgi im maasi ɨrav kuid-am.*
RPRT 3SG.SBJ NEG seem inside below-LOC
'He said there does not seem to be anything down in there.'
(Estrada Fernández 2014: 155)

Cora, a Corachol language spoken in Nayarit immediately to the south of O'dam, appears to be a Type B language. It uses the particle *ka* to express standard negation (68). This particle usually appears in first position in the clause and is followed by second position enclitics that encode subject (Vázquez Soto, p.c.).

(68) *ɨ́ Juan, ka pu wa-mɨ́'ɨ*
DET John NEG s3SG COMPL-die.SGS
'As for John, he did not die.' (Vázquez Soto 2001: 201)

Cora differentiates between a positive (69) existential copula[10] that suppletes for number and a negative existential copula that does not supplete (70). The standard negation particle *ka* is also apparently obligatory in negative existential constructions.

(69) *hó'u-ni h-é'en   tátsi'u?*
LOC-INTER 3SG.SBJ.ANIM-COP.EX.SG rabbit
'Where is the rabbit?' (Vázquez Soto 2013: 139)

(70) *ká=pu mé'e   pá'arih Chimaltita*
NEG=3SBJ COP.EX.NEG child   Chimaltita
'There are no children in Chimaltita.' (Vázquez Soto 2013: 165)

A verb of posture can co-occur with the existential copula in Cora, as in (71), however, it is unclear whether this co-occurrence is possible with indefinite subjects, see (Vázquez Soto 2013: 180ff).

(71) *Núh náimi'i ma-tíh   mána'a   pwá'ame*
EVID all   3PL.SBJ-SUB 3PL.SBJ.EMPH COP.EX.PL
wi-ráa-uu.
ADH:hole-inside-be.standing.PL
'They say that all of them are inside.' (Vázquez Soto 2013: 181)

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[10]Vázquez Soto (2013) shows that Cora can use the existential copula for locative constructions of definite referents, especially in questions.

Vázquez Soto (2013: 181) argues that in the case of negative locative descriptions of the existential type the postural verb is ungrammatical, as in (72). Instead only the negative existential copula may be used, as in (73). Thus, it seems that all negative existential constructions in Cora require both the standard negator *ka* and the negative existential copula *mé'e*.

(72) * *Ká=pu*   *wa-tá-ka*   *tuíixu kuráh-ta'a.*
        NEG=3SG.SBJ.ANIM COMPL.EXT-SUP-sit.SG pig   barnyard-LOC
        Intended meaning: 'There is not a pig in the corral.' (Vázquez Soto 2013:
        181)

(73)   *Ká=pu*   *mé'e*   *tuíixu kuráh-ta'a.*
        NEG=3SG.SBJ COP.EX.NEG pig   barnyard-LOC
        'There is not a pig in the corral.' (Vázquez Soto 2013: 181)

Huichol, a Corachol language spoken in Nayarit just to the south of O'dam, appears to be a Type B language where a separate negative existential verb *mawe* is used for existential negation,[11] compare (74) and (75).

(74)   *Kwiniya waniu mu-xuawe.*
        disease   INDIR AS2-EX
        '...there are diseases...' (Bierge 2017: 112)

(75)   *kumu ne-maine   hepaɨ 'ukara-tsi pu-mawe-kai*
        how 1SG.SBJ-say how   woman-PL AS1-NEG.EX-IPFV
        '...as I'm saying, there were no women...' (Bierge 2017: 114)

Unlike in the closely related Cora, in Huichol the negative existential apparently does not co-occur with the standard negation prefix *ka-*, as in (76). However, the negative existential *mawe* can alternate with the standard negation prefix plus existential *xuawe*, as shown in (77). Bierge (2017: 115) notes that the *ka- + xuawe* construction is less frequently used than the negative existential *mawe* and it is probably borrowed from Spanish *no + existir*. We tentatively do not consider Huichol to be intermediate between Type A and B, because the Type A strategy seems to be so marginal.

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[11]The phonological and functional similarities between Northern Tepehuan *mai*, Cora *mé'e*, and Huichol *mawe* are such that they may be cognate, although we hesitate to make a more definitive claim here because the exact vowel correspondences and the correspondence between Cora /'/ and Huichol /w/ are not otherwise attested (Stubbs 2011).

(76) *nee=ri*   *kwatsie 'a-hetsie ne-p-e-tanua-ni*   *'a-papa*
      1SG=already AFF   2SG-in 1SG.SBJ-AS1-EXT-defend-FUT 2SG-father
      '...I'll defend you from your dad'
      ***ka**-metsi-he-ku-waya-ni=ri*
      NEG-2SG.NSBJ-EXT-SP-hit-FUT=already
      'so that he does not hit you anymore...' (Bierge 2017: 54)

(77) *ne-kie*   *teɨteri me-kwa-xuawe-kai*
      1SG-house people 3PL.SBJ-NEG-EX-IPFV
      'There were no people at home.' (Bierge 2017: 115)

Finally, Guarijío, a Taracahitan language located in the West Sierra Madre Mountains in Chihuahua and the border of Sonora, also appears to be a type A ~ B language. For existential negation, speakers can choose to use a standard negation strategy with the positive existential predicate, Type A, or use a dedicated negative existential predicate without the standard negator, Type B. For standard negation Guarijío uses the clitic *ki=*, which apparently attaches to the negated element (78-79).

(78) *Ki=tara-rú=ne*   *munní.*
      NEG=buy-PFV.EVID=1SG.SBJ beans
      'I didn't buy beans.' (Félix Armendáriz 2006: 192)

(79) *Ki=amó*   *tara-ké-ru=ne*   *munní.*
      NEG=2SG.NSBJ buy-APPL-PFV.EVID=1SG.SBJ beans
      'I didn't buy beans for you.' (Félix Armendáriz 2006: 193)

The positive existential *maní* (80) contrasts with the negative existential verb *ki'te*, as in (81). However, the standard negation particle can also attach to the positive existential marker, as in (82). Félix Armendáriz (2006) makes no comment on the different uses of the dedicated negative existential versus the negated positive existential.

(80) *Maní munní.*
      EX   beans
      'There are beans.' (Félix Armendáriz 2006: 191)

(81) *Ki'té*   *munní.*
      NEG.EX beans
      'There are no beans.' (Félix Armendáriz 2006: 192)

Table 4: Negation strategies among Southern Uto-Aztecan languages

Language (branch)	SN	NegEx	Source
O'dam (Tepiman)	*cham(tu')*	*cham(tu')*	
Northern (Tepiman) Tepehuan	*mai, tomali*	*tiípu(ka)*	Bascom (2003)
Pima Bajo (Tepiman)	*im, kova*	*im, kova*?	Estrada Fernández (2014)
Cora (Corachol)	*ka*	*ka + mé'e*	Vázquez Soto (2013)
Huichol (Corachol)	*ka-*	*mawe*, or *ka + xuawe*	Bierge (2017)
Guarijío (Taracahitan)	*ki=*	*ki'té* or *ki=maní*	Félix Armendáriz (2006)

(82) *Ki=maní-re   nerói.*
      NEG=EX-PFV water
      'There is no water.' (Félix Armendáriz 2006: 115)

In light of the other negation elements in Guarijío (*kái* 'negative answer', *katé* 'negative imperative'), it seems likely that the negative existential *ki'té* consists of a fossilized form of the negation particle *ki=* that fused with some element *té*, although we do not discount the possibility that *ki=* is a reduction of *ki'té*.

To summarize the discussions here, we present the standard and existential negation strategies in our sample of Southern Uto-Aztecan languages in Table 4.

Now that we have discussed the existential negation types in a sample of Southern Uto-Aztecan languages, we take a historical view and posit a developmental path for existential and standard negation in O'dam.

6 A possible pathway of change

Southern Uto-Aztecan languages in general seem to be Type B languages, where existential constructions are negated by a special strategy. The exceptions are O'dam and Pima Bajo, which are both Type A, where standard negation is used in all cases, and Guarijío, which seems to be both Type A and B. In the standard and existential negation strategies in Table 4 we find a significant amount of

replacement and change. This suggests that in Southern Uto-Aztecan languages, the development of standard and existential negation occurs along quite different paths. Especially in Tepiman languages (O'dam, Northern Tepehuan, Pima Bajo), both existential and standard negation appear to be highly susceptible to change, but their change cannot obviously be linked in any way.

Langacker (1977: 32–33) reconstructs **ka* as the Proto Uto-Aztecan basic negative morpheme. Across Southern Uto-Aztecan, Tepiman appears to be unique in lacking reflexes of **ka*.[12] All of the non-Tepiman languages discussed in this chapter maintain a reflex of the particle, summarized in Table 4. Aztecan languages, which form a subgroup with Corachol, appear to use cognates of Classical Nahuatl *a'mo* (Launey 1981) for standard negation and express existential negation through negated indefinite pronouns.[13] Hill (2014) and Langacker (1977) say that *a'mo* is a reflex of the aforementioned Proto Uto-Aztecan **ka*. Pima Bajo is possibly the only Tepiman language that maintains **ka* in its negative emphatic marker *kova*, which is likely derived from a combination of the basic negator **ka* plus **pa*, which Langacker (1977: 32) reconstructs as an emphatic affirmative.

Looking to Northern Tepehuan, *mai*, if **tia=mai* was a negative Proto-Tepehuan construction, then *cham* would be the expected reflex if O'dam speakers froze the full construction and Northern Tepehuan speakers only maintained the ending *mai*. The initial consonant [ch] appears in O'dam due to palatalization when /t/ is immediately adjacent to /i/ and the Southwestern Tepehuan negation particle *jiam*, suggests that **i* in the Proto-Tepehuan form followed the initial **t*. O'dam would have then placed stress on the initial syllable and deleted the final diphthong (Willett 1982).

Langacker (1977: 33) reconstructs ****ta* as a Proto Uto-Aztecan emphatic particle that gained its negative meaning through its common use in negative expressions. This could be the source of the **tia* element in the possible Proto-Tepehuan construction, however it does not explain the high vowel. A possible source for the high vowel lies in Pima Bajo *im*, which suggests there could have been a Proto-Tepiman construction ***ta-imai*. It is then possible that Proto-Tepehuan or Southern Tepehuan metathesized the diphthong in the initial syllable, however, such ***ai > ia* metathesis is otherwise unattested in O'dam reflexes so this seems unlikely. Additionally, ***imai* does not have a clear source as we do not find negative or emphatic morphemes in other Uto-Aztecan languages with a similar phonological shape. The possible pathway of developments is shown in

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[12]This includes the Tepiman language Tohono O'odham, which uses the negation particle *pi*.

[13]See Hausteca Nahuatl (Beller & Beller 1979), Mecayapan Nahuatl (Wolgemuth 2002), Michoacán Nahuatl (Sischo 1979), North Puebla Nahuatl (Brockway 1979), Tetelcingo Nahuatl (Tuggy 1979), Tlaxcala Nahuatl (Flores Nájera 2019), and Pipil (Campbell 1985)

***ta* >	***ta-imai* >	**tia-mai* >	*cham*
NEG.EMPH	NEG-??	NEG-NEG?	NEG
Proto Uto-Aztecan	Proto-Tepiman	Proto-(Southern) Tepehuan	O'dam

Figure 1: Possible development of O'dam *cham*

Figure 1, however without an in-depth look at negative and emphatic particles (beyond the scope of this chapter), we can only speculate on the origins of O'dam *cham.*

Hill (2014) finds that the Proto Uto-Aztecan negator **ka* was maintained in all subgroups as a negation marker, except Tepiman, which entirely lacks reflexes of the form. In contrast with the rest of Uto-Aztecan, it seems that Tepiman has undergone quite a bit of innovation specific to the standard negation particles. We can only speculate on the origins of the Tepiman negation particles. The possible proto-form **imai* is not attested in any other parts of the family and is only weakly constructible based on present evidence. Moreover, the Tohono O'odham negation particle *pi* is not obviously connected to any elements in any other Uto-Aztecan language.[14]

O'dam also uniquely innovated the negation particle *cham tu'*. This particle almost certainly developed from the combination of the basic negator *cham* plus the indefinite pronoun *tu'* 'something'. While *tu'* seems to most often pronominalize nouns, it also seems to be able to have an irrealis non-specific function with dependent clauses, a property not unique to O'dam (Haspelmath 1997). In (83), *tu'* is the head of the bracketed subordinate clauses and essentially makes their meaning irrealis and non-specific. This structure mirrors that of standard externally headed relative clauses, shown in (84), where the head immediately precedes the subordinator (García Salido; submitted).

(83) a. *Tu'   na pix ba-ñ-pasaru-'.*
        something SUB MIR COMPL-1SG.PO-pass-IRR
        'Something is going to happen to me.'
        (Text_092010_MSM_GGS_Lavidatepehuana, 27:32)

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[14]While it is possible that it developed out of a compound of the Proto Uto-Aztecan emphatic negator ***pa* and our Proto-Tepiman **imai*, we seriously doubt this. First, Proto Uto-Aztecan ***p* became **v* in Proto-Tepiman, so that we would expect *vi* rather than *pi*. Second, **pa=imai* would have had to lose its final CV segment and completely assimilate /a/ > /i/. While final vowel devoicing and deletion is almost a universal Tepiman process, deletion of final consonants, or full CV segments, is not attested in Tepiman, let alone Tohono O'odham.

b. *Ɉiñ-alhii-chu-k   dhi'   tu'   [na=ø   pɨx*
1SG.POSS-boy-CAUS-PNCT DEM.PROX something SUB=3SG.SBJ MIR

pasar-ka']   ora mui' chumiñ-kɨ'n na=ñ   ba-dependero'.
happen-STAT now a.lot money-with SUB=1SG.SBJ COMPL-depend

'Something is going to happen to my son, now with a lot of money, I help him.' (Text_102010_CFC_GGS_Lacostumbre, 02:11)

(84) *Gu chi~chio'ñ* [*na=m   ba-nab-dhi-po'*].
DET PL~man   SUB=3PL.SBJ COMPL-hunt-APPL-MOV

'The men who are going to hunt.' (Text004/
Text_092010_TSC_GGS_Elxiotahl, 00:31)

Through frequent collocation, *cham + tu'* would become a frozen NEG + 'indefinite head' construction. We must caution that the modern particle *cham tu'* differs in many ways from its plausible previous life as a negated external relative clause head construction. It can be used in realis and specific contexts, (85) and currently we do not know of any semantic constraints that *cham tu'* places on the negated element that would follow from it being a relative clause head. As discussed in §4.1, *cham* can only precede negated verbs (clausal negation) and must follow all other negated constituents. In addition, it must occur inside of negated dependent clauses. Conversely, *cham tu'* can precede negated verbs and constituents and occurs outside of dependent clauses. Thus, the position of the particle follows from its development from an external relative clause head.

(85) *Añ   ubii   ya' ai-ch-dha'   jumai'* **cham tu'** *ap*.
1SG.SBJ woman DIR arrive-CAUS-APPL another NEG   2SG.SBJ

'As for me, I am going to bring another woman (for me), not you.'
(Text_102010_CFC_GGS_Cuandolacuranderaeraniña, 21:17)

It seems that Tepiman languages as a whole, including O'dam, are particularly prone to elaborating and replacing negative particles within the Uto-Aztecan family. It is not clear whether the O'dam and Tepiman forms were taken from common sources (e.g. emphatic negative particles) or whether they were simply innovated separately. However, the key point is that the development of standard negation in O'dam, and Tepiman more widely, is unconnected to existential negation.

Turning to existential predication in Southern Uto-Aztecan, we find that there is quite a bit of evidence for the (re-)emergence of negative existentials. In Table 5 we show the dedicated positive and negative existential predicates in each language in our sample. To our knowledge none of the forms are cognate with

each other, and they do not appear to be reflexes of attested Proto Uto-Aztecan cognates.

Table 5: Positive and negative existential predicates in our Southern Uto-Aztecan sample

Language	PositiveEX	NegativeEX
O'dam	*jai'ch*	*cham (tu') + jai'ch*
Northern Tepehuan	*oidʸága*	(mai +) tiípu(ka)
Pima Bajo	*ai* SG *amig* PL	*im/kova? + ai/amig*
Cora	*é'en* SG *pwá'ame* PL	(*ka* +) *mé'e*
Huichol	*xuawe*	*mawe*
Guarijío	*maní*	*ki'té* or *ki=maní*

We see that the Corachol subgroup (Cora, Huichol) seems to have derived their positive and negative existentials from a common source, or possibly one from the other. However, it is unclear where this source would be or what the origin of the /m/ initial segment is. The possible Proto-Tepiman *imai* seems an unlikely source because it is unattested in Corachol and truncation of /imai/ > /m/ would be otherwise unattested in Corachol.

The negative existential in Northern Tepehuan and Guarijío are completely unrelated to their positive counterpart. Most of the languages allow the negative marker to co-occur with either the positive or negative existential, and this is obligatory in O'dam and Pima Bajo. However, Guarijío is the only language that has plausible evidence for evolutionary interaction of standard and existential negation, because the /ki/ segment of *ki'té* could plausibly be from the standard negation clitic. All others do not show any obvious reflex of the standard negation particle in the positive or negative existential forms. Thus, while we do not know the source of the negative, or positive, existential predicates in Southern Uto-Aztecan, only Guarijío seems to have any evolutionary interaction between standard and existential negation.

7 Conclusion

This chapter described the strategies that O'dam employs to express existential meaning and their negation. O'dam uses several types of constructions to express positive existential meaning; these include the non-verbal predicate *jai'ch*, locative positional constructions and a copular construction. We also described standard negation, which is accomplished through the use of two particles *cham* and *cham tu'* that are used for both clausal and constituent negation. O'dam is a Type A language because it uses standard negation strategies to negate existential constructions. Clausal negation seems to be preferred for existential negation and we find no attested cases of postverbal constituent negation. The apparent exception to O'dam's Type A status is the use of *ampïx* + 'finish', which does not appear with any overtly negative elements and seems limited to 'there is nothing'. Finally, we discuss the place of other Southern Uto-Aztecan languages in the existential negation cycle, most of which appear to be Type B. O'dam and Pima Bajo appear to be unique as Type A languages. Standard negation particles and existential negators seem to be commonly replaced and emergent, especially in Tepiman. Thus, it seems that standard and existential negation in the history of O'dam, and likely Southern Uto-Aztecan, have not played roles in each other's development and evolution.

Abbreviations

ADV	adverbializer	COND	conditional
AFF	affirmative	CONT	continuative
AL	alienable	COORD	coordinator
ANIM	animate	COP	copula
APPL	applicative	DIR	directional
AS1	primary assertion	DUR	durative
AS2	secondary assertion	EMPH	emphatic
DEM.PROX	demonstrative proximal	EVID	evidential
DEM.DIST	demonstrative distal	EX	affirmative existential
DEM.MED	demonstrative medial	EXPS	expository
DIREV	direct evidential	EXT	extension
DET	determiner	FOC	focus
DUR	durative	FUT	future
CAUS	causative	IMP	imperative
CNJ	conjunction	INDIR	indirect evidential
COMPL	completive	INFR	inferential
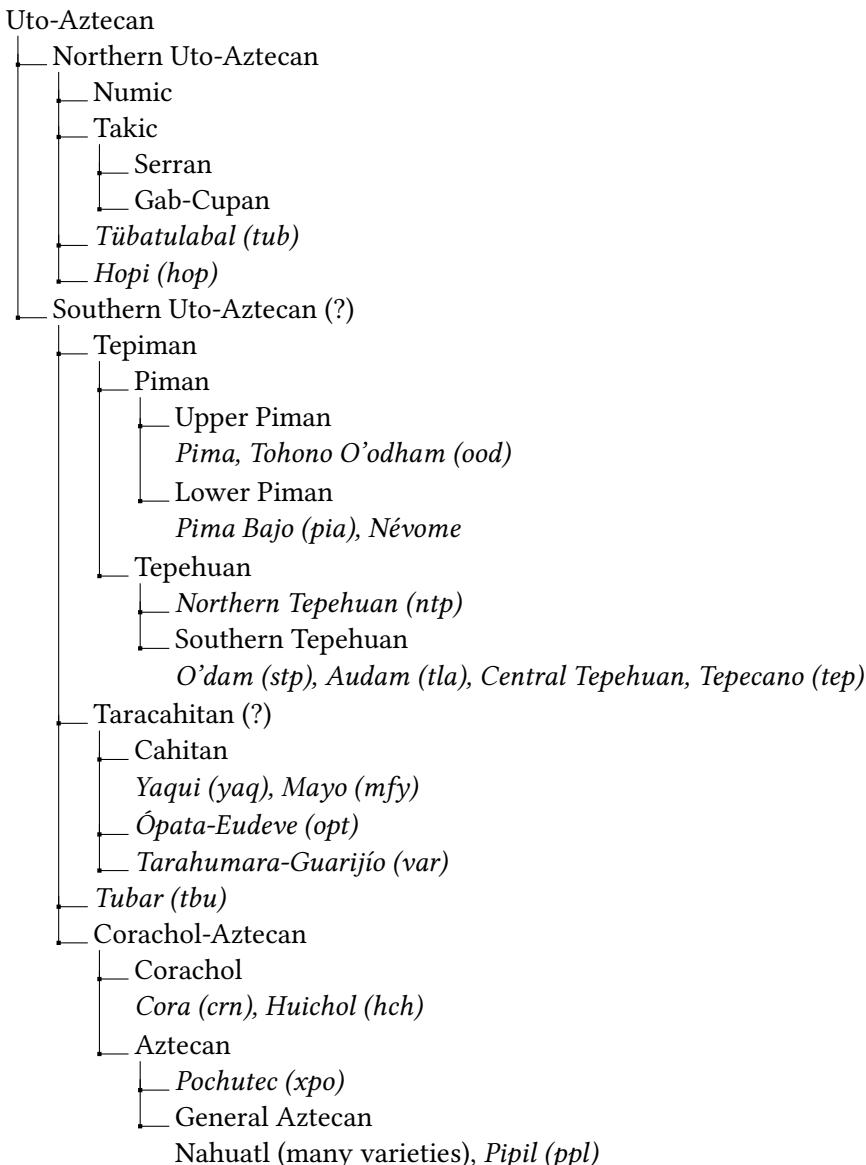
INS	instrumental	PROB	probability
INTER	interrogative	PROG	progressive
IPFV	imperfective	PRT	particle
IRR	irrealis	Q	question marker
ITER	iterative	QUANT	quantifier
LOC	locative	RPRT	reportative
MID	middle	RPRT.UI	reportative unknown information
MIR	mirative		
MOV	movement	RET	rhetorical
NEG	negation	SBJ	subject
NEG.EX	negative existential	SENS	sensorial
NMLZ	nominalizer	SEQ	sequential
NRINT	non-realized intention	SGS	singular subject
NSBJ	non-subject	STAT	stative
PFV	perfective	SUB	subordinator
PNCT	punctual	SUBJ	subjunctive
PO	primary object	SUP	support
POSSD	possessed	VBLZ	verbalizer
PREC	precision	VIS	visual
PRF	perfect		

Acknowledgements

Appendix: Uto-Aztecan family tree

Uto-Aztecan family tree based on Haugen (forthcoming). Some subgroups are controversial, these are indicated with a (?).

```
Uto-Aztecan
 ├─ Northern Uto-Aztecan
 │   ├─ Numic
 │   ├─ Takic
 │   │   ├─ Serran
 │   │   └─ Gab-Cupan
 │   ├─ Tübatulabal (tub)
 │   └─ Hopi (hop)
 └─ Southern Uto-Aztecan (?)
     ├─ Tepiman
     │   ├─ Piman
     │   │   ├─ Upper Piman
     │   │   │    Pima, Tohono O'odham (ood)
     │   │   └─ Lower Piman
     │   │        Pima Bajo (pia), Névome
     │   └─ Tepehuan
     │       ├─ Northern Tepehuan (ntp)
     │       └─ Southern Tepehuan
     │            O'dam (stp), Audam (tla), Central Tepehuan, Tepecano (tep)
     ├─ Taracahitan (?)
     │   ├─ Cahitan
     │   │    Yaqui (yaq), Mayo (mfy)
     │   ├─ Ópata-Eudeve (opt)
     │   └─ Tarahumara-Guarijío (var)
     ├─ Tubar (tbu)
     └─ Corachol-Aztecan
         ├─ Corachol
         │    Cora (crn), Huichol (hch)
         └─ Aztecan
             ├─ Pochutec (xpo)
             └─ General Aztecan
                  Nahuatl (many varieties), Pipil (ppl)
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Part IV

Theoretical approaches to cyclical processes

Chapter 15

The Negative Existential and other cycles: Jespersen, Givón, and the copula cycle

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Veselinova (2013) provides two sources for negative existential constructions: (a) the univerbation of a negative and a part of the existential construction, which needs not be verbal, and (b) the reanalysis of a lexical item with an appropriate, negative sense. I argue that this definition is both too narrow and too broad when examining the Negative Existential Cycle (NEC). Regarding (a), copulas and auxiliaries provide input to the NEC in addition to existentials, in e.g. Croft (1991), and regarding (b), verbs with a negative meaning are better seen as a separate development, as in Givón (1978). I will contend that copulas, auxiliaries, and existential verbs can all fuse with the negative and then disappear into the negative whereas negative verbs,such as *fail,* trade their semantic negative features into grammatical ones without fusion or loss. This paper will address three specific questions relevant to the NEC. The first is what are the source verbs in this cycle. A second question is whether or not the NEC is essentially a verbal cycle, in contrast to the nominal nature of the Jespersen Cycle (JC; Jespersen 1917). The third question involves the possible doubling of the negative, which is relevant to showing the NEC is different from the Jespersen Cycle. The role of verbal agreement and inflection sets apart the verbal cycles (NEC and the Givón Cycle) from the nominal one (JC) and the two verbal cycles are different in their renewal. The differences will be shown in their reanalyses in the last section.

1 Introduction

The Negative Existential Cycle (NEC) was so named by Croft (1991) and was added to greatly by e.g. Veselinova (2013, 2016). The basic cycle is given in Fig-

ure 1 and, by now, well-known: Type A involves standard negation and existential negation expressed by the same morpheme; Type B is (usually) where the negative has attached itself to the existential verb and is no longer the same as the standard negative; and Type C is where the Negative Existential of Type B is used for all negation, often with a null existential. Veselinova has argued for intermediate stages as well, which we'll see below. What is typical for the NEC

Type A
Regular NEG $\longrightarrow$ Type B
NEG ≠ NEG EXIST

Type C
NEG = NEG EXIST
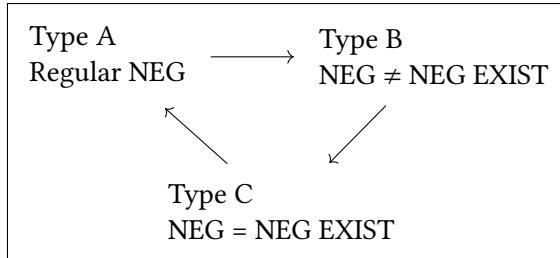
Figure 1: The NEC (Croft 1991)

is that the verb is renewed at the end of the cycle by a new existential or copula, in something that has been called the Copula Cycle (Katz 1996) where I take a copula in the broad sense as locative, equational, possessive, or existential. This copula can then again be the source to another NEC. Traditionally, two other negative cycles have been recognized, namely the Jespersen Cycle (JC) and the Givón Cycle. The Jespersen Cycle renews a negative with a minimizer or negative/indefinite quantifier while the Givón Cycle creates a new negative without co-occuring with another negative.

As the name NEC suggests, most scholars from Croft (1991) on have argued that the input verbs to the NEC are existential ones although Croft gives examples of other verbs. Veselinova, in various work, only includes existential verbs and negative verbs but not copulas and auxiliaries. She argues that existential constructions (negative ones included) are special. They have non-referential subjects, frequent non-canonical verb and subject marking, etc. Locatives, copulas, and possessives do not fall under her definition of existential (Veselinova 2013: 108–11), unless the particular verb is the same. Later in the paper, she defines NECs as originating from either (a) a univerbation of a negative and a part of the existential, which need not be verbal, or (b) the "reanalysis of a lexical item with an appropriate sense" (136). The (a) part is the traditional NEC while the (b) part makes it possible to extend the NEC to the JC where a negative indefinite can be reanalyzed as standard negation and to cases included in the Givón Cycle. So, Veselinova's formulation of the sources of negative existentials incorporates

all negative cycles, NEC, JC, and the Givón Cycle but does not find auxiliaries and copulas as sources in her data. Veselinova (p.c.) herself doesn't see the JC as her focus but the quote in (b) makes it possible to do so.

In this paper, I will advocate for at least three negative cycles that interact with each other as well as with the Copula Cycle. In doing this, I address three questions surrounding this cycle: the sources of the verbs involved, the verbal nature of the cycle, and the issue of negative doubling. The methodology is not that of a typological article; my aim has been to take a broad look at the various negative cycles to discover what they have in common and how they differ.

The outline is as follows. In §2, I further discuss Veselinova's (2013) definition and look at a number of cases where a copula and auxiliary are also the source of what looks like a NEC. In §3, Givón's (1978) examples of inherently negative verbs are discussed. I think it is better for the latter to be seen as their own cycle, e.g. named Givón's Cycle. §3 also considers the verbal nature of the NEC and §4 whether or not doubling is ever uncontroversially present with the NEC. §5 provides the structural characteristics of the three negative cycles and §6 is a conclusion.

2 Auxiliary and copula sources

In this section, I examine which categories are input to the NEC. For instance, can copula and auxiliary verbs also be included as source verbs, in addition to existential verbs? Existential constructions display separate syntactic properties, e.g. the agreement is shared between the expletive and post-verbal subject, i.e. plural in (1).

(1)   There aren't any ghosts in the closet.

Croft (1991: 12), by mentioning Marathi *nahĩ* [NEG.be], for instance, keeps the door open for other verbs to be involved as well. In §2.1, I will use data from Urdu/Hindi where a similar negative is found as in Marathi to show that this indeed appears to involve a NEC. §2.2 and §2.3 show the same for English and Arabic. §2.4 provides data that are inconclusive about the origin of the negative existential.

2.1 Hindi/Urdu

Kellogg (1938) sees the development of the negative as going from the single *na* in Sanskrit (inherited from Indo-European) to a stage where *na* and *nehĩ* alternate to one where *nehĩ* is the main negative. In Kellogg's account, *-hĩ* is a remnant

of an auxiliary verb; simple *na* remains with non-indicatives and a prohibitive *mat* occurs with imperatives in the modern language. I have put the changes involving *na* and *nehĩ* in a table with the stages from Croft's Cycle. The last stage is one where a "double" auxiliary is appearing.

Table 1: The stages of the NEC from Sanskrit to Hindi/Urdu

Croft	Stage	Negative	
A	Sanskrit	*na*	
B	Early Hindi/Urdu	*na*	*na hĩ* [NEG + 'be']
C	Hindi/Urdu	*nehĩ* (marginal *na* and *mat*)	
C~A	change in Hindi/Urdu	*nehĩ*	*nehĩ + hona* 'be'

One piece of synchronic evidence that *nehĩ* is formed from *na* and an earlier inflected form of the verb/auxiliary *hona* 'to be' is that copulas and auxiliaries, i.e. typical uses of *hona* 'to be', are not necessary with *nehĩ*, as (2) and (3) show and are uncommon.

(2) Hindi/Urdu
  *mẽ student **nehĩ** (hũ)*
  I   student not   am
  'I am not a student.' (data checked with Sakshi Jain)

(3) *mẽ yehã kam   **nehĩ** karti (hũ)*
  I   here work not   do   am
  'I don't (generally) work here.' (data checked with Sakshi Jain)

Currently, the last stage of the cycle is reached and the copula and auxiliary are used again, as in (4).

(4) Hindi/Urdu
  *koi   bhi   Pakistani bharat me **nehĩ** rah raha   **hai***
  Any even Pakistani India in   NEG live PROGR is
  'No Pakistani is living in India.' (Lampp 2006: 17, her transliteration)

This "doubling" of the auxiliary verb (in stage C~A) would be expected, although, cross-linguistically, this stage is very rare.

Auxiliary verbs typically add tense, mood, aspect, or voice and accompany a lexical verb. They may agree with the subject and this is one of the reasons auxiliaries are less likely to be reanalyzed as negatives. Because they are inflected

in many languages, the forms will be many and that stops the reanalysis. So how was the reanalysis from stage A to B in Hindi/Urdu possible? Numerous scholars have argued there is a second source that may have helped the NEC along. Whitney (1889: 413), Turner (1966: 404), and Bashir (2006: 7), to name a few, have argued that *na* was strengthened with an emphatic *hĩ*, which is still around in the language. Since the paradigm of *hona* 'to be' shows many forms, *hũ, ho, hẽ* [1SG, 2SG, 3SG], etc, it may be that the presence of *hĩ* helped solidify the form *nehĩ*.

Different cycles compete and that is visible in a minimizer that is sporadically used as negative, e.g. the one identified by Gul (2009), namely *thoRi* 'little', as in (5). When *thoRi* is negative, emphatic particles like *si*, *hi*, and *tu* cannot follow it, as in (5b), according to Gul, and that is a way to distinguish the negative from its adverbial origin, possibly shedding doubt on the emphatic origin of −*hĩ* discussed above. This renewal by a minimizer is typical of the Jespersen Cycle.

(5) Hindi/Urdu

a. *Usne **thoRi** bat ki.*
    he   NEG   talk did
    'He didn't talk.' (Gul 2009)

b. *wo BASHEER **Thori** Tha, wo Tou   PAPA The.*
    he Basheer   NEG   was he EMPH papa was
    'He wasn't Basheer, he really was daddy.'
    (mobiletextsms.blogspot.com/2011/08/wo-basheer-thori-tha.html)

The verb *hona* 'to be', according to Platts (1884), also means 'to exist, subsist, be born' and a variety of other meanings typical of existential verbs but in present-day Hindi/Urdu compounds like *mowjud hona* 'be present' or *rehna* 'to live' are used instead. Such renewal of verbs that participate in the NEC is expected.

In this section, I have shown that a copula and auxiliary can be the source but that verbal inflection might be hindering the reanalysis as negative. What probably made it possible to see *nehĩ* as a negative particle in Hindi/Urdu, also an inflected language, rather than as verb, is the independent existence of *hĩ* in the language. In the next section, I show how an inflected negative auxiliary can indeed lose the inflection.

2.2 English and Uralic

Hindi/Urdu shows a case where auxiliary and copula forms of *hona* 'to be' combine with the negative in a typical NEC. As mentioned, this is often difficult in

languages where verbs are inflected because one of the many forms of 'to be' will have to be chosen to fuse with the negative. In this section, I provide two instances where it did.

There are stages in the history of English and present-day varieties where the inflected forms *am not, are not, is not*, etc. are reduced to *ain't* which is then used as multipurpose negative copula and auxiliary, as in (6), for all persons.

(6) a. copula
         I **ain't** afeard o' nyther on you [COHA fiction 1828]
     b. perfective auxiliary
         and when you **ain't** got any tanks [BNC spoken]
     c. progressive auxiliary
         that we **ain't** gonna relet these [BNC spoken]

This *ain't* could in principle be reanalyzed as the negative but there is no evidence in British English that *ain't* is spreading as a standard negative, e.g. used with an inflected, finite verb, as in (7). This sentence probably has a meaning of 'I didn't see/haven't seen'.

(7) I **ain't** see any because I were with Jacqueline weren't I? [BNC spoken]

Of the 1270 instances of *ain't* followed by a verb in the British National Corpus, no verbs are finite, but of the 4405 instances in COCA, there are fifty or so where *ain't* could be a negative particle preceding the finite verb, namely those in (8).

(8) a. When I came to this class, I **ain't know** nothing. [COCA spoken]
     b. Nah, you **ain't want** trying to hit the coach in the face. [COCA fiction]
     c. It **ain't have** any beer? [COCA fiction]

So, English copulas and auxiliaries could participate in a NEC when their inflection is neutralized as with *ain't*. For external reasons, *ain't* is stigmatized. The example from Uralic shows another case of an inflected auxiliary losing the markings of tense and agreement.

The origin of the negative auxiliary in Uralic "may well be related to the verb 'is' (*i-*)" (Simoncsics 1998: 594) and more precisely to a negative copula (Honti 1997: 173). That would mean the NEC occurred in earlier Uralic. We cannot be completely sure about this scenario but the present-day languages in the family show how the NEC proceeds: the negative auxiliary gradually loses inflection to end up a uninflected particle.

An example of an inflected negative auxiliary in the Uralic family appears in (9a). Other varieties of Saami have reduced inflection, as in (9b) and (9c), with the main verb picking up the tense.

(9) a. Southern Saami
Idtj-im (*manne*) *daejrie-h*
NEG.PST-1SG (1SG) know-CONNEG
'I didn't know.' (Bergsland 1994: 44)

   b. Skolt Saami
(*mon*) **jiõm** *poor*
(I) 1SG.NEG eat.PRS
'I don't eat.' (Miestamo & Koponen 2015: 355–6)

   c. Skolt Saami
jiõm *poor-râm*
1SG.NEG eat-PST
'I didn't eat.' (Miestamo & Koponen 2015: 355–6)

In Estonian and non-standard Finnish, the auxiliary has been reduced to a non-inflected particle *ei* for all negation, as in (10), and *ei* can be deleted if a negative adverb is present (see Honti 1997: 164).

(10) Estonian
Maia **ei** *laula*
Maia NEG sing.CONNEG
'Maia doesn't sing.' (Veselinova 2016: 151, data from Miina Norvik)

The variety among the languages of the Uralic family shows an auxiliary as source for a negative particle.

   This section has shown that inflection on a copula or auxiliary need not hinder reanalysis because it can get lost. I'll now turn to another example of a copula participating in the NEC.

2.3 Varieties of Arabic

So far, we looked at auxiliaries and copulas that are reanalyzed as negatives. Examples of verbs participating in the NEC that are only copulas occur as well. This should be frequent as long as the copula is not (very) inflected and that is true. One well-known example is from Arabic (Eid 1983, Katz 1996, Edwards 2006, Alsaeedi 2015). The sentences in (11) are from Egyptian Arabic but are grammatical in Modern Standard Arabic as well. The new copula agrees in number and gender because it was originally a demonstrative with number and gender features.

(11) Egyptian Arabic

    a. *'ana **huwwa** l-mas'u:l*
       I   he   the-responsible
       'I am the responsible.' (Edwards 2006: 51)

    b. *il-mushkila*   ***hiyya** T-Talaba*
       the-problem.F.SG she   the-students
       'The problem is the students.' (Edwards 2006: 52)

The erstwhile pronoun can be negated in the present tense in the same way as a verb, as in (12). Once the number and gender are lost on the demonstrative, this form can turn into a negative particle.

(12) Egyptian Arabic
    *faTma ma-**hiyya:**-sh   il-mas'u:la*
    Fatima NEG-be.3SG.F-NEG the-responsible
    'Fatima is not the one responsible.' (Edwards 2006: 53)

Sentences such as (12) may therefore participate in a NEC which occurs in a number of varieties of Arabic. In (13), there is a negative copula *miš* that derives from a form like (12), in particular from *ma-hu-šay* [NEG-COP-NEG], a copula inside a negative brace. The copula itself originates from a (minimally inflected) demonstrative *hu*. This negative copula *miš*, no longer inflected, is now being generalized for emphasis, as in (14).

(13) Cairo Arabic
    *Mohammed **miš** hina*
    Mohammed NEG here
    'M. isn't here.' Diem 2014: 2

(14) Cairo Arabic
    hiyya miš iggawwizzit?
    she   NEG married
    'Hasn't she married?' (Woidich 2006: 341)

Although existential verbs are the source of many auxiliaries and general copulas, as in Urdu/Hindi, the latter participate in the NEC by themselves. In languages where the copula develops from a demonstrative, as in Arabic, the copula also participates in the NEC. I'll end with an example of a copula/auxiliary participating in the NEC, where the reconstruction is not completely clear.

2.4 Athabascan

Athabascan is a family of 42 languages (according to Ethnologue[1]) that has a negative construction derived from a negative copula/auxiliary. For instance, Kari (1990) suggests that the negative *'ele'* in Ahtna (15) is related to the verb *lae* 'to be', and one could argue that the suffix −*leh* is also related to that verb. Kwadacha (16), Dëne Sųłiné (17), and Tlingit (18) have the same forms but no affix, and in Carrier (19), it is a prefix. It is thus possible that the negative marker arose from a negative existential.

(15)   Ahtna
       'ele' *ugheli ghi-**leh***
       NEG good   3-PFV.be.NEG
       'He is not good.' (Kari 1990: 272)

(16)   Kwadacha/Ft Ware Sekani
       *Edna **ʔədu** Mary əʔį̀ʼh*
       Edna NEG   Mary 3.see
       'Edna doesn't see Mary.' (Hargus 2002: 110)

(17)   Chipewyan/Dëne Sųłiné
       *nɛzú-**hílɛ***
       be.good-not
       'It is not good.' (Li 1967: 420)

(18)   Tlingit
       ƛéɬ *wusgîd*
       NEG fall.IRR
       'He didn't fall.' (Krauss 1969: 72)

(19)   Carrier
       ***lh**-eʼ-z-us-ʼal*
       NEG-OM-NEG-1SG-eat
       'I am not eating (an unspecified object).' (Poser 2009: 26)

Leer reconstructs an alternative scenario with a Proto-Athabascan *-*he* suffix, which is "originally an enclitic" (2000: 102), and a Proto-Atabaskan-Eyak-Tlingit particle *(ʔi)łeʔ 'it is not' (Leer 2000: 123). He writes that it "seems probable that the Tlingit negative particle *ł* is by origin a contraction of the prohibitive interjectional particle (ʔi)*łí* 'don't' which is a phonologically perfect cognate with Pre-PA [Pre-Proto Athabascan] *(ʔi)łeʔ" (Leer 2000: 123–4). Willem de Reuse (p.c.) also

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[1]https://www.ethnologue.com/subgroups/eyak-athabaskan.

suggests a link of the sentence-final prohibitive particles to this root. In Western Apache, for instance, there is *hela'* and in Navajo *lágo*, both meaning 'don't'.

One question is the following. Is **(ʔi)łeʔ* originally a third person negative of the verb 'to be' that was reanalyzed as a negative particle during Proto-Athabascan-Eyak-Tlingit or is it still an auxiliary? Rice (1989: 1108, n. 1) suggests that the negative *yíle* in Slave, e.g. in Bearlake (20), "may historically be an auxiliary verb in the perfective aspect".

(20)   Bearlake
        bebí nedá **yíle**
        baby heavy NEG
        'The baby is light.' (Rice 1989: 1101)

The account for the doubling in (15) depends on the analysis of the (*'e*)*le*(*h*): negative existential, auxiliary, or particle. If it is an auxiliary or existential, the final *-leh* would be a renewed existential that became part of the negative; if a particle, doubling is fine. I think the data are not clear enough to decide between a prohibitive or negative copula/auxiliary earlier stage.

§2 has provided examples of auxiliaries and copulas that, like existentials, are sources for negatives.

3 Negative verbs and adverbs as source for the NEC?

Connected to the question about the source of the negative existential is the issue if semantically appropriate lexical items should be seen as part of the NEC. This would include negative verbs, such as *fail*, *lack*, and adjectives, like *empty*, as in the Givon Cycle, and negative adverbs, as in Jespersen's Cycle. Veselinova (2013: 136–7) sees these as part of the NEC. In this section, I first examine negative verbs and then non-verbal sources.

3.1 Negative verbs

Givón (1978: 89) writes "[n]egative markers in language most often arise, diachronically, from erstwhile negative main verbs, most commonly 'refuse', 'deny', 'reject', 'avoid', 'fail', or 'lack'". In earlier work (Givón 1973: 917), he provides example verbs: English *fail*, Kihung'an *−khona* 'refuse', and Bemba *−bula* 'lack, miss', but no actual trajectories. Veselinova (2013) quotes Kannada *illa* as derived from a Dravidian root 'to die'.

The Chinese negative *mei* is perhaps the most well-known example of a verb meaning 'to sink, die', as in (21), being reanalyzed as negative in (22) with an

optional *you* renewal (Croft 1991: 11, Shi & Li 2004, Yang 2012), also Nina Yunsun Lin (p.c.).

(21) Old Chinese
Yao Shun ji **mo** *...*
Yao Shun since died
'Since Yao and Shun died, ...' (Mengzi, Tengwengong B, Nina Yunsun Lin (p.c.))

(22) Modern Chinese
wo **mei** (*you*) *shu*
I   not EX   book
'I don't have a book.'

Lam Chit Yu (2017) shows that, in Hong Kong Cantonese, the negative *mei* and existential/possessive *you* merge phonetically as *mou*, and a new copula could develop.

The changes in the verb *mei* present a classification challenge in that the verb first reanalyzes as a negative possessive in (23) and aspectual auxiliary in (24) in Early Mandarin (12[th] to 14[th] centuries CE) and then as an (aspectually restricted) negative in Modern Chinese.

(23) Early Mandarin
yu   de wang ren **mei**   *kunan,   ...*
wish PRT died person textscneg.ex suffering
'If you wish that the deceased one has no suffering, ...' (*Dunhuang Bianwen*, Nina Yunsun Lin (p.c.)

(24) Early Mandarin
zheyiri   **mei**   *shang-guo zhong jiu*
for.a.while NEG.ASP serve-PRT cup   wine
'Wine has not been served for a while.' (*Jin ping mei*, Shi 2002: 200)

With the verb *mei* 'to die', the reanalysis of the negative verb in (21) is to a negative existential in (23) and then to a negative in (22) with the existential being renewed by *you*. The first step is an instance of the Givón Cycle and the second of the NEC.

Clear cases where a negative verb would be reanalyzed as a negative might be the verb *fail* in English, as in (25). Here, 'failed to' can be replaced by 'didn't' without loss of meaning.

(25) [we] became so engrossed in our game of tetherball that we **failed to hear** the teacher calling us to return to the classroom. [COCA magazine]

Because the English negative *-n't* is in the final stages of the Jespersen Cycle (i.e. it is often inaudible and speakers have to repeat it), we expect such a renewal because the alternative, renewal of the negative by a negative adverb, as in (26), is objected to so much by prescriptivists.

(26) He **don't** care about **nothing** but his car, rims, money. [COCA spoken]

However, the use of (25) is not frequent and many of the *failed to* instances still have the meaning of 'not be successful'. Table 2 provides some data on *fail* from American English since 1990. This figure shows little change in 25 years and that the spoken register lags behind, a sign that this change is not really in progress.

Table 2: *Failed to* and a verb in COCA.

Section	Freq	Size (M)	Per Mil	
spoken	1,881	109.4	17.20	
fiction	2,166	104.9	20.65	
magazine	3,553	110.1	32.27	
newspaper	4,999	106.0	47.18	
academic	4,866	103.4	47.05	
1990–1994	3,736	104.0	35.92	
1995–1999	3,203	103.4	30.96	
2000–2004	3,396	102.9	32.99	
2005–2009	3,228	102.0	31.63	
2010–2015	3,902	121.6	32.10	
Total	34,930			

As several people have mentioned to me, this verb is so negative (in American culture) that it probably won't catch on. Its use in the British National Corpus (e.g. in spoken) is even lower though not in the written registers. Other negative verbs, e.g. *lack*, don't show this either, however.

In this subsection, negative verbs have been shown to be the source for the NEC.

3.2 Non-verbal nature

Some scholars have tried to unify the NEC and the JC, e.g. van der Auwera et al. (2022 [this volume]). In addition, Veselinova's definition of the NEC includes

reanalyzing non-verbal material from existential constructions. The relevant example that Veselinova (2013: 136) mentions is from Ket. In this section, I argue against including these into the NEC. I'll first discuss the adverb/noun sources followed by the existential pro-form.

The JC has traditionally been seen as a nominal cycle because its source is a negative noun, such as *nan wuht* 'no thing' in (27), or a minimizer, such as French *pas* 'step'. These nouns can be reanalyzed as adverbs in (28).

(27)   Old English
    *forþæmþe hie   hiora **nan wuht** ongietan   **ne** meahton*
    because   they their no thing   understand not could
    'because they couldn't understand anything' (Alfred, *Pastoral Care* 4.12
    Cotton, van Gelderen 2004: 81)

(28)   Old English
    *Næron   ȝe   **noht** æmetti3e,   ðeah   ge   wel ne dyden*
    not-were you not   unoccupied though you well not did
    'You were not unoccupied, though you did not do well.' (OED, Alfred,
    Pastoral Care 207.20 Cotton, van Gelderen 2004: 82)

The JC typically renews the negative element *ne* by a new noun *nawhiht* whereas the NEC replaces the verb that has become part of the negative.

The example that has been used to show that non-verbal material from existential constructions is reanalyzed is a solitary one from Ket. In Ket, *bən's'aŋ* 'there are no' derives from the negative *bənj* and *us'aŋ* 'there', according to Veselinova (2015: 136, but without a reference) and this would use non-verbal parts of the construction. The Ket dictionary (Kotorova & Nefedov 2015) confirms *bən* as negative (2015: 135), *bənsaŋ* 'there are no' (2015: 136), and *usaŋ/usam* as 'there are' (2015: 415). The existential particles *bənsaŋ* and *usaŋ/usam* do not agree with the subject or mark tense and are also used to mark locative or possessives, as shown in (29).

(29)   Ket
    *ópdaŋ bɔ́gdɔm **bʌ́nsaŋ***
    father rifle   not.exist
    'Father has no rifle.' (Kotorova & Nefedov 2015: 65, but gloss adjusted)

Using the dictionary information, it is possible to regard *usaŋ/usam* 'there are' in Ket as a copula (possibly originating from a demonstrative like Arabic) and then *bənsaŋ* is the combination of a negative and a copula, quite typical for the NEC.

Concluding, I have shown an interaction between the Givon Cycle and the NEC in §3.1 and have shown in §3.2 that the instance where a non-verbal part of the existential seems to participate in the NEC is just a negative form of the copula. The use of non-verbal material in the NEC is very rare. For instance, in their compilation of typical grammaticalizations, Heine & Kuteva (2002: 199–206) mention a development where a locative develops into an existential (e.g. Sranan *de* 'to be' from the locative *there*) but this is part of the copula cycle (van Gelderen 2015). This locative, having become a copula, can of course be input to a NEC, just like demonstratives that have been reanalyzed as copulas.

4 Doubling

A last question concerns another difference between the JC and the NEC, namely that doubling is typical for JC but not for the NEC. This follows from the ways the cycles procede: the NEC has a negative with an existential (or copula or auxiliary) serve as a sentential negative and there is therefore no doubling of the negative but rather of the copula. In contrast, the JC is about pragmatic strengthening by a second negative and therefore doubling is typical. In this section, I discuss two possible counterexamples to the claim that doubling the negative is not typical of the NEC.

Croft (1991: 10) mentions the case of Wintu where the negative existential ˚*elew* is reinforcing the regular negative *-mina* in (30).

(30) Wintu
ˈ**elew**-*be:sken*   *hara:-wer*-**mina**
NEG.EX-YOU.IPFV go-FUT-NEG
'You were not supposed to go.' (Pitkin 1984: 198)

The morpheme *-mina* derives most likely from the verb root *min* 'to not exist' (Schlichter 1981: 361, Pitkin 1984: 121) and is also related to *minel* 'be dead; die' (Schlichter 1981: 146). Schlichter (1981: 311) refers to ˚*elew* as a negative auxiliary preverb so this language renews its negative auxiliaries with negative verbs (the Givón Cycle).

It is not clear from Croft, Schlichter, or Pitkin what the process was for adding ˚*elew* in (30). The negative auxiliary ˚*elew* is reconstructed from a demonstrative **˚E* and stative **l* or future **le* and a suffix **w* (Pitkin 1984: 164). The examples of a solitary ˚*elew* given by Pitkin (1984: 198) are optative or imperative prefixes, as in (31), or on its own, as in (32).

(31) Wintu
      ˤ***elew**-war*
      NEG.EX-go
      'don't venture' (Pitkin 1984: 198)

(32) *sedet* ˤ***elew** kiyemti·m*
      coyote not   old.man.speak
      'Coyote never speaks wisely.' (Pitkin 1984: 269)

This means that ˤ*elew* can be analyzed in Wintu as a copula in origin that became used with other negatives. There is no evidence that there was ever a stage with two negative existentials in this language but further work is needed.

Butters (2022) mentions some NEC cases from Chadic that suggest doubling of the negative, based in part on Shay (2008) who, in her grammar of South Giziga, mentions an existential consisting of two negatives, namely (33). The verb *(á)n* only occurs in negative clauses and is therefore glossed as 'be.NEG'.

(33) South Giziga
      *kà **n**   **tá** sà jí   mèvèl*
      2   be.NEG NEG FUT catch liver
      'You will not be angry.' (Shay 2008, chapter 13)
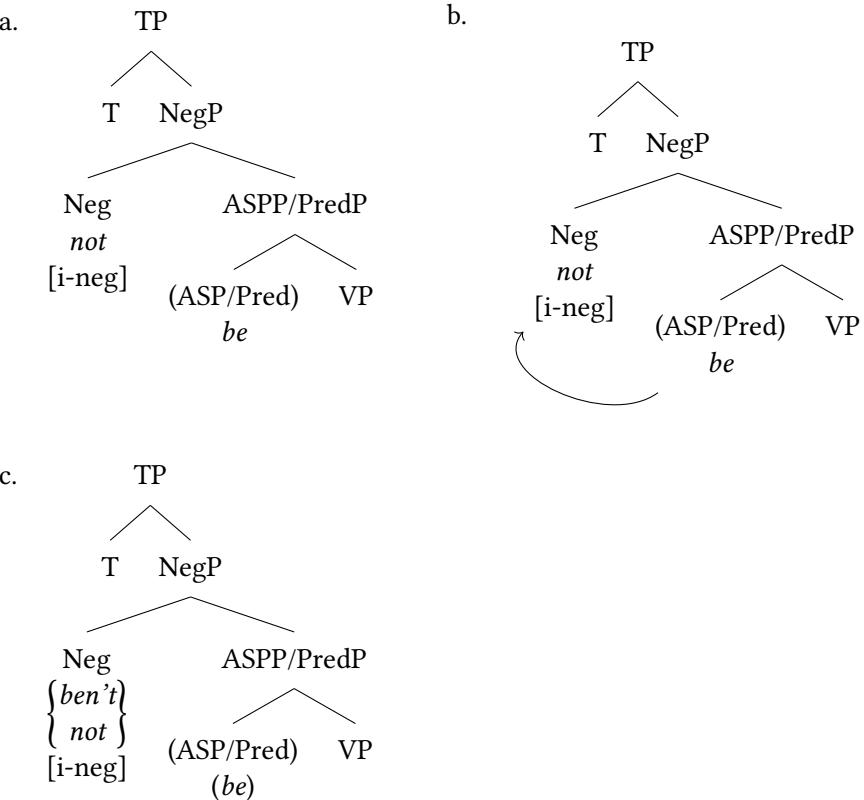
Shay mentions that a "likely source for the negative existential predicate is a verb *n*V meaning 'be" supported by Lukas' (1970: 151) report of a North Giziga -*naŋ* 'to be'. I therefore think this is not a case of doubling but just of an existential being used with a negative, i.e. stage B.

5 Structural characteristics of the NEC, JC, and the Givón Cycle

In this paper, I have argued that there are three negative cycles, NEC, JC, and the Givón Cycle, with the NEC interacting with Givón's and the Copula Cycles (which renew the existential lost in the NEC). In this section, I will provide formal descriptions of each of these cycles showing that they differ.

For ease of exposition, I provide English morphemes for the NEC. A possible NEC may go from having the same negative with a full verb and an existential in (34a) to (34b) where the negative and existential are fused because the existential moves to the Neg head on its way to T. Finally, in (34c), the reanalyzed negative serves both existential and standard negatives and an optional new copula may appear.

(34)   a.

```
              TP
             /  \
            T    NegP
                /    \
             Neg      ASPP/PredP
             not      /        \
           [i-neg] (ASP/Pred)   VP
                      be
```

b.

```
                TP
               /  \
              T    NegP
                  /    \
               Neg      ASPP/PredP
               not      /        \
             [i-neg] (ASP/Pred)   VP
                        be
```

c.

```
              TP
             /  \
            T    NegP
                /    \
             Neg      ASPP/PredP
           {ben't}    /        \
           { not }  (ASP/Pred)   VP
           [i-neg]    (be)
```
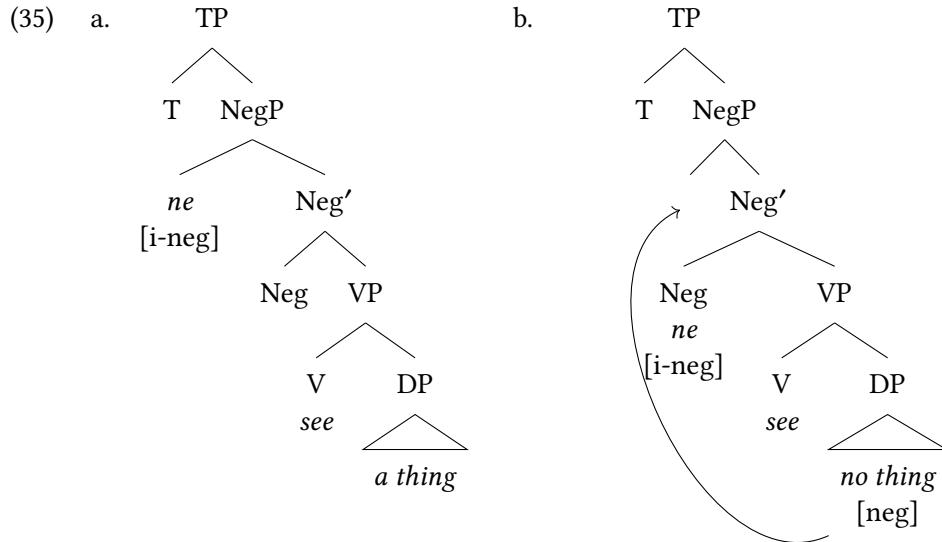
Because the NEC can have a copula as its source, the Pred(icate) P(hrase) is used in (34); the ASP(ect) P(hrase) is needed for stages of the NEC that are aspectually restricted, as in Chinese.

The trigger for this cycle is that copula verbs can be zero and the child reanalyzes the copula as part of the negative. For instance, Becker (2000) shows that young children omit the copula especially when the predicate expresses a temporary property (with an aspectual representation).
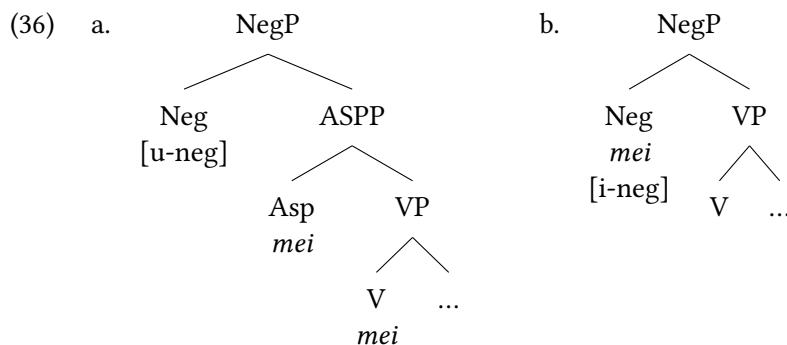
Turning to the JC, these changes don't single out a special kind of verb; this cycle typically takes a negative or indefinite noun to renew a negative head. Meillet (1912: 139) writes that what provokes the start of the (negative) cycle is the need to speak forcefully ("le besoin de parler avec force"). Kiparsky & Condoravdi (2006), in examining Jespersen's Cycle in Greek, find no evidence for phonetic weakening and similarly suggest pragmatic and semantic reasons. A simple negative cannot be emphatic; in order for a negative to be emphatic, it needs to be reinforced, e.g. by a minimizer. Adapting ideas from Dahl (2001), they argue that, when emphatic negatives are overused, their semantic impact weakens and they become the regular negative and a new emphatic will appear. I have provided

these changes in (35). In (35a), there is one negative, represented by Old English *ne*; in (35b), there is a second negative which, because it is agreeing with the negative features in the NegP, moves to the Spec of NegP and then the original negative is reinterpreted as head.

(35) a.

TP
├─ T
└─ NegP
   ├─ *ne* [i-neg]
   └─ Neg′
      ├─ Neg
      └─ VP
         ├─ V *see*
         └─ DP *a thing*

b.

TP
├─ T
└─ NegP
   └─ Neg′
      ├─ Neg *ne* [i-neg]
      └─ VP
         ├─ V *see*
         └─ DP *no thing* [neg]

Finally, the negative features of the DP are reanalyzed as the grammatical negative features and housed in the specifier of the NegP and we are back to (35a).

The Givón Cycle involves the reanalysis of a verb into an aspect marker into a negative. This could be represented as a change from (36a) to (36b), with Chinese as the example language.

(36) a.

NegP
├─ Neg [u-neg]
└─ ASPP
   ├─ Asp *mei*
   └─ VP
      ├─ V *mei*
      └─ ...

b.

NegP
├─ Neg *mei* [i-neg]
└─ VP
   ├─ V
   └─ ...

The reason English *failed to* in (36b) shows no inclination to take over as [i-neg] is related to English verbs having other features, e.g. tense and agreement and not being reanalyzable as a simple negative. The same hold for the NEC because a negative and a verb are hard to reanalyze as verb if there are too many agreement and other features involved. The JC doesn't encounter these obstacles.

6 Conclusions

In this paper, I argue in favor of seeing the NEC as a verbal cycle that combines a 'be'-like verb with a negative and then renews the existential/copular verb. The JC is a non-verbal cycle, with renewals originating in nouns and adverbs. Both the NEC and the Givón Cycle rely on verbs for their renewal and work best when these verbs don't have too many other features; JC is not affected by these verbal features.

Acknowledgements

List of languages

Ahtna	aht	Hindi	hin
Arabic	arb	Ket	ket
Bearlake	scs	Kwadacha	sek
Cantonese	yue	Marathi	mar
Carrier	crx	Skolt Saami	sms
Chinese	chi	South Giziga	giz
Chipewyan/Dëne Sųłiné	chp	Southern Saami	sma
Egyptian Arabic	arz	Tlingit	tli
English	eng	Urdu	urd
Estonian	est	Wintu	wnw
Finnish	fin		

Abbreviations

ASP	aspect	NEC	Negative Existential Cycle
CONNEG	negative participle	NEG	negative
COP	copula	OM	object marker
EX	affirmative existential	PFV	perfective
EMPH	emphatic	PRED	predicate
FUT	future	PROG	progressive
JC	Jespersen Cycle	PRS	present
IPFV	imperfective	PST	past
IRR	irrealis	PRT	particle

Sources

British National Corpus (BNC)
Corpus of Contemporary American English (COCA)
Corpus of Historical American English (COHA)

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Chapter 16

Intertwining the negative cycles

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In the synchronic and diachronic typology of negation three so-called "cycles" have been prominent: the Jespersen Cycle, the Negative Existential Cycle and the Quantifier Cycle. This paper refines these notions, sketches what is cyclical about them and shows how they relate to one another. As the Jespersen Cycle, we argue that it crucially involves a negator that is either contaminated by another item or fuses with it. The Negative Existential Cycles comes in three subtypes, two of which can be fit into a more general Jespersen Cycle frame. As the Quantifier Cycle, we argue that the term should be given a new definition and we then show how it is similar to a Jespersen Cycle and feeds into it.

1 A tale of three cycles

Both the synchronic and the diachronic typology of standard negation, that is, the negation of a main clause affirmative verbal predicate, have been described and explained in terms of at least two "cycles", i.e., hypotheses about the nature and the development of negative markers. The "cycle" hypothesis that has been most prominent is, without doubt, the "Jespersen Cycle". This hypothesis is associated with the Danish Anglicist and general linguist Otto Jespersen, who drew attention to a "curious fluctuation" (Jespersen 1917: 4) in the renewal of negative markers, with one negative marker first weakening, then being strengthened, "generally" by another word, not itself negative, but which in time becomes a negator too and suppresses the original negator. The process is schematized in (1).

(1) The "Jespersen Cycle"

negation is expressed by one negator

→

this one negator is strengthened by another word

→

the "other word" is interpreted as part of the now bipartite negator

→

negation is expressed by one negator again, but it is the word that was previously added to the old negator

This path is indeed a cycle, for the new negator can then also undergo this process. The term "Jespersen Cycle" was introduced by Dahl (1979), in the variant "Jespersen's Cycle", with a possessive *'s.* Other terms are "negation cycle" (e.g. Schwegler 1983) or "negative cycle" (e.g. van Gelderen 2011, Mithun 2016). The phenomenon was extensively studied even before 1917: Meillet (1912) used it to illustrate grammaticalization in the very paper in which he introduced the term "grammaticalization". The textbook illustration features French. Specifically, earlier French negated a finite verb with a preverbal *ne*, whereas modern French has this *ne* in the company of a postverbal *pas*, the original and still surviving lexical meaning of which is 'step'. With this original meaning the reference was to something small, which lent itself into an emphatic negative polarity use. In the context of negation *pas* turned negative polarity into a negation force and lost the emphatic sense. Now colloquial French may negate with only *pas*. (2) is a four stage representation of what happened in French.

(2) The "Jespersen Cycle" in French

ne   'not'

→

ne … pas   'not even a step'

→

ne … pas   'not'

→

pas   'not'

The scheme in (2) is, of course, a language-specific illustration. In French, both negators are syntactic elements; the first one is preverbal, and the second one is postverbal (relative to the finite verb) and it results from an emphatic minimizing use of the word *pas*. These properties are not essential, i.e., the negators may be affixes, the order with respect to the verb may be different and the origin

of the new negator need not be a word that means 'step' or even a minimizer (the English ancestor to 'not' and counterpart to *pas* was a pronoun meaning 'nothing'). Furthermore, the representations in (1) and (2) are too simple, even for French. Thus (1) and (2) sketch the process in terms of four stages. However, the 'not at all' stage could be made explicit and one can add two intermediate stages: a stage in which *pas* is not obligatory yet and another stage in which *ne* is no longer necessary.

The second cycle is the "Negative Existential Cycle", so named by the first linguist to focus on it, viz. Croft (1991: 6), and later also called "Croft's Cycle" (e.g. Kahrel 1996: 73). The idea is that a language may develop a special negator for existential clauses like (3).

(3)   *There are black swans.*

The special existential negator may extend its use to standard negation and ultimately replace the original standard negator. The cycle is summarized in (4).

(4)   The "Negative Existential Cycle"

   one negator is used for both standard and existential negation
   $\longrightarrow$
   one negator is used for standard negation and another one for existential negation
   $\longrightarrow$
   one negator is used for both standard and existential negation, but it is the one that was previously only used for existential negation and so it is a "new" one

There is no textbook illustration and we are not aware of a language in which the full cycle is attested (see also Veselinova 2014). The scheme in (5) takes us to Tuvaluan (Polynesian), based on Veselinova (2014: 1345–1346); the third stage is hypothetical.

(5)   The "Negative Existential Cycle" in Tuvaluan [tvl]

   see is used both for standard and existential negation
   $\longrightarrow$
   see is used for standard negation and *seeai* (a fusion of *see* and an existence marker) for existential negation
   $\longrightarrow$
   seeai is also used for standard negation

Similar to (1), the representation in (4) is a simplification, not least because one can add intermediate stages. The stage between the first and second stage, for example, is the constellation in which existential negation is not the exclusive terrain of the special negative existential negator, because it allows constructions with the standard negator too.

In both cycles the last stage takes us back to the beginning.[1] We are dealing here with one notion of cyclicity. There is a second notion, a wider one, in which it is sufficient that when the language has reached a final stage, it can start a new cycle, but not necessarily with the negator of the last cycle. This is the perspective taken by van Gelderen (2011). It is also the perspective under which yet a third cycle comes up. This is the "Quantifier Cycle" (e.g. Willis et al. 2013: 36), first described as the "Jespersen argument Cycle" by Ladusaw (1993: 438) and subsumed under the Jespersen Cycle by Larrivée (2011). The phenomenon concerns the development of negative indefinites out of constructions with a negator and a non-negative word, via stages in which the latter becomes negatively polar and then negative.

(6) The "Quantifier Cycle"

a clausal negator combines with a non-negative word

→

the non-negative word which the clausal negator combines with becomes a negatively polar indefinite

→

the negatively polar indefinite that the clausal negator combines with becomes a negative indefinite

→

the negative indefinite occurs without the clausal negator

A textbook illustration takes us to French again. French *personne* 'nobody' ultimately derives from a word meaning 'person', which got restricted to negatively polar contexts. In negative contexts it first needs the support of the clausal negator and may change into a true negative indefinite – a pattern that has come to be known as "negative concord".[2] In colloquial French, *personne* is negative and can occur without *ne*. A four stage representation is given in (7).

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[1]The new first stage is not exactly the same as the old one, though. For French the first single negator stage has *ne* but the next single negator stage starts with *pas*. From this point of view, the Gabelentz term "spiral" (1891: 251), used by Meillet (1912: 394), is a better term.

[2]The term became standard since Giannakidou (1998), although we have to go back to Jespersen once more for an *avant la lettre* occurrence, not this time to Jespersen (1917), but to Jespersen (1922: 352).

(7)   The "Quantifier Cycle" in French

personne   'person'
→
ne … personne   'not anybody'
→
ne … personne   'not nobody'
→
personne   'nobody'

Like the earlier sketches of cycles, the sketch in (7) is language-specific and too simple. As to the language-specificness, note that the end stage has a pronoun that is semantically, but not morphologically, negative. This is not necessary. The English word *nobody* underwent a variant of the "Quantifier Cycle" too but *nobody* is morphologically negative.[3] Like the Jespersen Cycle, the "Quantifier Cycle" has led to an abundance of research. Since the "Quantifier Cycle" does not itself create standard negators, we will not focus on it. Importantly, the process shown in (7) is not a cycle in the sense that the fourth stage takes us back to beginning. But negative indefinites do show a real cycle, although in the case of *personne*, we have to look at a wider trajectory, starting from Latin *nemo* 'nobody' (cp. Gianollo 2018a: 208).

(8)   A "Quantifier Cycle" in Latin and French

Latin   *nemo* 'nobody'
                 →
Latin to French   *nemo* disappears, perhaps replaced by *nesun*
                 'not one', in turn replaced by a construction
                 with a negator and *personne* 'not a person'
                 →
French   *personne* 'nobody'

Here the first and the third stages have a negative pronoun. Curiously, the term "Quantifier Cycle" is not, as far as we know, used for this wider trajectory. Yet something like (8), we propose, shows a better use of this term.

In this paper we aim to improve our understanding of the three cycles insofar as they tell us something about the development of standard negation. In §2 we focus on the Jespersen Cycle, and in §3 on the Negative Existential Cycle. In §4

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[3]The notion of morphological negativity is tricky, cp. Haspelmath (1997: 130–133) on "dunno" indefinites, i.e., indefinites that have a negative component but are not semantically negative in the way *nobody* is.

we aim to come to a generalized model of a Jespersen Cycle. Subsections §4.1 and §4.2 discuss a few cases which illustrate the interaction between the two cycles. §4.3 presents a Positive Existential Cycle, which is another illustration of the interaction of the cycles, and §4.4 brings all arguments together in a model of a generalized Jespersen Cycle. Section §5 treats the relation between this cycle and the "Quantifier Cycle", both the classical version in (6) and (7) and its alternative shown in (8). Our conclusions are presented in §6.

2 Refining the notion of the Jespersen Cycle

In this section we show that analyses of the Jespersen Cycle encounter a terminological dilemma due to two definitions, and we suggest a solution. For most linguists, including ourselves, the most crucial stage in the simplified model of the Jespersen Cycle has been the third one. In other words, it is the switch from single to double negation that is crucial. There are two important implications.

First, a final stage with a return to a single negator is not crucial. Instead of this return to a single negator the language may get "stuck" in the doubling phase and never realize the potential of further development. It may also enter a fourth stage with three negators. This is illustrated in (9).

(9)   Mid 20th c. Brabantic Belgian Dutch [no ISO code] (Indo-European; Pauwels 1958: 454)
*Pas op da   ge   **nie en**   valt **nie!***
fit   on that you NEG NEG fall   NEG
'Take care that you don't fall!'

Cross-linguistically the tripling of negation is rare. In Vossen (2016: 344) tripling only shows up in 19 out of 1715 languages investigated, as against 383 languages with doubling and 418 languages with a postverbal negator that could be the result of a classic left to right Jespersen Cycle. However, we don't know how many of these postverbal negator languages really went through a Jespersen Cycle, nor do we know that these cycles took the classical left to right direction. In any case, in this paper we do not pursue tripling (see Devos & van der Auwera 2013) nor the even rarer quadrupling (only 3 languages in Vossen 2016: 343) or the very special quintupling (no languages in Vossen 2016, and only one in van der Auwera & Vossen 2017: 42).

Second, it is not sufficient for an element to join the first negator to fit into the second stage. This second element has to become a negator too. In Latin the negator *non* is a fusion of the negator *ne* with *oenum* 'one' and the latter

does not itself become a negator – this only happens to the univerbation. Thus Jespersen (1917: 14–15) assumes that *ne* was replaced by *non* without a doubling stage. Obviously, there was an intermediate stage with two elements but the second one does not itself become negative (10).

(10)   A cycle in Latin [lat]

    ne   →   *ne oenum*   →   *non*

Jespersen (1917) sets this trajectory apart from the "curious fluctuation" named after him later.

> Sometimes it seems as if the essential thing were only to increase the phonetic bulk of the adverb by the addition of no particular meaning, as when in Latin *non* was preferred to *ne, non* being according to the explanation generally accepted compounded of *ne* and *oenum* (= *unum*) 'one' (neutr.) (Jespersen 1917: 14–15).

Of course, it is not because Jespersen (1917) didn't see (10) as a manifestation of a Jespersen Cycle, that we, a century later, are forced to do this too. There are many other things that Jespersen didn't see and that we now recognize as a type of Jespersen Cycle. Unknown to Jespersen (1917) is doubling with a second element originating from a focus particle 'also, even', as with Amharic *−mm*; it is now given a Jespersen Cycle treatment by Sjörs (2015: 305–306, 349–350); Sjörs (2018: 341–343, 388–389) (cp. also Moyse-Faurie & Ozanne-Rivierre 1999: 69 on the Loyalty Islands languages Drehu and Nengone).

(11)   Amharic [amh] (Afro-Asiatic; Fridman, p.c.)
    *zare   ḳurs   **al**-bälla-**mm***
    today breakfast NEG-eat.PST.3M.SG-NEG
    'He didn't eat breakfast today.'

Jespersen was also not aware of the fact that negator status could accrue to a subordinator – as argued for the Arizona Tewa former subordinator *dí* by Kroskrity (1984) and explicitly integrated into the Jespersen Cycle by van der Auwera (2010: 83).

(12)   Arizona Tewa [tew] (Kiowa-Tanoan; Kroskrity 1984: 95)

    a. *he'i sen   na-mɛn-**dí**   'o-yohk'ó*
        that man 3.STAT-go-SUB 1.STAT-be.asleep
        'When that man went, I was asleep.'

b. *sen kʷiyó **we-mán-mun-dí***
   man woman NEG-3>3.ACT-see-NEG
   'The man did not see the woman.'

Negator status can also befall on the bareness of the lexical verb that goes with a Finnish negative, the so-called "connegative" form, which in dialectal Finnish (Miestamo 2005: 238) – and dialectal Estonian (Tamm 2015: 425–426) – can carry negation all by itself (the fourth stage of a Jespersen Cycle).[4] This is obviously quite different from the classical French type.[5]

Jespersen did not include in his fluctuation hypothesis the repetition of a clausal negator either, though he was aware of it (Jespersen 1917: 72–73). One of his examples is Swedish (13), where the doubling is emphatic.

(13) Swedish [swe] (Indo-European; Jespersen 1917: 72)
      ***Inte** märkte han mig **inte**.*
      NEG noticed he   me NEG
      'He didn't notice me.'

Jespersen (1917: 72) called this "resumptive negation". However, in the 35 years since Dahl (1979) it has become accepted practice to consider the copying of an identical negator to be a part of a Jespersen Cycle too – and we follow that practice. Somewhat related to this resumptive use – and even called that by Sjörs (2015: 359, 2018: 399) for South Arabian languages – is the integration of a "pro-sentence", i.e., a construction that corresponds to *No!*.[6] This type was not included in Jespersen's own account either, but it is now. Example (14) from the

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[4]The Uralicist's term "connegative" may be taken to say that this form of the verb is "not negative in itself" (Miestamo 2005: 82, Wagner-Nagy 2011: 56). It is indeed not morphologically negative, but neither is the French word *pas*, but like French *pas* it has become strongly associated with negation. The association is not complete though, neither in French nor in Finnish: there is still a French word *pas* meaning 'step' and the connegative form is often the same as the second singular imperative. Uralicists have not, to our knowledge, considered a connegative construction to illustrate Jespersenian doubling. The fact that in Finnish and Estonian dialects the connegative can mark negation by itself makes clear that a description in terms of a Jespersen Cycle is appropriate.

[5]Note that "the French type" is not only found in French. We find it in Italian dialects and a special case – with a so-called "partitive" element or an element meaning 'first' – is found in Vanuatu (Vossen & van der Auwera 2014: 72–74).

[6]Pro-sentences do not only serve as holistic denials. As Veselinova (2013: 111) shows, *not* in *Are you coming or not* is also a pro-sentence, i.e., a "sentence[s] with the same propositional content as the utterance of the preceding context" (Bernini & Ramat 1996: 89). However, for our purposes – and for those of Veselinova, as well as the authors in Hovdhaugen & Mosel (eds.) (1999), for who pro-sentences are important (see §4.2), only the denial uses matter. Schwegler (1988: 30) calls the pro-sentence use an "absolute negator" use.

Bantu language Lifunga shows both a sentence-external pro-sentential and a clause-internal use of a negator.

(14) Lifunga [bmg] (Atlantic-Congo; Djamba 1996: 143, Devos & van der Auwera 2013: 233)

    tɛ *na-í-mo-wɛn-ɛ*   ***tɛ***

    no 1SG-NEG-1-see-PRS NEG

    'No, I will not see him.'

Given that the term "Jespersen Cycle" now covers quite a few phenomena that Jespersen (1917) did not associate with a French type cycle that would later carry his name, we should return to Latin. Should one take the non-doubling *ne oenum* trajectory to be part of a Jespersen Cycle too? Schwegler (1983, 1988) would, even though his term was not "Jespersen Cycle" but "negation cycle" (cp. also Gianollo 2018a: 180). It is interesting to bring in Greek. The fate of Classical Greek is similar to that of Latin. The modern Greek standard negator is *den* and it derives from *ouden*, composed of the Classical Greek standard negator *ou* followed by a particle *de* 'even' and the numeral *hen* 'one'. The change from *ouden* to *den* is apparently a phonetic one (Willmott 2013: 303) – just like the development of Latin *non* to French *ne*. It is the change from *ou* to *ouden* that is relevant, for it is taken to have happened without doubling.

(15) A cycle in Classical Greek [grc]

    ou   'not'

    →

    ou de hen   'not even one'

    →

    ou de hen   'not'

    →

    ouden   'not'

Just like for Latin, the question is whether one should call this a Jespersen Cycle. Willmott (2013) stresses the differences between the Greek and French scenarios and decides against a Jespersen Cycle analysis, though she is aware of the similarities. More or less simultaneously, Chatzopoulou (2012), later also Chatzopoulou (2015, 2019), discusses the same data: her analysis is similar, but she prefers to redefine the concept of the Jespersen Cycle, and she explicitly does this so as to include both the Greek and the French scenario.

Since doubling is not the defining characteristic for a Jespersen Cycle for Chatzopoulou (2012), Chatzopoulou (2015, 2019) nor, *mutatis mutandis*, for Schwegler

(1983, 1988), it is important to see what they do consider to be crucial. For them, the defining features are emphasis, whether through doubling or fusion, and the later bleaching. This is a perfectly good definition,[7] but then they don't include scenarios such as the doubling that appears through the reinterpretation of subordination, as in Arizona Tewa, or non-finiteness (the connegative of dialectal Finnish and Estonian). So we are left with a terminological dilemma. A form-based definition of a Jespersen Cycle requires there to be doubling, whether it goes with emphasis or not. A meaning-based account requires emphasis, whether it goes with doubling or not. The embryo of the dilemma is the fact that Jespersen's textbook example of French fits both definitions. Arizona Tewa and Finnish as well as Latin and Greek only fit one definition. The dilemma can be solved in more than one way. One solution is simply to stick to one of two definitions. A second one is to drop the term "Jespersen Cycle" altogether. After all, we now know more about the "curious fluctuation" than in 1917 and Jespersen delivered neither the first nor the best early description. Meillet (1912), for one, beat him, and he was not the first either. In a somewhat obscure paper on Coptic, Gardiner (1904) makes a parallel between *pas* and Coptic *iwn'* 'certainly'. Earlier still, in the book that launches the term "sémantique", Bréal (1897: 22) assures us that "everybody knows what happened to the words *pas*, and *point*"' [our translation]. But then, the term "Jespersen Cycle" has been around for close to 40 years, everyone more or less knows what it is all about. However, there is an easy way to embrace both the meaning- and the form-based account: a more general definition that allows both accounts. What we then require of a Jespersen Cycle is that it deals with the genesis of a standard negator from a constellation that involves a standard negator and another element 'α', where α is either another negator (e.g. in Swedish) or a non-negative element (e.g. a minimizer like in French or a

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[7]We gloss over the problem of describing the nature of emphasis. In the last decade it has been proposed that emphasis has to be replaced or explained by notions of discourse presupposition or activation. Such accounts have been particularly prominent for resumptive negation, as in Brazilian Portuguese (Schwenter 2006) or Palenquero (Schwegler 1991), but they have also been offered for the textbook case of French (Mosegaard Hansen 2009, Larrivée 2010). We offer three considerations. First, in case notions of discourse presupposition or activation are to replace emphasis, this is fully compatible with our insistence that the term "Jespersen Cycle" covers a variety of phenomena, a variety more compatible with a plural "Jespersen Cycles" than with a singular (van der Auwera 2009). Second, it is no less possible that in some cases presupposition and activation will not so much replace emphasis but, to borrow Schwenter's term, "fine-tune" it. Third, accounts downplaying emphasis are found more with resumptive negation, and this fact is interesting. Resumptive negation is a matter of repeating a marker and this could simply serve to make the meaning clearer, which is not the same as making a negation emphatic. This analysis was offered for resumptive negation in Brabantic Belgian Dutch by van der Auwera (2009: 52), with reference to Pauwels (1974: 76).

subordinator like in Arizona Tewa). This constellation can further develop in two directions: (i) the negator and α fuse, the new element becomes a negator and it may replace the original negator, or (ii) if there is no fusion, then α, which is either negative from the start or has become negative by contamination[8] from the original negator, could replace this original negator. These developments may be prompted by emphasis or not. This is what we propose – and we will come back to it in §4, after we have discussed the Negative Existential Cycle and we have seen whether the new definition could encompass this too.

3 Refining the notion of the Negative Existential Cycle

After its introduction in Croft (1991) and a period where not much happened to it, the Negative Existential Cycle came within the purview of Veselinova (2010, 2013, 2014, 2015, 2016). Veselinova made at least three very important contributions. The first one is an endeavor to check the hypothesis on a wide range of language families. The second one is her finding that the Negative Existential Cycle is rarely completed. The third contribution is her claim that the mere fact that a language uses an existential strategy for both existential and standard negation does not itself constitute evidence for the Negative Existential Cycle yet. Thus in Bulgarian an invariable *njama* 'not.have' is used for both existential negation and future tense standard negation.

(16)   Bulgarian [bul] (Indo-European; Veselinova 2014: 1333, 2010: 204)

  a. ***Njama***   *div-i* *kotk-i*
    not.have.3SG.PRS wild-PL cat-PL
    'There aren't any wild cats.'

  b. ***Njama***   *da xod-ja* *na kino.*
    not.have.3SG.PRS to go-1SG.PRS to movies
    'I will not go to the movies.'

But the use of *njama* in standard negation is not due to an extension of the use of the existential negator. In Old Church Slavonic the positive future also availed itself of 'have' (as one option, https://lrc.la.utexas.edu/eieol/ocsol/50#grammar_-1014). What we see therefore is a decrease in the use of 'have' for the future and

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[8]The "contamination" metaphor goes back to at least Bréal (1897: 221–226). It is better than the more sober "reinterpretation" because reinterpretation can happen through a range of language external or internal factors, while "contamination" nicely captures that the original meaning disappears under the influence of another element in the clause, viz. the negator.

a domain expansion of 'have' in the realm of expressions of existence (Veselinova 2010: 203–204, but compare Veselinova 2014: 1336–1337, 2016: 157). So on top of the observation that a strategy is used for both existential and standard negation, we ideally have diachronic information on whether the construction originated in existential or in standard negation. This information can be direct (language-internal) or indirect (from comparing related languages) or even just etymological: a negative existential that is a fusion of standard negator and an existential marker and that is used for both existential and standard negation is bound to have started in the existential domain.

In what follows, we focus on a problem with the third stage of the Negative Existential Cycle. This is the stage in which the existential negator, originally restricted to existential negation, has come to be used for standard negation. Let us illustrate it with Tongan (cp. Croft 1991: 12, Veselinova 2014: 1342).

(17) Tongan [ton] (Austronesian; Veselinova 2014: 1342, Broschart 1999: 101, 104)

    a. *'oku **'ikai** ha me'a*
        PRS ??? NSP thing
        'There is not anything.'

    b. *na'e **'ikai** ke kata 'a Pita*
        PST ??? SUB laugh ABS Pita
        'Pita didn't laugh.' ('[It] was not that Pita laugh[ed].')

We have purposely not yet glossed the occurrence of *'ikai* in both examples. Croft's gloss for the (17a) type of example is 'NEG.EX', which makes sense, for the sentence could not be more negative existential. Broschart (1999: 101), Veselinova's source linguist, provides 'It is not that there is anything' as the literal translation. For the example of the (17b) type Croft's gloss for the negator is 'NEG(EX)'. 'NEG(EX)' is to indicate that we are dealing with a "polysemy between negative existential meaning and verbal negation" (Croft 1991: 12). Since (17b) illustrates verbal negation, one might argue that *'ikai* permits the 'NEG' gloss, i.e., the gloss for the standard negator, and 'NEG' is in fact the gloss that Veselinova (2014: 1342), following Broschart (1999: 104), offers for (17b). But her literal translation of this sentence '[It] was not that Pita laugh[ed]' (in line again with Broschart 1999: 104) is a little confusing then, for it rather asks for a 'NEG.EX' gloss. To solve this problem we suggest that the third stage of the cycle should be conceived of as the "existentialization" of standard negation. Table 1 represents the three analyses, in a three stage format. We use underlining to show that the

Table 1: Comparison of three analyses (Croft 1991, Veselinova 2014, this paper). "std.": standard; "exist.": existential.

construction	Croft 1991		Veselinova 2014		this paper	
	std.	exist.	std.	exist.	std.	exist.
marker	NEG	NEG	NEG	NEG	NEG	NEG
	→	→	→	→	→	→
	NEG	NEG.EX	NEG	NEG.EX	NEG	NEG.EX
	→	→	→	→	→	→
	NEG(EX)	NEG.EX	NEG	NEG	NEG.EX	NEG.EX

negators of the third stage have the same form as the NEG.EX of the second stage.

In our view, the third stage has standard negation using an existential negator. What has to happen now – for the cycle to continue – is that the existentialized standard negation gets "de-existentialized". This is what we arguably see in Spoken Kannada. In this language both types of negation use *illa,* but while this is a free form for existential negation, it is a suffix for standard negation.

(18)   Spoken Kannada [kan] (Dravidian; Veselinova 2016: 144, Sridhar 1990: 111, 112)

    a.   *khaja:neyalli haNa*   ***illa***
        treasury.LOC money NEG.EX
        'There is no money in the treasury.'

    b.   *anil ka:le:jige*   *ho:gu-vud-**illa***
        Anil college.DAT go-NPST.GER-NEG
        'Anil doesn't/won't go to college.'

Note that we have glossed the free form with 'NEG.EX' and the suffix with 'NEG', in agreement with Veselinova and Sridhar and they do not provide (18b) with a literal gloss of the type 'it is not that Anil goes / will go to college'. At the risk of overinterpretation of the glosses, we assume that there is nothing existential about (18b) and that it really just means 'Anil doesn't/won't go to college'. Suffixal *-illa* has thus been de-existentialized. The free form, however, is still existential. This de-existentialization in the domain of standard negation is worthy of a stage of its own. Thus, with application to Kannada, a fourth stage of (19) has suffixal *-illa* as a standard negator and the free form *illa* as an existential negator. In a

hypothetical fifth stage, existential negation could avail itself of *-illa*, the standard negator, together with some marker of existence.

(19)

standard	existential
NEG	NEG
→	→
NEG	NEG.EX
→	→
NEG.EX	NEG.EX
→	→
NEG	NEG.EX
→	→
NEG	NEG

The claim that there are additional stages is a little tricky. Both Croft and Veselinova have in fact included transitional stages in their stage model. These are stages which have both NEG and NEG.EX for either standard or existential negation, but they may not be equivalent: the choice could depend on tense or one option could carry emphasis. These kinds of intermediate stages have to be accepted in the basically five-stage model of (19) as well. Also, it does not follow that every standard negation structure with a lexical verb and something like an auxiliary is a negative existential structure. Finnish is a good example. Example (20) has a negative auxiliary and the so-called "connegative", but this structure illustrates standard negation. So the negative auxiliary is not a negative existential, though it might originate in one (see Veselinova 2015: 577 for references), and though it is also used for existential negation, it then combines with a 'be' verb in the connegative form.

(20) Finnish [fin] (Uralic; Vilkuna 2015: 476)
    *Täällä **ei** **ole** yhtään kahvi-a.*
    here   NEG.3SG EX.CNG at.all   coffee-PART
    'There is no coffee here.'

4 Towards a generalized Jespersen Cycle

In this section we look at the interaction between the Negative Existential and Jespersen Cycles. First, we discuss to what extent a Negative Existential Cycle can involve Jespersenian doubling and resumption (§4.1). Then we look at a specific claim about East Futuna (§4.2) and we pair the Negative Existential Cycle with

a Positive Existential Cycle (§4.3). In §4.4 we offer a generalized Jespersen Cycle, even more general than what we ended up with at the end of §2.

4.1 Negative Existential Cycles with doubling

The proposal for a Negative Existential Cycle came much later than that for a Jespersen Cycle. It is therefore appropriate to check whether any manifestation of the former is in fact a manifestation of the latter, under either the form-based, the meaning-based or the general definition. We will first discuss the original proposal by Croft (1991) and then the detailed studies by Veselinova (2010, 2013, 2014, 2015, 2016).

In Croft (1991) there is no explicit mentioning of the Jespersen Cycle, but the implicit one is very strong and it concerns the French type. A Negative Existential Cycle, so Croft claims, is that a special existential negator may be used in combination with a standard negator. According to him this is one of the two ways in which an existential negator can enter the domain of standard negation. The other way is replacing the standard negator partially or completely (Croft 1991: 9–11).[9] Judging from later work by Veselinova, who only discusses the replacement strategy, the latter would seem to be the more important type of Negative Existential Cycle, but the focus here is on the doubling type.

The reason why, according to Croft (1991: 13–14), an existential negator may combine with a standard negator, is that this combination makes the utterance emphatic. He illustrates this with two examples. One is from the Australian language Mara (Heath 1981: 289).

(21)   Mara [mec] (Mangarrayi-Maran; Croft 1991: 14, Heath 1981: 289)

    a. ***ganugu** wunayi*
       NEG   see.him
       'He did not see him.'

    b. ***ganugu** wunayi **mal'uy***
       NEG   see.him NEG.EX/EMPH
       'He did not see him at all.'

Croft then goes on to say that the emphasis may bleach and that this process "is the same […] that has occurred in the evolution of the French negative *pas*" (Croft 1991: 14), with reference to the pre-Jespersen account of Meillet (1912) as well to

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[9]Partial and complete replacements are counted separately by Croft (1991), so in that way he does not have two but three pathways of intrusion.

Schwegler (1983, 1988). This counts as an acknowledgment that this kind of Negative Existential Cycle is a subtype of a Jespersen Cycle. More specifically, with (21b) we are in the doubling stage of a Jespersen Cycle. Interestingly, the Mara form for the Negative Existential also serves as a negative pro-sentence, a usage which, as Veselinova (2013: 127) has shown, is cross-linguistically rather frequent. So it is not clear whether the form that doubles is indeed the existential negator as such or the negative pro-sentence. In the latter case Mara joins languages like Lifunga, illustrated in (14), and it is again an illustration of a Jespersen Cycle.

The second example of Jespersenian doubling comes from the Wintuan language Wintu.

(22) Wintu [wit] (Wintuan; Croft 1991: 10, Pitkin 1984: 197)
      ʔelew-*be:sken*   *hara:-wer-**mina***
      NEG.EX-YOU.IPFV go-FUT-NEG
      'You were not supposed to go.'

For our purposes, there are two interesting things about the Wintu case.[10] First, the presence of the preverbal negator is said to "reinforce" (Croft 1991: 10) the original negator, but "reinforce" probably doesn't mean "make emphatic". The translation in Croft and in the source figures non-emphatic negation. This makes sense in a form-based Jespersen scenario, but no less in a meaning-based one, for Wintu may illustrate what Mara does not show: the bleaching of the emphasis. Second, the source grammarian Pitkin (1984: 197) makes clear that the negative existential also serves as a negative pro-sentence. So, once more, there is a suspicion that it is latter use that is crucial in this process of Jespersenian doubling.

As mentioned already, Veselinova (2010, 2013, 2014, 2015, 2016) does not discuss the Mara–Wintu scenario, and this strongly suggests that it is relatively rare. Croft does not give any other languages either. We do, however, find other candidates for a Jespersenian doubling analysis with a negative existential in the Munda languages Juang (Anderson 2007: 150–151) and Korku (Nagaraja 1999: 64–67, Zide 2008: 279–281), the isolate Urarina and also in the Takanan language Tacana. For example, in Tacana standard negation with a finite lexical verb almost always uses two negators.[11]

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[10]Croft (1991: 10) points out that Pitkin (1984) has no example of a negative existential use, which is a bit problematic. Also, the second negator is itself also a negative existential in origin. Croft (1991: 10) argues that it is older than the first one: *ʔelew* is a separate word, one that is a finite verb furthermore, and the second is morphological. This makes sense.

[11]Guillaume (2022 [this volume]) signals only one case in his corpus with the postverbal negator omitted.

(23) Tacana [tna] (Takanan; Guillaume 2017, 2016)

    a. ***Aimue** e-juseute-ta=**mawe**/**mue** beni=ja*
       NEG   FUT-fell-A3=NEG   wind=ERG
       'The wind will not fell (the trees).'

    b. *Kwati=mu   **aimue** tsu'u.*
       firewood=CNTR NEG.EX still
       'There is no firewood yet.'

The postverbal negator (*mawe/mue*) is the oldest one: it is shorter, bound and phonologically dependent, it has variant forms and occupies a rigid position in the construction (Guillaume 2016, Guillaume 2022 [this volume]). And it is also formally similar to negators in the other Takanan languages. The preverbal negator is an innovation in Tacana only (i.e., it is not found in the other Takanan languages). It is identical to the existential negator and, in our view (van der Auwera & Krasnoukhova 2018) the etymology gives us 'be.without', which suggests that the negative existential use predates the standard negator use. Its presence in standard negation, Guillaume (2016) suggests, was due to emphasis. Interestingly, this form, like in Mara and Wintu, also serves as a pro-sentence (Guillaume 2016, 2017). And even more interesting is the fact that the lexical verb may be non-finite, in which case there is an optional finite auxiliary, and in this construction the newer negator is the sole exponent of negation.

(24) Tacana [tna] (Takanan; Guillaume 2017)
    *Biame **aimue**=da dia (a-ta-ina).*
    but   NEG=TOP eat AUX.TR-A3-PST.HAB
    'But (the jaguar) would not eat it.'

We thus have a reasonably standard Jespersen Cycle with arguably emphasis-driven doubling and even with the new negator forbidding the company of the old negator, in one type of construction. And, importantly, the new negator has the form of the existential negator, which is also the negative pro-sentence.

In the isolate Urarina, standard (non-emphatic) negation is encoded by a single postverbal negator, which has different allomorphs depending on person, conjugation class and other factors (Olawsky 2006: 484). However, Urarina has two constructions which are regarded as "emphatic" standard negation. One of these constructions involves the negative existential *nijej* (*ni-ji* 'be-NEG') before the lexical verb that is already marked by a negator (25a). And thus we have doubling.

The negative existential use is shown in (25b).[12] A negative reply in Urarina has a different form: *aji*, composed of an auxiliary *aja* and a negative suffix *–i* (Olawsky 2006: 400).

(25)   Urarina [ura] (isolate; Olawsky 2006: 554, 556)

    a.   *nii hãʉ*   ***nijej*** *beraj-ɲaa   najɲ-**ene**   rai   komasaj*
        that because NEG.EX care.for-INF be.able-NEG.3E POSS wife
        'Therefore, his wife could not look after him at all.'

    b.   *nukue seti-aka=ne   **nijei** ate taba-j*
        creek fish-1DU=COND NEG.EX fish be.big- NMLZ
        'When we fished in the creek, there were no big fish.'

Veselinova, following leads by Croft (1991: 21) and Schwegler (1988: 38–39), also discusses the role of the negative pro-sentence, yet not in a scenario of first doubling up a standard negator and later potentially being the sole exponent of negation, but in a scenario of more directly replacing the standard negator. One of the languages brought in to support this is Sino-Russian Pidgin (Veselinova 2014: 1337, 2016: 155–156).[13] In this language the standard negator is *netu*, which is related to Russian *net*. Russian *net* is used both as negative existential and as negative pro-sentence, with the latter use being more prominent than the negative existential use, according to Veselinova (2014: 1337). The idea is that the greater prominence of the pro-sentential use of *net* could explain why it is the related form *netu*, rather than *ne*, that functions as the standard negator in Sino-Russian.

(26)   Sino-Russian Pidgin [no ISO; glottolog code: kjac1234] (Pidgin;
    Veselinova 2014: 1337, Stern 2002: 19)
    *naša ego ponimaj   **netu***
    1PL   3SG understand NEG
    'We don't understand him.'

There are two problems with this hypothesis. First, Russian has *netu* too, in stylistically lower speech, but it is only used as an existential one, not as a pro-sentential one. It is easier to assume that Sino-Russian Pidgin borrowed *netu*.

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[12]Olawsky (2006) uses two different transcriptions of the negative existential in order to distinguish the meanings; specifically, he notes that the distinction between *nijej* encoding emphasis 'not at all' and the negated copula *ni-ji* encoding negative existence in the transcriptions is "not based on phonological differences, but in order to distinguish the two meanings" (Olawsky 2006: 555, footnote 65). Since there is no difference in phonology, we reproduce the examples using one form *nijej*.

[13]The other one is the Austronesian language Kapingamarangi, but we only know its synchrony. For Sino-Russian Pidgin we do have some relevant diachrony, viz. that of Russian.

Second, even if we grant that the Russian input for the Sino-Russian Pidgin standard negator *netu* is indeed the pro-sentential *net*, it is not clear that it entered Sino-Russian Pidgin standard negation in its pro-sentential role instead of just being a prominent exponent of negation in general. It is interesting to compare Sino-Russian Pidgin with English Creoles. In the overwhelming majority of the English Creoles the typical and sometimes the only standard negator is *no* rather than a form related to *do* combined with *not* (van der Auwera 2017: 140–141). (27) is an example from Ghanaian Pidgin English, nicely contrasting with Ghanaian English in (28).

(27)   Ghanaian Pidgin English [gpe] (Indo-European; van der Auwera 2017: 140, Huber 2012b: 398)
       *dɛ pikin **no** dè spik*
       the child NEG PROG speak
       'The child is not speaking.'

(28)   Ghanaian English (van der Auwera 2017: 140, Huber 2012a: 385)
       These demonic things …. I *don't* believe it.

The Ghanaian Pidgin English speakers use *no*, which has the same form as pro-sentential *No!* But what is so attractive about pro-sentential *no* to have it as a standard negator? Is it its pro-sentential semantics or is it just its saliency and – no doubt – frequency as an exponent of negation? We propose the second answer.

4.2 Interaction of the two cycles in East Futuna?

The negation in Polynesian East Futuna has given rise to a claim on the interaction of the Negative Existential and Jespersen Cycles. The original claim is explicit in Mosel (1999: 18), it is implicit in Moyse-Faurie (1999: 122), and the basic idea is endorsed by Veselinova (2014: 1359–1364). In what follows we start from Veselinova (2014).

In East Futuna an existential negator *le'ai* is made up of a standard negator *le* and an existential element (*i*)*ai*. There is also a reduced form *le'e*. *Le'ai* and another reduced form, *e'ai*, function as pro-sentences and *le'e* has intruded the domain of standard negation,[14] which qualifies the trajectory as an instance of the Negative Existential Cycle.

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[14]Veselinova (2014: 1364) describes the intrusion only for forms with -*se*, but the analysis also contains example (29b), which is a standard negation use without -*se*.

(29) East Futuna [fud] (Austronesian; Veselinova 2014: 1362, 1361, Moyse-Faurie 1999: 117, 1997: 98)

    a. *e'a e* **le'e** *se lāisi*
       no TAM NEG.EX INDF rice
       'No, there is no rice.'

    b. *e* **le'e** *'au a Setefano ki le fai o le ga'oi*
       TAM NEG.EX come ABS Stefano OBL DET make POSS DET work
       'Stefano is still not coming to do the work.'

What is special about East Futuna is that there are also the more complex forms *le'aise* and *le'ese,* which function in the existential domain and also intrude into the verbal domain.

(30) East Futuna [fud] (Austronesian; Moyse-Faurie 1999: 126, 122, Veselinova 2014: 1361)

    a. *ko le mako ko le tapaki e* **le'aise** *ko se mako tefua ma*
       PR DEF dance PR DEF tapaki NSP NEG.EX PR IND dance alone for
       Futuna
       Futuna
       'The tapaki dance is not a special dance for Futuna.'

    b. *na* **le'aise** *kau ano o mako i nānafi*
       PST NEG.EX 1SG go COMP dance OBL yesterday
       'No, I didn't go dancing yesterday.'[15]

The element *se*, which is added to the simple negators, is an indefinite singular article (Moyse-Faurie 1999: 122).[16] But then there is also reduction, for standard and existential negation allow the complex forms *le'aise* and *le'ese* to reduce to *se.*

(31) East Futuna [fud] (Austronesian; Veselinova 2014: 1360–1362, Moyse-Faurie 1999: 119, 122)

    a. *… e* **se** *na'a ai se tosi …*
       GENR NEG.EX be.there ANAPH INDF book
       '… there are no books …'

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[15]The English translation has a pro-sentential *No*, but the East Futuna original does not. The *No* must be meant to show that a negation with *le'aise* is stronger (Moyse-Faurie 1999: 122) than one with *le'ese.*

[16]It is not clear whether the article is indefinite or non-specific. Mosel (1999: 18) and Veselinova (2014: 1363) call it "non-specific". Moyse-Faurie (1997: 45) calls it "non-specific" too, but later in the grammar it is called "indefinite" (Moyse-Faurie 1997: 88).

b. *e*   ***se***   *tio a*   *tātou*   *ki ke fatu*
GENR NEG.EX see ABS 1PL.INCL OBL DEF stone
'We do not see the stone.'

For Moyse-Faurie and Mosel, the fact that an erstwhile indefinite article now functions as a negator shows that we are dealing with a Jespersen Cycle. For Veselinova (p.c.) there is a Jespersen cycle because the *le'aise* and *le'ese* are taken to carry emphasis, which then got lost together with phonetic substance. But these claims are not obvious. Much depends on what is meant with the notion of Jespersen Cycle and this has to be made explicit. As argued in §2, most linguists take a form-based approach of the Jespersen Cycle and require doubling but in East Futuna there is no doubling. The East Futuna facts are thus similar to the Greek ones. In Greek a complex form *ouden* lost the negative morpheme and the emphasis, and it is the remains of a focus particle and a numeral that now function as a negator. In East Futuna the complex forms *le'aise* and *lé'ese* lost the negative morpheme and the emphasis, and it is the remains of an indefinite article that now function as a negator. As for East Futuna *se* to count as the result of a Jespersen Cycle, one can thus use the semantics-based account, the one that allows both doubling and fusion but requires an emphatic stage, or the more general account, one that requires neither doubling nor emphasis.

Of these two accounts, the general one seems better. The argument for the extended notion has so far been, for both Schwegler and Chatzopoulou, that the second part of the fusion had an emphatic use. This is very clear in Greek as well as in Latin. It is less clear in East Futuna. The *-se* part is an indefinite or non-specific article. The latter is obligatory for noun phrases in the scope of negation and it is therefore "a frequent collocate of the existential negator" (Veselinova 2014: 1348). In the fusion, *se* then "reinforced" the original negator – "reinforce" is the term in Moyse-Faurie (1999: 122) – but it is not clear that it is meant in a semantic sense. According to Mosel (1999: 18), followed by Veselinova (2014: 1363), the reinforcement would indeed be semantic: the reinforcement is to yield emphasis. But note that it is an indefinite article that fuses, and not, for example, the numeral and pronoun *tasi* 'one' (Moyse-Faurie 1997: 27, 35, 1999: 121). A similar fusion is reported for Cèmuhî and Paicî (Moyse-Faurie & Ozanne-Rivierre 1999: 63) as well as for Hawaiian (Veselinova 2014: 1348), each time with an indefinite article. For Hawaiian the fusion does not appeal to emphasis: "consequently, *a'ole* [the standard negator] must have become fused with *he* [the indefinite article] as a result of frequent collocation" (Veselinova 2014: 1348). In short, for the East Futuna development of the *se* negator to count as a Jespersen Cycle it cannot be the one embraced by Schwegler and Chatzopoulou. The story of the *se* negator

does, however, fit the general definition argued for in §2: the development of a negator is a Jespersen Cycle, if it results from the interaction of two elements, at least one of which is a negator.

4.3 A Positive Existential Cycle?

Before we clarify the general concept of a Jespersen Cycle more, it is useful to point out that there is more to the interaction of existence and negation than what has been sketched in the above. First of all, in the Negative Existential Cycle proper, the one without doubling, we have so far seen a negator fusing with something else, typically a positive existential. A fusion of a negator and a positive existential is not, however, the only strategy to make negative existentials, and it does not seem to be the most frequent one. In a worldwide overview Veselinova (2013: 137) points out that languages may recruit negative existentials directly from the lexicon, more particularly from words with a negative content, such as 'absent' or 'lack'.[17] For the 42 languages for which she reports the origin, 25 have this origin vs. 17 that involve fusion. We come back to direct recruitment in §4.4.

Second, we have seen fusion in Latin and Greek Jespersen Cycles. These Cycles are a little different from the French one, in that the element that combines with negation does not itself turn into a standard negator. It is the fusion that turns into a standard negator. This begs the question of whether there could be a cycle in which the positive existential and the negator do not fuse, but in which the latter changes the meaning of the former. What we are after is a constellation in which a negator turns an existential marker into a negator, a new one, with the possibility of ousting the old one. This is precisely what van der Auwera & Vossen (2017) have argued for in their study of negative doubling in the Kiranti languages.

In most of the Kiranti languages there is a preverbal negator with a solid Tibeto-Burman ancestry, viz. *ma*. In the eastern Kiranti languages there is often a postverbal negator with the form *ni* or a similar form. It usually co-occurs with the preverbal *ma* and it has no clear negative etymology.

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[17]The development of standard negator out of a privative construction ('without'), argued for Arawak by Michael (2014: 285–288), could be seen as a subtype. There could furthermore be a third origin, no doubt rare, viz. a word of which the meaning was originally positive but which got contaminated by a negator that later disappeared – the typical Jespersen scenario. At least in Kulina (Arawan; [cul]) the negative pro-sentence, which derives from a negative existential, only utilizes a word that originally meant 'show' (Dienst 2014: 236; p.c.) and which turned negative under the influence of a negator (Krasnoukhova & van der Auwera 2019).

(32)   Dumi [dus] (Tibeto-Burman; van Driem 1993: 288)
    ɨ-mu-ʔa   *tida:m-tida:m-mil ryekbo **mə-ɨil-ni-nə***
    their-mother-ᴇʀɢ child-child-ᴘʟ   three   ɴᴇɢ.ᴘsᴛ-raise-3ᴘʟ-ɴᴇɢ
    'Their mother did not raise the three little ones.'

Forms like *ni*, however, do show up in Tibeto-Burman outside of Eastern Kiranti as various sorts of 'be' verbs (Lowes 2006), as in Meithei (Chelliah 1997: 249–250, 297), with an ascriptive use in (33a) and an existential one in (33b).

(33)   Meithei [mni] (Tibeto-Burman; Chelliah 1997: 297)
    a. *phurit-tu   ə-ŋəw-pə-**ni***
        shirt-ᴅɪsᴛ ᴀᴛᴛ-white-ɴᴍʟᴢ-ᴄᴏᴘ
        'That shirt is the white one.'

    b. *əy-nə phi ə-du   ləŋ-thok-ləbə-**ni***
        I-ᴄɴᴛʀ cloth ᴀᴛᴛ-ᴅɪsᴛ throw-out-having-ᴄᴏᴘ
        '(It is that) I have thrown out that cloth.'
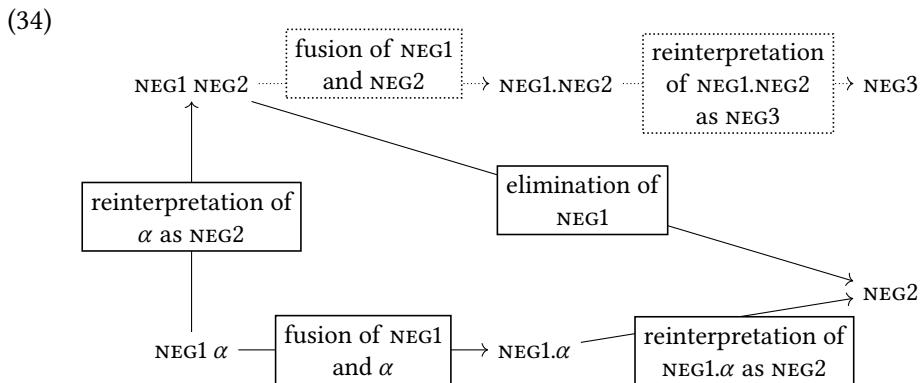
In van der Auwera & Vossen (2017) it is argued that the *ni* was gradually reinterpreted as a negator. The semantics motivating the reinterpretation is that the negative proposition was followed by an emphatic *so it is* phrase. This lost the emphasis and got contaminated with negative meaning, first doubling the earlier negator with a potential of doing the negative work on its own. Given that it is a positive 'be' verb that will become a negator, one could call it as "Positive Existential Cycle".[18] And given that it involves a progression from single to double and back to single negation, it is no less of a Jespersen Cycle.

    The case for a Positive Existential Jespersen Cycle does not only rest on the analysis of Kiranti *ni*. Within Kiranti itself there is more evidence, the clearest case being a negative past verbal suffix *yuk/yukt* (Doornenbal 2009: 163), which co-occurs with a negative prefix and which derives from a copula (Doornenbal 2009: 276) and still is one (Doornenbal 2009: 119). Outside of Kiranti, candidates for a Positive Existential Jespersen Cycle are the Oceanic language Lewo spoken in Vanuatu (Early 1994a: 425–426, 1994b: 79–80) and the languages of the Awju group (Wester 2014: 127–140) as well as Kaugel (Head 1976: 152–153), spoken in New Guinea.

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[18]The term is a bit misleading. The Positive Existential Cycle is still negative in the sense that it produces a new negator. The term identifies the source as a positive existential, just like the term "Negative Existential Cycle" identifies the source as a negative existential.

4.4 A generalized Jespersen Cycle

We are now ready to return to the most general conception of the Jespersen Cycle. The idea is that a standard negator may find itself co-occurring with something 'α' and then either fuse with it or contaminate it with negativeness. If α is itself a negator, the same or another one, we get doubling. In case α is not a negator, there are two alternatives with respect to trajectories leading to a standard negator. Either the standard negator turns α into another negator (i.e., the standard negator contaminates α with negativeness) and we get doubling, or there is fusion. The first trajectory, the doubling-after-reinterpretation, is the more restricted form-based Jespersen Cycle. There may be emphasis and bleaching (as in French) or not (Arizona Tewa). In principle, there is nothing preventing the new standard negators to fuse and the result may then be a third negator. We do not know, however, of any such cases and we use dotted lines in the representation in (34).[19] The second trajectory, the one involving fusion of the negator and α, has two outcomes, depending on the nature of α. If α is an existential verb, we get a (subtype of the) Negative Existential Cycle. If α is a minimizer – the Latin and Greek case – we get the more restricted meaning-based Jespersen Cycle. The scenarios are represented in (34).

(34)
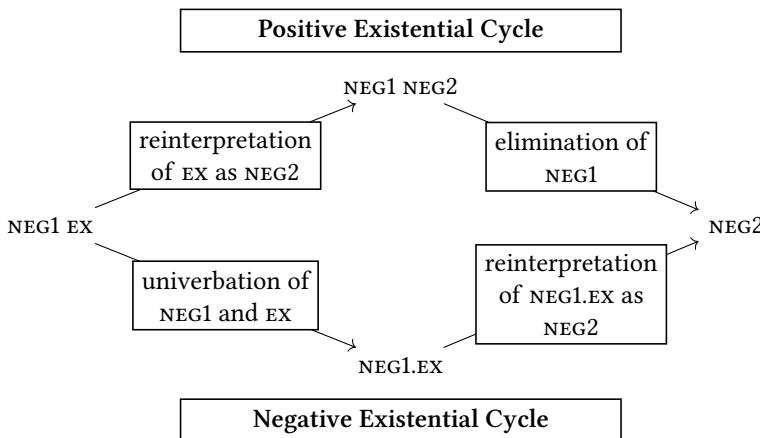
Note that the figure in (34) includes the end stages with one new negator, but we do not require a language to have reached it for us to claim that the language is involved in a Jespersen Cycle: the language may get stuck in an intermediate stage or the end stage may show tripling. In that sense (34) does not say

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[19]Fusion of standard negators is attested (Vossen 2016: 18 on the Austronesian languages Lewo and Nese; Devos et al. 2010 on the Bantu language Kanincin), but only in cases of tripling and quadrupling.

enough. In another sense, it may say too much, for not every type of α has been attested with both a reinterpretation and a fusion scenario. When α is an existential marker, we do have both scenarios, i.e., a Positive Existential Cycle for reinterpretation and a Negative Existential Cycle for fusion. The two scenarios are schematized in (35).
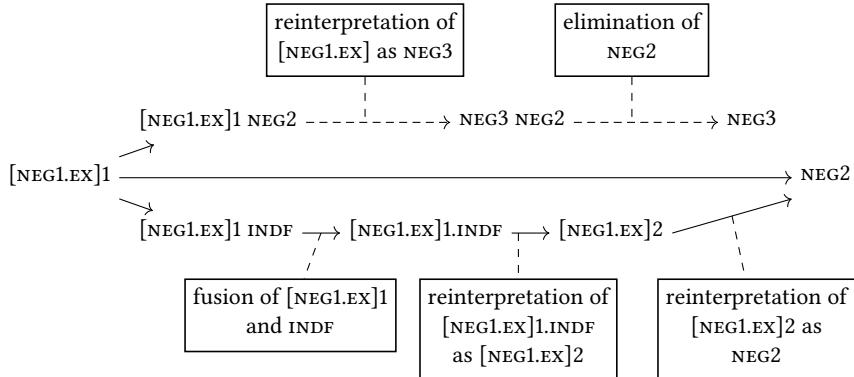
(35)

For most α's, however, only the reinterpretation scenario has been attested. Thus, in Arizona Tewa the subordinator *dí* turned into a negator through the influence of the negator *we*, but we haven't seen a language in which an original negator like *we* is adjacent to a subordinator like *dí* and delivers a new negator *wedí*. So in this sense (34) says too much. But in another sense, (34) – or (35) for that matter – does not say enough. For one thing, neither (34) nor (35) show that a language may have negator doubling followed by tripling (and even quadrupling and quintupling); these complications were already excluded from the paper in §1. For another thing, we do not expand the simple 3 stage model of a classic French style Jespersen Cycle into a model with more stages, nor do we include the five stages of the Negative Existential Cycle, represented in (19) in the above. However, we need to come back to the Mara, Wintu, Tacana and East Futuna cases. They are also not provided for in (34) or (35) yet. Like in these simpler scenarios, Mara, Wintu, Urarina, Tacana and East Futuna show doubling and fusion. In Mara, Wintu, Urarina and Tacana the negative existential combines with a standard negator, it may become a standard negator too with a further potential to oust the old standard negator. For East Futuna, the negative existential combines with something else, viz. an indefinite article. They fuse and combine to form a new negative existential and later a new standard negator. In (36) the

middle lines show the simple Negative Existential Cycle; the ones on the top represent Mara, Wintu, Urarina and Tacana and the ones below represent East Futuna.

(36)

reinterpretation of [NEG1.EX] as NEG3	elimination of NEG2

[NEG1.EX]1 NEG2 - - - - - - - - → NEG3 NEG2 - - - - - - - - → NEG3

[NEG1.EX]1 —————————————————————→ NEG2

[NEG1.EX]1 INDF —→ [NEG1.EX]1.INDF —→ [NEG1.EX]2

fusion of [NEG1.EX]1 and INDF	reinterpretation of [NEG1.EX]1.INDF as [NEG1.EX]2	reinterpretation of [NEG1.EX]2 as NEG2

Finally, these schemas do not exhaust the paths that languages make use of to make negators. First, a negator may arise not only through the influence of a negator that is already in place, whether through contamination or fusion. It may be borrowed or calqued from other languages – and to the extent that what is borrowed or calqued is negative doubling, distinguishing this from a Jespersen scenario can be difficult (cp. van der Auwera & Vossen 2015). Second, we have also assumed that the negator that will fuse or contaminate and thus yield a new negator is a standard negator. In the cases discussed in the literature, this seems to be the case, but what could prevent a standard negator from arising from, say, a contamination of a minimizer through a non-standard negator like a derivational negator? Third, a negator may also be recruited directly from the lexicon (cp. van der Auwera 2010: 74). The source will be a word with negative content and the outcome could in principle be a standard negator, although we cannot give a good example (cp. van der Auwera 2010: 75, 90–91): the literature (e.g. van Gelderen 2011: 292–339) only shows cases which yield special negators, such as prohibitives or negators of relative, focus or cleft constructions (Givón 1973: 917) or, to wit, existential negators. As mentioned already, in Veselinova's (2013: 137) cross-linguistic survey of the origin of existential negators, the majority of languages for which the origin is known derive from a negative word and not from a fusion of the standard negator and some existential marker. For these negative existentials the dynamics described by Croft and Veselinova, and in §3 of this paper, are just as valid as for the negative existentials that derive from fusion. And,

importantly, these Negative Existential Cycles are not part of Jespersen Cycles, for the simple reason that they do not involve two things, at least one of which is a standard negator. The Negative Existential Cycle may thus serve inside the generalized Jespersen Cycle in the sense that we get from one standard negator to another one with fusion, but it need not.

5 The "Quantifier Cycle", similarities and links

We now turn to the "Quantifier Cycle", not for a full analysis but for describing the similarities and the links with the cycles that yield standard negators. As the introduction of the "Quantifier Cycle" as a "Jespersen Argument Cycle" by Ladusaw (1993: 438) already suggests, the "Quantifier Cycle" and the classical Jespersen Cycle are very similar. What Ladusaw had in mind was the similarity between French *pas* and *personne*, shown in (37) in a four stage format (cp. Gianollo 2018a: 263, 2018b).

(37)   *ne* 'not'   *personne* 'person'
         $\rightarrow$ $\rightarrow$
         ne … pas 'not any step'   *ne … personne* 'not any person'
         $\rightarrow$ $\rightarrow$
         ne … pas 'not'   *ne personne* 'nobody'
         $\rightarrow$ $\rightarrow$
         pas 'not'   *personne* 'nobody'
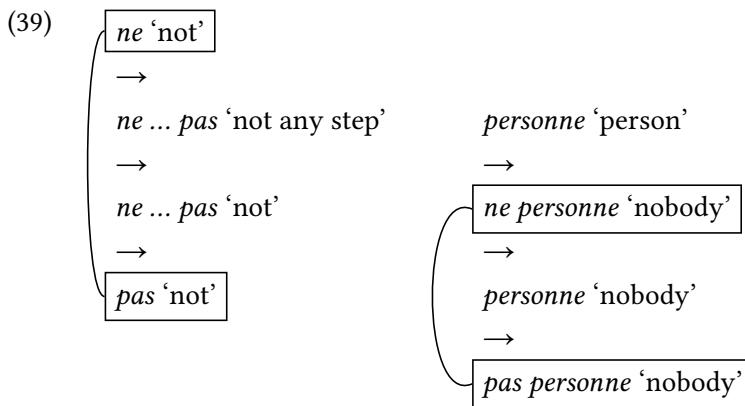
A first similarity is that both French *pas* and *personne* were once polarity neutral nouns – these uses prevail until today – and they both turned into negative polarity expressions on their way to becoming negative expressions (a process finished for *pas*). Second, these reinterpretations are mirrored by fusions. Different from French *pas*, Latin *non* involved fusion. Likewise, different from French *personne*, English *nobody* involved fusion. Third, the third stage is in both cases a kind of doubling, i.e., classical Jespersenian doubling for standard negation and so-called "negative concord" for the negative indefinites. Fourth, in both cases the doubling can get undone. Fifth, the undoubling stage need not be a final stage. *Pas* can be the beginning of a new Jespersen Cycle and we are back at stage 1. For the pronouns there is cyclicity too, but in the version of the cycle shown in (37) we go back to the preceding stage: a standard negator is added and we return to negative concord. Interestingly, in the well-known cases of Canadian French and Brabantic Belgian Dutch (e.g. van der Auwera & Van Alsenoy 2016: 499) the standard negator that is added now is not the one that fell in disuse. (38)

is an example from Canadian French, in the literature since at least Muller (1991: 262–263).
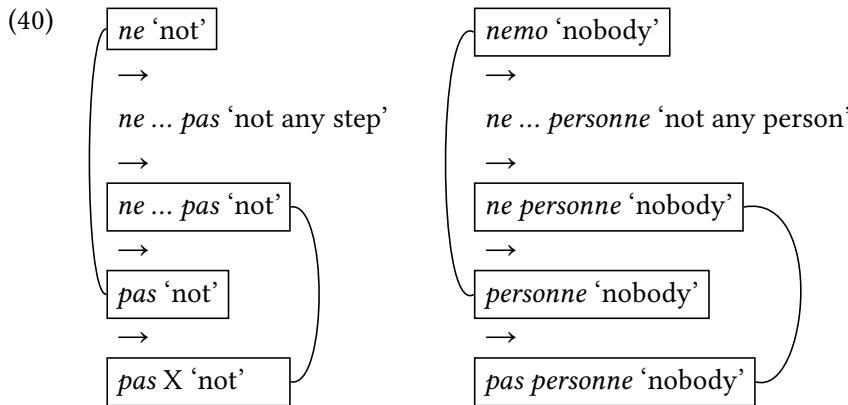
(38) Canadian French [no ISO code] (Indo-European; Muller 1991: 262)
     *… y   a   **pas personne** en ville*
        there has NEG nobody   in town
     '[…] there is nobody in town'

(39) shows the cyclicity based on the modelling of (38).

(39)

| *ne* 'not' |
| → |

ne … pas 'not any step'   *personne* 'person'
→   →

ne … pas 'not'   *ne personne* 'nobody'
→   →

pas 'not'   *personne* 'nobody'
                                  →
                                  pas personne 'nobody'

But this representation can be improved. As already argued in §1, if we add Latin *nemo* 'nobody', there is more cyclicity. Furthermore, if we do not include a stage with only the lexical component *personne* 'person', the similarity becomes more transparent still (the Jespersen Cycle does not have a stage with just *pas* 'step' either). We add *X* as the as yet unfulfilled "doubler" of *pas*. Of course, the motivation to redouble for *personne* is not the complex Jespersen Cycle trajectory. A plausible explanation, we find, is the one offered by Haspelmath (1997: 203), echoing Heidolph (1970: 99): standard negation is clause-level negation and when it is marked on a participant there is a tendency to remedy this construction and to add a standard negator. So this is a significant difference between the two cycles. There are more differences. First of all, the doubling illustrated by Canadian French is not the only additional stage in the "Quantifier Cycle". In another scenario, the negative indefinite may trade its negativity for negative polarity. This is taken to have happened to e.g. French *nul* 'no (one)' (see Catalani 2001: 113–114, Buridant 2000: 135–137, van der Auwera & Van Alsenoy 2011: 327, Gianollo 2018a: 211–213) and *jamais* (Mosegaard Hansen 2012), as well as in

(40)

ne 'not'	*nemo* 'nobody'
→	→
ne ... pas 'not any step'	*ne ... personne* 'not any person'
→	→
ne ... pas 'not'	*ne personne* 'nobody'
→	→
pas 'not'	*personne* 'nobody'
→	→
pas X 'not'	*pas personne* 'nobody'

Jamaican Creole. (41) is an Old French non-negative example, culled from a fable by Marie de France by Buridant (2000: 167). (42) shows two Jamaican Creole examples, taken from *Di Jamiekan Nyuu Testament* (2012) and discussed in van der Auwera & De Lisser (2019).

(41) Old French [fro] (Indo-European; Brucker 1998: 118)
     Si **nuls**   *l'en veut   doner lüer   ...*
     If anyone him wants give   reward
     'If anyone wants to bribe him ...'

(42) Jamaican Creole [jam] (Indo-European)

   a. [...] **nobadi** *we kil* **nobadi**, *dem a-go   go a kuot ous*   [...]
        nobody REL kill anybody 3PL PROG-PROSP go to court house
      '... anybody who kills anybody is going to go to court [...]' (*Matthew* 5: 21)

   b. *Bot muo dan* **notn**   *els, Gad gud an kain tu wi.*
        but more than anything else God good and kind to 1PL
      'But more than anything else, God is good and kind to us.' (*James* 4: 6)

In yet another scenario, the negative indefinite loses a marker of negativity. This has been argued by van der Auwera et al. (2006) for a small area within Brabantic Belgian Dutch in which the negative indefinite *niemand* 'nobody' of the negative concord pattern in (43a) has lost its initial nasal, thus resulting in *iemand*, the positive indefinite ('someone').

(43) Brabantic Belgian Dutch [no code] (Indo-European)

    a. *Ik heb* **niemand nie** *gezien.*
        I   have nobody   NEG seen

        'I have seen nobody.'

    b. *Ik heb* **iemand   nie** *gezien.*
        I   have somebody NEG seen

        'I have seen nobody.'

All in all, the differences between the standard Jespersen Cycle and the Quantifier Cycle are substantial[20] and, we propose, this is mirrored by the fact that not that many languages seem to have undergone both the Quantifier and Jespersen Cycles. Or, put differently, Jespersenian doubling probably seldom co-occurs with negative concord (Van Alsenoy & van der Auwera 2014, Van Alsenoy 2014: 182–195).[21] But in languages like French and English, the two cycles do co-occur. In both English and French we see that a new standard negator is recruited from the set of negative indefinites and the resulting pattern is a doubling pattern, not unlike the negative concord of the negative indefinites. In Latin and Greek the new standard negator also derives from a negative indefinite, but this time it does not come from a doubling pattern but from one in which the negative indefinite is not accompanied by a standard negator.[22] We also see that when doubling disappears in standard negation, negative concord disappears as well, and one may assume that the loss of the old standard negator in one construction influences its loss in the other pattern.[23]

6 Conclusion

In this paper we aimed to increase the understanding of each of the three Negative Cycles individually and of the links between them. We focused on the in-

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[20]No wonder that Larrivée (2011), whose notion of Jespersen Cycle is narrower than ours but which subsumes the "Quantifier Cycle", concludes that what is going on is too diverse to continue using the term "Jespersen Cycle".

[21]In Van Alsenoy's sample of 179 languages only 6 languages have both Jespersenian doubling and negative concord (Van Alsenoy 2014: 187).

[22]Different from Latin, the Greek indefinite that became a standard negator had negative concord, but it was the non-strict type, and it is from the preverbal concord-free use of the negative indefinite that the standard negator must have developed (Chatzopoulou 2012: 294–295).

[23]There is no claim here that the two processes are in sync or it is invariably the same process that leads. Thus Ingham (2011: 152) argues that in Anglo-Norman the old negator disappears in indefinites before it does in standard negation, but Jäger (2013: 176) holds the opposite view for Middle High German.

teraction between the Jespersen and the Negative Existential Cycles. We argued for a wide definition of the Jespersen Cycle, which solves the currently existing terminological dilemma. The new definition allows elements not only to be contaminated by negators, and thus become negators themselves, but also to fuse with negators and thus also make new negators. Fusion can also yield negative existentials, and to that extent the Negative Existential Cycle is part of a Jespersen Cycle, as are the instances where Negative Existential Cycles allow negator doubling. We integrated a Positive Existential Cycle, i.e., a scenario in which an existential marker does not fuse with a negator but is contaminated by it. Finally, we described the similarities and differences between Jespersen and Quantifier Cycles and the way "Quantifier Cycle" output can be inserted into a Jespersen Cycle. We also proposed a more enlightening model of what goes in the "Quantifier Cycle".

Acknowledgements

Abbreviations

1	1st person	COND	conditional
3	3rd person	COP	copula
3>3	3rd person agent +	EX	existential
	3rd person patient	DAT	dative
A	agent	DEF	definite
ABS	absolutive	DET	determiner
ACT	active	DIST	distal
ANAPH	anaphoric	DU	dual
ATT	attributive	E	E-type inflection class
AUX	auxiliary	EMPH	emphatic
CNG	connegative	ERG	ergative
CNTR	contrastive	FUT	future
COMP	complementizer	GENR	general tense-aspect-mood

GER	gerund		POSS	possessive
HAB	habitual		PR	presentative
IPFV	imperfective		PROG	progressive
INCL	inclusive		PROSP	prospective
INDF	indefinite		PRS	present
INF	infinitive		PST	past
LOC	locative		SG	singular
M	masculine		STAT	stative
NEG	negation		SUB	subordinator
NMLZ	nominalizer		TA	tense-aspect
NPST	non-past		TAM	tense-aspect-mood
NSP	non-specific tense-aspect		TOP	topic
OBL	oblique		TR	transitive
PART	partitive		V	verb
PL	plural			

List of languages

Amharic [amh]
Arizona Tewa [tew][24]
Awju [ahh][25]
Bulgarian [bul]
Cèmuhî [cam]
Drehu[dhv]
Dutch, Brabantic Belgian[26]
Dumi [dus]
East Futuna [fud]
English [eng]
English, Ghanaian[27]
English, dialectal[28]

Finnish [fin]
Finnish, dialectal[29]
French [fra]
French, Anglo-Norman [xno]
French, Canadian[30]
French, Old [fro]
German, Middle High German [gpe]
Greek, Classical [grc]
Greek, Modern [ell]
Hawaiian [haw]
Juang [jun]
Kannada [kan]

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[24]Arizona Tewa seems not to have its own ISO 693-3 code. The ISO code given here is the one for "Rio Grande Tewa", which is at least a variety of Arizona Tewa. However, we do have geographic coordinates for Arizona Tewa: Latitude: 35,84; Longitude: -110,38 (source: Glottolog).

[25]Awju is a group of 4 languages. We mention the group in the text, not an individual language. Here we give an ISO code of just one of four languages.

[26]No ISO code, glottolog code: brab1243.

[27]No ISO code.

[28]No ISO code.

[29]No ISO code.

[30]No ISO code.

Kanincin [rnd]

Kapingamarangi [kpg]

Kaugel [ubu]

Korku [kfq]

Kulina [cul]

Latin [lat]

Lewo [lww]

Lifunga [bmg][31]

Mara [mec]

Meithei [mni]

Nese[32]

Nengone [nen]

Sino-Russian Pidgin[33]

Swedish [swe]

Tacana [tna]

Tongan [ton]

Tuvaluan [tvl]

Urarina [ura]

Wintu [wit]

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[31]Ethnologue gives Lifunga as one of the dialects of Bamwe [bmg]. There seems to be no separate ISO-code for Lifunga, so we give the ISO-code for Bamwe here.

[32]No ISO code; glottolog code: nese1235.

[33]No ISO code; glottolog code: kjac1234.

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The Negative Existential Cycle

In 1991, William Croft suggested that negative existentials (typically lexical expressions that mean 'not exist, not have') are one possible source for negation markers and gave his hypothesis the name Negative Existential Cycle (NEC). It is a variationist model based on cross-linguistic data. For a good twenty years following its formulation, it was cited at face value without ever having been tested by (historical-)comparative data. Over the last decade, Ljuba Veselinova has worked on testing the model in a comparative perspective, and this edited volume further expands on her work.

The collection presented here features detailed studies of several language families such as Bantu, Chadic and Indo-European. A number of articles focus on the micro-variation and attested historical developments within smaller groups and clusters such as Arabic, Mandarin and Cantonese, and Nanaic. Finally, variation and historical developments in specific languages are discussed for Ancient Hebrew, Ancient Egyptian, Moksha-Mordvin (Uralic), Bashkir (Turkic), Kalmyk (Mongolic), three Pama-Nyungan languages, O'dam (Southern Uto-Aztecan) and Tacana (Takanan, Amazonian Bolivia). The book is concluded by two chapters devoted to modeling cyclical processes in language change from different theoretical perspectives.

Key notions discussed throughout the book include affirmative and negative existential constructions, the expansion of the latter into verbal negation, and subsequently from more specific to more general markers of negation. Nominalizations as well as the uses of negative existentials as standalone negative answers figure among the most frequent pathways whereby negative existentials evolve as general negation markers. The operation of the Negative Existential Cycle appears partly genealogically conditioned, as the cycle is found to iterate regularly within some families but never starts in others, as is the case in Bantu. In addition, other special negation markers such as nominal negators are found to undergo similar processes, i.e. they expand into the verbal domain and thereby develop into more general negation markers.

The book provides rich information on a specific path of the evolution of negation, on cyclical processes in language change, and it show-cases the historical-comparative method in a modern setting.