A SUBGROUPING OF NINE PHILIPPINE LANGUAGES

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TEODORO A. LLAMZON, S.J.

PREFACE BY
J. C. ANCEAUX

*To my brother, Ben.*

# PREFACE

BY

J. C. ANCEAUX

Since the appearance of Brugmann's famous article on the relation-
ships of the Indo-European languages in 1884, the subject of sub-
grouping of languages as a methodological problem has been raised
only occasionally. To this apparent lack of interest in a major point
in comparative linguistics several causes can be assigned. One of them
is that a consensus has been reached about the main outlines of the
family-tree for the language-family which has received more attention
than any other: the Indo-European. Another explanation is that for
most of the branches of this family historical materials are available
which have proved very valuable for the reconstruction of the inter-
mediate stages between the proto-language ande the modern languages.
For a few branches only has the problem of subgrouping been a matter
for discussion (e.g. Germanic).

Special attention, however, could be expected from those who started
to apply the comparative methods to other language-families. This
attention did come forward, though not immediately, because linguists
first had to deal with the problems of proving the existence of the
family in question and deciding which languages belonged to it.

For the Austronesian languages serious attemps to arrive at a lin-
guistic classification started relatively late. Certain cases of closer
relationships were obvious enough to be recognized very early (e.g.
Polynesian), and in other cases scholars were at first content with rough
divisions, sometimes based on very few criteria (like the so-called
Brandes-line dividing Indonesia into a western and an eastern half,
mainly based on the difference in word-order in noun-noun construc-
tions). No one can blame these scholars for an impressionistic approach
or for not taking into account all the data available. In fact, their task
was enormous, if only because of the great number of languages to be

classified. Soon it became more and more evident that a sound approach could only be found in using as many data as possible. Limitation to part of the linguistic data only seemingly facilitates a solution: it cannot be done without determining the relative weight of what is taken into account and what is disregarded. Therefore, lexicostatistics, limited as it is to basic vocabulary, cannot give all the answers; though it has the advantage of reducing the number of acceptable family-trees, it does not tell us how important all the elements are which are not taken into consideration.

The choice of the best fitting family-tree is probabilistic: of all theoretical possibilities — running into astronomical figures with any considerable number of languages — the one which offers the most probable explanation of the facts is the best. Therefore, what needs to be done is to evaluate the various hypotheses, weighing the evidence for each of them. In the case of vocabulary items this seems easy enough: one exclusively shared word suggesting a certain classification is overruled by a great number of common words in favour of another solution. Here the evidence can be counted. Apart from the question of in how far number alone may be taken as decisive in the comparison of vocabularies, in all other aspects of language (phonology, grammar, etc.) things do not lend themselves to counting. And how is the evidence of the uncountable weighed against the numbers of shared vocabulary items?

Altogether, it seems to be a matter of feeling. In fact it is not. In many cases the relative significance of shared features can be shown. This is the case when one innovation must have preceded another. Especially in comparative phonology there are many cases on record of an obvious chronological order in changes in certain languages. If in a given language A a change 1 must have preceded a change 2, the fact that change 2 is also found in language B is no evidence for a period of common development of A and B, unless change 1 is also found in B. In other cases it is not relative order that is decisive, but the irreversible character of a certain innovation. Such irreversible innovations usually are changes in the system. When phonemes only change places (e.g. a coherent bundle of changes like that of the Germanic soundshift), the phonemic chart remains unchanged. The same change has only to repeat itself to bring everything back to the original situation. But if two separate phonemes merge into one, even a later split cannot restore the original situation. To assign such an innovation to a certain subgroup it is necessary that it be found in all

the members of the subgroup. All these and other considerations must be taken into account, and that means an intensive scrutiny of all the relevant facts. This approach takes more time than merely recording and counting differences and similarities, but it produces better results.

The crucial point is still the criterion of the exclusiveness of features characterizing a subgroup and giving proof of a period of common development. For it is possible that a feature which has always been regarded as the exclusive property of a certain subgroup appears somewhere else. It is obvious that checking with a limited number of languages which are regarded as representative is only a halfway-house: the practically feasible is taken instead of what is necessary from principle. Moreover, this representativeness is not measurable.

Summarizing, one may say that the results of this approach are never final: a better theory is always possible. But this is no reason to give up or leave results unpublished merely because they are a priori preliminary and open to criticism. It is to be hoped that in the future more work of this kind will be done and that thereby new contributions will be made both to the study of the internal relationships of the Austronesian family and to the theory of linguistic subgrouping in general.

# AUTHOR'S NOTE

The evidence presented here for the subgrouping of the nine Philippine languages under study is, admittedly, limited in many respects. First of all, I have chiefly used materials which are plausible cognates because their forms and meanings follow certain rules of correspondence. I have scarcely included materials whose forms and meanings have undergone changes due to analogy, etc. Secondly, although the research basis for this subgrouping extended over larger areaso f the structure of the languages involved, I have presented here only those features which are based on more or less reliable descriptions. Thus, I have not included syntactic evidence, since the syntactic descriptions of some of the languages left much to be desired. Thirdly, because of the relatively few languages investigated for this sub-grouping, it goes without saying that some of the innovations on which this subgrouping is based may later turn out to be not innovations after all. The reason why I, nevertheless, used such forms is that there were quite a number of them. It is thus probable, that some, but unlikely that none, of them are in fact innovations.

Since 1966, when I last worked on this manuscript, I have done more work on Tagalog grammar. There are certain changes in the transcript-ions of the Tagalog material which, I now feel, should be made. I have not made them, however, since they do not affect the validity of the argument.

I would like to take this opportunity to thank a number of colleagues who were of great help to me in the preparation of this book, namely: C. C. Berg, A. Teeuw, I. Dyen, R. Hendon, H. C. Conklin, W. Cowgill, G. W. Grace, E. Constantino, M. Vanoverbergh, C.I.C.M., J. Ver-haar, S.J., S. Tsuchida, and F. Glover, S.J.

Leiden, Netherlands     TEODORO A. LLAMZON, S.J.
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# I. METHODOLOGICAL PRELIMINARIES

**1.1** In comparative linguistics we study the relations between the *linguistic features* of two or more languages as these relations bear on the genetic connection between these languages. These features are the speech forms and their meanings (i.e. the shapes of phonemes, the arrangements of phonemes and morphemes, and the semantic content of morphemes) of these languages. Certain pairs of languages seem to show more sets of resemblant features than other pairs. From a study of such resemblant features, it is sometimes possible to make an inference on the genetic history of these languages and to assert that some are more closely connected to each other than to other languages. This procedure is called subgrouping.

**1.2   THEORY OF INNOVATION**

**1.2.1** Languages continually change. As communication between the speakers of a language is increasingly disturbed by changes which are not universal for the language, ever more divergent dialects result and if this process goes on far enough, it can result in different languages. The procedure of subgrouping aims to determine the successive stages by which a number of related languages evolved from a single original language. The result of a subgrouping is usually stated in the form of a "family tree".

**1.2.2** Any specific feature of a language is either an unchanged continuation of a feature in an earlier stage or it is not. An unchanged continuation is a *retention*; any other feature is an *innovation*. However, a particular feature which is an innovation at one stage in the history of a language may continue unchanged into a later stage of development, and thus be regarded as a retention from the stage at which it was an innovation.

**1.2.3** Let us consider the hypothetical development of part of a language "family tree" as shown in figure 1. The languages A, B, C, D, E, and F are all modern related languages. Languages D, E, and F

developed independently from some more remote stage, P. Languages A, B, and C have enjoyed a recent period of common development p subsequent to their development from stage P. We may refer to p as a proto-language with regard to A, B, and C, which have developed from it. Proto-language p itself developed from the more remote proto-language P at the same time that D, E, and F (and possibly other languages as well) developed from it. Moreover, P itself and several other languages developed from a still more remote proto-language Q. Such is our hypothetical family tree:
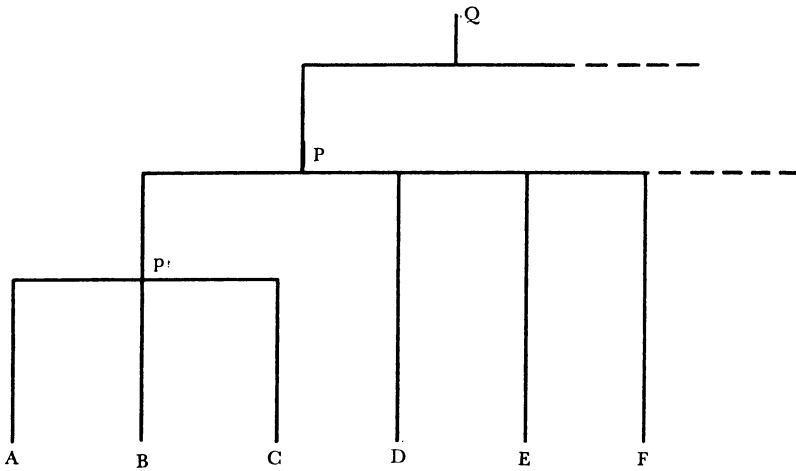


*Figure 1*

1.2.4    In principle, it is comparatively easy to determine with certainty the linguistic features of the modern languages A, B, C, D, E, and F. However, since the linguistic features of p, P, and Q are usually unattested, we may only conjecture as to their specific shapes. Of our six modern related languages: D, E, and F developed directly from P while A, B, and C developed through p, an intermediate stage of common history. The question arises: what particular linguistic features may be found in A, B, C, D, E, and F which can indicate this particular historical development?

1.2.5    A comparative study of the six modern languages would probably reveal a number of *shared linguistic features* (features in two

or more languages which resemble each other), SLF's. It is through a study of the sharing distribution of such SLF's that we hope to detect the interesting details of the historical genealogy of the languages under study.

1.2.6    The notions of retention and innovation have been discussed above. We now make a basic assumption about the probability of each process. We assume that the probability of a given linguistic feature being retained for a given time in any language line of development is *inversely* proportional to the period of time through which it is thought to perdure. Thus the longer the period of time, the *less probable* it is that the linguistic feature be retained. We also assume that the probability of a particular linguistic feature appearing by the process of innovation during a given period of time is *directly* proportional to the length of the period. Thus, the longer the period of time, the *more probable* it is that a linguistic feature appear as an innovation.

1.2.6.1    From the basic ideas of probability we know that if an event may take place as the result of two or more independent probable processes, the probability of the occurrence of the event is the *sum* of the probabilities of each process. If however an event may take place only as the result of two or more probable processes each occurring, the probability of the event occurring is the *product* of the probabilities of the separate processes. This is sometimes referred to as a *compound probability*. Note that the probability is measured in terms of a positive number between zero and one, and the product of two or more such numbers is always smaller than the smallest multiplier. Therefore since the probability of an innovation in a given period is usually small, the probability of an event that can be produced only by two or more separate but identical innovations (a compound probability) is vanishingly small, and in practice may be ignored in comparison with other processes not demanding such a compound probability.

1.2.6.2    In the light of these notions on probability, let us examine the inference to be drawn from possible distribution patterns of shared linguistic features, SLF's. We represent the sharing pattern of a particular SLF found in our six languages by the symbol (A, B, C, D, E, F). It is most probable that this particular SLF was found originally in P. The alternate possibility that it was not found in P demands that the same innovation occurred in D, E, F and either in p or separately in A, B, C.

Even if the probability of a single such event were .5, the probability of the compound event would be very small $(.5)^6$. We would have to conclude that the first alternative is more probable. A SLF distribution in five of the six modern languages strongly indicates that this same linguistic feature was originally found in P and was lost in one of the languages by an innovation introducing another feature to replace it. To assume that the feature was not in P would demand a compound probability of several identical innovations.

1.2.6.3     It is of interest to consider the probability of a SLF distribution of the form (A, B, C) or (D, E, F). A SLF distribution of the form (A, B, C) implies that the feature is not found in D, E, F. An (A, B, C) distribution strongly points to an innovation in proto-language p. The reason is that if the SLF were originally in P, the (A, B, C) distribution would demand three innovations, one each in D, E, and F to replace the term. Such a triple innovation is less probable than the alternate explanation, namely, a single innovation in p, followed by a subsequent retention in A, B, C. A (D, E, F) distribution for a particular SLF is improbable unless the element were originally in P (and removed in p by a single innovation, replacing it by some other feature). Thus, if a particular linguistic feature is *not* found in P, a (D, E, F) distribution for this feature is highly improbable, while an (A, B, C) distribution is reasonably probable.

1.2.7     Now, begin at the other end. Assume we have a number of SLF's of the forms (A, B, C) and also (D, E, F), but we do not yet know which of the six languages had the period of common history, p. If the particular SLF of the form (A, B, C) is *not* found in P, then the more probable explanation is that languages A, B, and C had a period of common development. But if this feature is in P we can draw no definite conclusion about a period of common development. Likewise, if the SLF of the form (D, E, F) is *not* in P, it is most probable that languages D, E, and F must have shared some period of common history during which this innovation took place. However, if the feature is in P, we can draw no definite conclusion about a period of common development. Therefore, for our subgrouping procedure, it is more important that we know what is *not* in P rather than what is there.

1.2.8     Unfortunately, the linguistic features in P are unattested, and therefore cannot be directly determined. It is reasonable to suppose that

much of what is in P was retained from Q. Also it is reasonable to suppose that much of what is in P was inherited by the other languages which developed from it. Therefore, if we wish to find out if a particular linguistic feature is in P, we examine the other languages which developed from (or are suspected to have developed from) P for this feature. We also examine all other languages thought to have developed from Q. *If a particular feature is not found in any of these languages, most probably it is not in P.*

1.2.8.1    It is helpful, therefore, to introduce the concept of an *exclusively shared linguistic feature, ESLF, a linguistic feature common to two or more of our languages under study, but not found in all of our study group, and not found in any outside language* (other related languages outside our study group). From the foregoing analysis, the most probable explanation for such an ESLF is that it occurred as the result of a single innovation which took place during a period when those two or more languages possessing the shared feature enjoyed a period of common historical development.

1.2.8.2    Thus, we see that shared features in our present day languages which are retentions from P do not reveal the latent genealogical structure of the family tree. Likewise innovations in one of our present day languages also tell us nothing. However, an innovation at a period when two or more of our languages shared a common period of history, if detected, is an indication of the reality of such a period of shared history. And such innovations give rise to exclusively shared linguistic features, ESLF's. Therefore, the object of our procedure is to detect and verify such ESLF's.

1.2.8.3    In general, there are two types of innovations: (a) replacements, and (b) emerging forms. The term "replacement" means any change in the original forms and meanings of cognates (1.3.6) in the parent language. This means that, for example, if the reconstructed form for the numeral "three" in Proto-Malayo-Polynesian is *telu,* then a form like Tagalog *tatlú* shows an innovation, since the original form *telu* has changed by the addition of a reduplicated element. The term "emerging forms" means any forms and meanings which represent not merely changes in the original forms and meanings of the cognates in the proto-language, but which were simply not there originally. An example of this is the lexical item *kabúg* 'bat', which apparently is found only in Cebuano, Hiligaynon, and Samar-Leyte (or Waray).

1.2.8.4    In principle, therefore, it is important to investigate all the languages which belong to the same family to determine whether the forms and meanings in question are found there or not. In practice, however, it may not be possible to examine every language to prove that an SLF is also an ESLF. Often it will suffice to examine a small number of key representative languages outside the group under study.

## 1.3    LIMITATIONS OF THE THEORY

1.3.1    From the above analysis, it can be seen that the presence of a verified exclusively shared linguistic feature, ESLF, leads to an inference regarding a period of common history of two or more languages. The inference is only a probable conclusion. Moreover even a true ESLF can be known as such only with a high degree of probability but not certainty. Thus we should avoid drawing immediate conclusions from a single or a very few ESLF's, but rather rely on patterns appearing in a larger amount of data. It also follows that a single ESLF pattern not compatible with other data is not to be considered as a positive contra-indication to the validity of our analysis. In the original presentation of this method of analysis applied to a group of Indo-European languages, Karl Brugmann pointed out:[1]

> "it is not a single or a few linguistic phenomena appearing in two or several areas at the same time which furnish a proof of closer community, but only a large mass of agreements in sound, flectional, syntactic, and lexical innovations, the large mass of which excludes the thought of accident."

1.3.2    In the above analysis we assumed that innovation is a random and spontaneous process, and that a new linguistic feature appears in a language in a very arbitrary manner, uninfluenced by factors outside the language context. On the basis of such an assumption, we concluded that an identical innovation occurring in two or more independent languages involves a compound probability, and thus may in general be disregarded, in comparison with much more probable competing processes.

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[1]  Karl Brugmann, "Zur Frage nach den Verwandschaftsverhältnissen der indogermanischen Sprachen". Transl. by Isidore Dyen.

**1.3.3** Admittedly, it is possible by sheer chance that in two languages the same linguistic feature may appear by innovation. Such a phenomenon produces a shared linguistic feature by *accident*. Statistically, this is a very improbable process, and should produce a negligible number of shared linguistic features.

**1.3.4** It is also possible that in two related languages the same linguistic feature may appear by innovation, not however as the result of sheer chance, but as the result of the similarity of their structures. Such a phenomenon is called *convergence*.[2] Like accident, the process of convergence is not likely to produce a relatively large number of shared features in the languages under study.

**1.3.5** The most serious perturbing influence in our analysis is the innovation of a new linguistic feature in a particular language due to the direct influence of another language already possessing this same feature. Such a process is called *borrowing*. The borrowing may take place between two languages within our study group (internal borrowing) or two languages may each borrow some linguistic feature from some third language outside the group under study (external borrowing). In either event we are presented with a shared linguistic feature, SLF, which is not the result of an innovation occurring in a proto-language prior to its development into two or more languages. It is important then to detect and eliminate such features from our analysis of linguistic features lest erroneous conclusions be reached. This problem is especially acute in our present study since we are considering languages which are found in close geographic proximity to each other. We shall have more to say on this process of borrowing later (4.1.4, 4.1.6.2).

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[2] An interesting example of convergence is furnished by Joseph Greenberg: "Both German and archaic English have in common an *-st* suffix indicating the second person singular of the verb: German *du denk-st*; English *thou think-est*. Given the relatively close genetic relationship of English and German, the obvious explanation is one of common origin, that is, that both forms are the continuations of a Proto-Germanic *-st*, second person singular suffix in both English and German. The known history of these forms, however, shows something quite different. Both German and English inherited a second person singular in *-s*. In both languages, independently, the suffixation of the independent pronoun in question led to the form in *-st*, which then spread by analogy to non-interrogative constructions: *ϑinkes-ϑu, ϑinkest; denkes-du, denkest*." Joseph Greenberg, *Essays in Linguistics*, p. 46.

1.3.6    At this point, it is helpful to introduce the notion of *cognates*. A cognate is a shared linguistic feature which is the result of inheritance and not of borrowing, convergence, or accident. A cognate may be either a retention or an innovation, either an exclusively shared feature or not. From what we have seen above, however, it seems clear that our best indication of a shared linguistic history of particular subgroups of our languages under study are cognates which are exclusively shared linguistic features produced by an innovation in a proto-language.

1.4    SUBGROUPING PROCEDURE

1.4.1    We now outline the general procedure that we shall employ in detecting such cognates which are exclusively shared features produced by an innovation in a proto-language. We presume that we have already selected our set of study languages. We further presume that these languages all developed from some proto-language P. Although we analyze phonological, morphological, and vocabulary features separately, we follow in general the same approach for each type of linguistic feature. The following are the basic steps:

1.4.2    (*A*) *We note all sets of linguistic features in two or more of our study group which are similar.* The object of this step is to gather sets of *resemblant features*. This step requires that each of the languages be reasonably well described to permit a comparison of their various features.

1.4.3    (*B*) *Of the features in* (*A*), *reject those in which the resemblance is not based on systematic correspondence.* The object of this step is to gather sets of *shared features*. By systematic correspondence, we mean here a consistent pattern of matching between the features compared. Such a criterion is helpful in eliminating resemblances which are accidental. Further, we do not require that features be exactly identical before they can be considered shared features.

1.4.4    (*C*) *Of the set of shared features verified in* (*B*), *reject those which are not exclusively shared features.* The object of this step is to eliminate retentions. In this step we employ a double criterion: a) the feature is *not found in all nine* of the languages to be subgrouped; b) the feature is *not found in any related language outside our study group*. It is quite simple to meet the first requirement, but it is much more difficult to meet the second requirement. As noted above, it is

often practical to select a certain limited number of representative languages and use these as controls. Such a procedure admits the possibility of latent error, but it appears to be a practical compromise.

**1.4.5** (*D*) *Of the set of exclusively shared features obtained in* (*C*), *reject those which appear to be the result of borrowing or convergence.* The object of this step is to gather sets of exclusively shared features which are *cognates*. There are certain criteria which are helpful in distinguishing loanwords from cognates. These will be discussed later. As pointed out above, ESLF's which are the result of convergence are negligible.

**1.4.6** (*E*) *Tabulate the sharing pattern of the exclusively shared features not rejected in* (*D*) *above.* The object of this step is to make it easy to observe the patterns of distribution of the exclusively shared features which are cognates. These patterns are indications of subgrouping relationships.

**1.4.7** Since each stage of the analysis is only capable of yielding probable conclusions, the final interpretation is made in the light of what makes for the most probable historical pattern of development genealogy. One or two instances contradicting a large mass of data indicating a consistent trend may be dismissed as being without sufficient significance.

**1.5 SPECIFIC PROBLEM**

**1.5.1** It is generally recognized that the languages of the Philippines form a subgroup within the Malayo-Polynesian family of languages.[3] Of the eighty odd Philippine languages, nine were selected for the present study. These languages are listed in figure 3, which also gives an indication of the approximate number of persons who speak these languages as their mother tongue as of 1960.[4] In figure 2, the approximate geo-

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[3] Some contemporary investigators who have recognized the Philippine languages as a subgroup within the Malayo-Polynesian family are: Harold C. Conklin ("Outline Gazetteer of Native Philippine Ethnic and Linguistic Groups"), Isidore Dyen (*A Lexicostatistical Classification of the Austronesian Languages*), David Thomas and Alan Healy ("Some Philippine Language Subgroupings: A Lexicostatistical Study").

[4] The term "mother tongue" is used by the report in *Census of the Philippines: Population and Housing*, 1960.
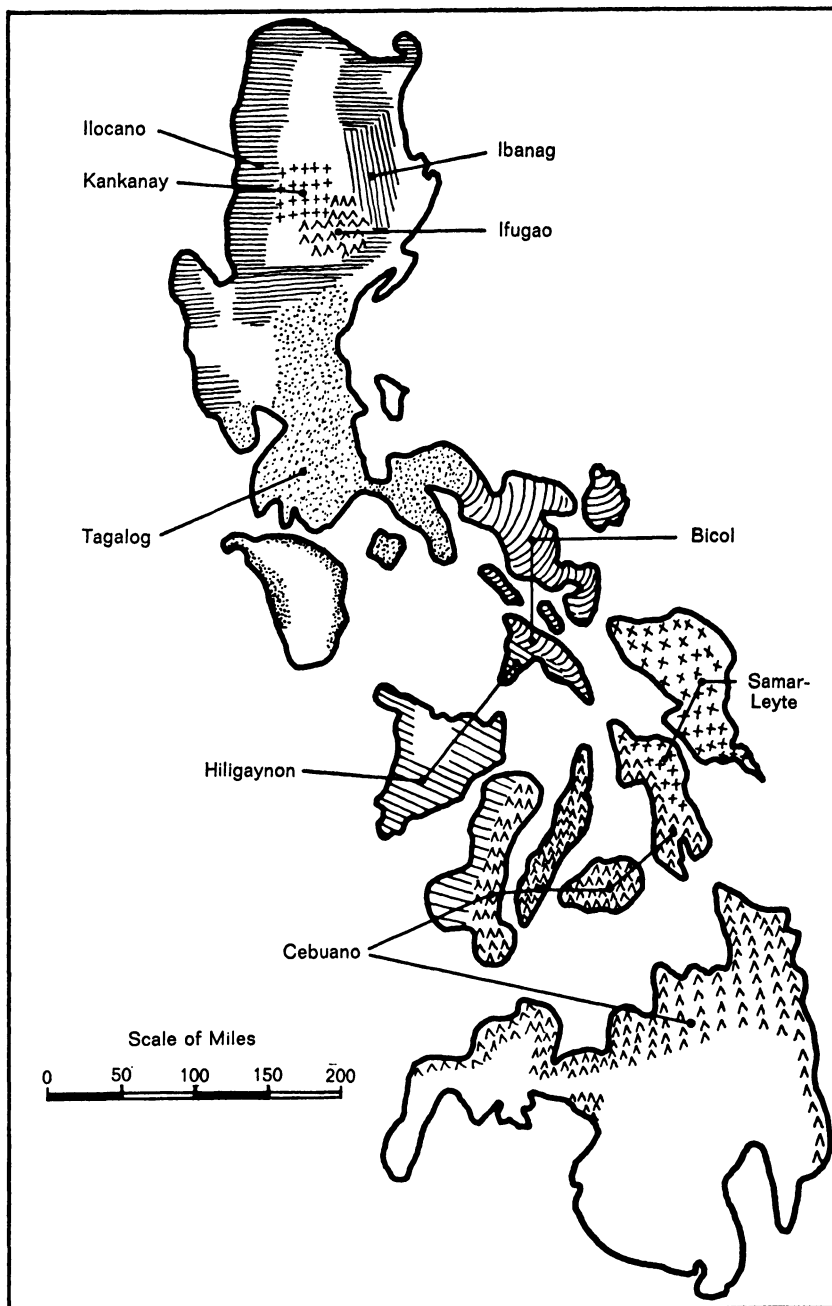
Figure 2

graphical regions in which these languages are chiefly spoken are indicated.

1.5.2     Two criteria were employed in selecting these particular nine languages. First, it was necessary that the languages to be studied should be sufficiently well described. Second, it was deemed desirable to select languages which perhaps might represent different subgroups within the Philippine family. A recent study has suggested that a number of Philippine languages belong to distinct subgroups within the Philippine family.[5] According to this study, the four languages of northern Philippines (Ilocano, Ibanag, Ifugao, and Kankanay) form a subgroup while the remaining languages are members of a different subgroup. It is not asserted that either set of languages are the only members of the particular subgroups. Thus, by selecting languages thought to have different lines of historical development, we have a check on the validity of our procedure.

1.5.3     As control languages for determining the exclusiveness of shared linguistic features, the following languages have been employed: Pangasinan, Pampango, Malay, Toba-Batak, Javanese, Ngadju-Dayak, Malagasy, Tongan, Sa'a, and Chamorro.[6]
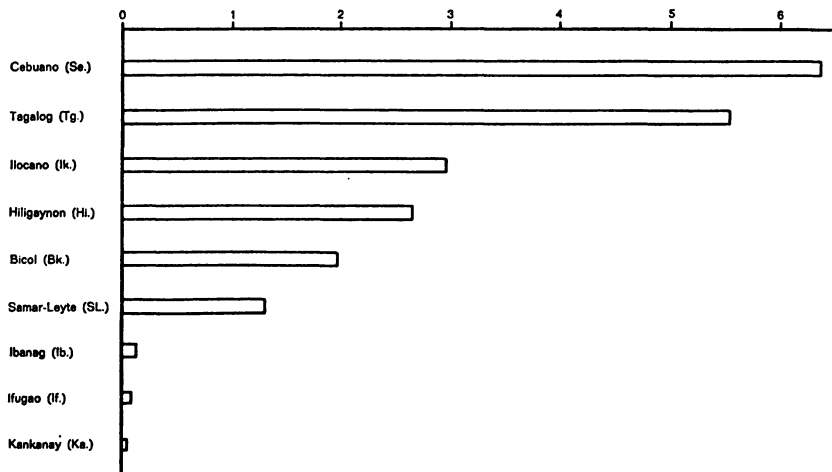


*Figure 3*

## 1.6    ORDER OF DISCUSSION

**1.6.1**    In the following three sections, exclusively shared features will be treated under the headings: phonology, morphology, and lexicon. In the final section, an analysis of the distribution of these features and their massing patterns will be made, and appropriate conclusions drawn.

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[5]  Isidore Dyen, *op. cit.*, pp. 29—33.

[6]  For other control languages employed in the comparison, see 3.1.3, and 4.1.3.2. The following books were used for the languages mentioned:

| | |
|---|---|
| M. A. Pellicier, | *Arte de la lengua Pangasinan.* |
| L. F. Cosgaya, | *Diccionario Pangasinan-Español, Vocabulario Hispano-Pangasinan.* |
| D. Bergaño, | *Arte de la lengua Pampango,* and *Vocabulario de la lengua Pampango.* |
| M. B. Lewis, | *Teach Yourself Malay.* |
| R. O. Winstedt, | *Malay Grammar.* |
| R. J. Wilkinson, | *A Malay-English Dictionary.* |
| O. Marcks, | *Einführung in die Batacksprache.* |
| P. Jansz, | *Practisch Javaansch-Nederlandsch Woordenboek.* |
| E. C. Horne, | *Beginning Javanese.* |
| T. Pigeaud, | *Javaans-Nederlands Handwoordenboek.* |
| A. Hardeland, | *Versuch einer Grammatik der dajackschen Sprache.* |
| A. Hardeland, | *Dajacksch-Deutsches Wörterbuch.* |
| P. Malzac, | *Grammaire Malgache* and *Dictionnaire malgache-français.* |
| C. M. Churchward, | *A Tongan Grammar,* and *Tongan Dictionary.* |
| W. G. Ivens, | *A Dictionary of the Language of Sa'a (Mala)* and *Ulawa.* |
| H. Costenoble, | *Die Chamoro Sprache.* |

# II. PHONOLOGY

2.1     This section contains: a) a table of Proto-Malayo-Polynesian phonemes and their corresponding reflexes in the nine Philippine languages under study; and b) phonological evidence for the sub-grouping of these nine Philippine languages.

2.2     TABLE OF CORRESPONDENCES

2.2.1     In preparing the table of correspondences in 2.2.5 below: a) forms and meanings were gathered which had been reconstructed so far for Proto-Malayo-Polynesian; b) forms and meanings were gathered in the nine Philippine languages under study which matched these reconstructed forms and meanings; c) a table of Proto-Malayo-Polynesian phonemes and their corresponding reflexes in the nine Philippine languages were drawn up.

2.2.2     In gathering the forms and meanings which have been reconstructed for Proto-Malayo-Polynesian, I have used mainly the third volume of Otto Dempwolff's *Vergleichende Lautlehre*.[1] Some of these reconstructions have been modified, and more reconstructions have been added to the list by Isidore Dyen.[2] In looking for forms and meanings in the nine Philippine languages under study which matched these reconstructed forms and meanings, I used: (for details see bibliography) Laktaw, *Diccionario Tagálog-Hispano*; Cabonce, *Visayan-English Dictionary*; Kaufmann, *Visayan-English Dictionary*; de la Rosa, *Diccionario Bisaya-Español*; de Lisboa, *Vocabulario de la lengua Bicol*; Vanoverbergh, *Iloko-English Dictionary*; Bugarin, *Diccionario Ybanag-Español*; Conklin, private files on Ifugao; Vanoverbergh, *A Dictionary of Lepanto Igorot or Kankanay*; *Preliminary Studies*; R. F. Barton, *First Ifugao-English Wordbook*.

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[1] A good account of Dempwolff's method in the preparation of this work is given by George W. Grace, *The Position of the Polynesian Languages Within the Austronesian (Malayo-Polynesian) Language Family*, pp. 19—27.

[2] Isidore Dyen's modifications and continuation of Dempwolff's work are contained in a series of articles in *Language, JAOS,* etc. (See bibliography).

2.2.3     I have checked the various forms and meanings in these
sources with native speakers where this was possible.[3] My phonemic
transcriptions of the various forms of the nine Philippine languages
imply the following phoneme inventories for the various languages:

2.2.3.1     Tagalog, Cebuano, Hiligaynon, Samar-Leyte, and Bicol have
identical phoneme inventories, namely: 3 vowels /a, i, u/; 14 consonants
/p, t, k, b, d, g, h, q, m, n, ŋ, s, l, r/; 2 semivowels /w, y/; a phoneme
of length /:/, and at least one phoneme of stress /'/. Some minimal
pairs can be found to support the contention that there are two
additional vowel phonemes, namely /e/ and /o/. However, almost all
these pairs involve Spanish loanwords, and elsewhere the occurrences
of e and o are either predictable or are in free variation with /i/ and
/u/ respectively. Hence, in this study, I have decided to regard e as
an allophone of /i/, and o as an allophone of /u/.

2.2.3.2     The phoneme inventory of Ilocano includes: 4 vowels /a, e,
i, u/; 13 consonants /p, t, k, b, d, g, q, m, n, ŋ, s, l, r/; 2 semivowels
/w, y/; a phoneme of length /:/, and at least one phoneme of stress /'/.
Kankanay has an identical phoneme inventory, except that it has /h/
for Ilocano /s/. Perhaps a phoneme /o/ should be added to the in-
ventory; however, since in both languages o and u are frequently inter-
changed in pronunciation without distinction in meaning, I have decided
to regard o as an allophone of /u/ for both languages.

2.2.3.3     Ibanag has 5 vowels: /a, e, i, o, u/; 13 consonants /p, t, k, b,
d, g, q, m, n, ŋ, s, l, r/; 2 semivowels /w, y/; a phoneme of length /:/,
and at least one phoneme of stress /'/.[4]

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[3] Except for Ifugao, Kankanay and Tagalog, I had to check my materials with
native speakers. Harold C. Conklin checked my materials on Ifugao with
informants. Unfortunately, I was unable to find informants for Kankanay;
however, I wrote to Morice Vanoverbergh for the proper interpretation of
his data. Since I spoke Tagalog as a native, I reported on my own speech.

[4] A phonemic analysis of Ibanag as it is spoken in Tuguegarao, Cagayan, was
made by Shigeru Tsuchida. Apparently, this dialect distinguishes 6 vowels
/ i, u, e, o, a, ʌ /, 21 consonants / p, t, k, b, d, g, q, m, n, ŋ, s, f,
z, v, č, j, l, r, w, y /, and a phoneme of stress / ' /. My analysis is based on
Bugarin's dialect which is spoken in Cabagan, Isabela. In this dialect, /b/
has an allophone [v], and /p/ has an allophone [f] before /u/; /d/ has an
allophone [z] before /i/.

2.2.3.4    Ifugao has 5 vowels: /a, e, i, o, u/; 12 consonants /p, t, k, q, b, d, g, m, n, ŋ, h, l/; 2 semivowels /w, y/; a phoneme of length /:/; 2 stresses, namely, primary /′/, and secondary /ˆ/.[5]

2.2.4    I have regularly added a glottal stop /q/ before every word written with a vowel in initial position, e.g. Tagalog <qakó> 'I' = /qakú/. Likewise, I have added a glottal stop between vowels written in succession, except in Ifugao and Kankanay, e.g. Tagalog <aalís> 'will leave' = /qa:qalís/ 'will leave'.

2.2.4.1    I have found that a stressed penult in an open syllable is regularly lengthened in all the nine Philippine languages involved here; elsewhere, the two phonemes of stress /′/ and length /:/ do not coincide. Hence, I have deemed it sufficient to indicate length in the penult to show that both length and stress coincide in this position. Elsewhere, if stress and length do not coincide, I have marked them separately, e.g. Tagalag /hini:hintúq/ 'being stopped', /sálsa/ 'gravy'. In Kankanay, I have placed a length mark in the penult whenever the item has a stress mark in the penult in Vanoverbergh's dictionary.

2.2.4.2    In this section I use the following symbols: an asterisk * to indicate that the item is unattested; the bar | to separate an affix from the base, e.g. Tagalog tubuh|an 'place where sugarcane is found'; the brackets [ ] to enclose all proto-phonemes which are possible in a reconstruction when there is ambiguity in the testimony of witness languages, e.g. *de[rR]as means that the reconstruction is indeterminably *deras or *deRas; similarly, *[a]baRa means that some of the daughter languages agree that there is an *a*-element before *baRa, while others do not, and I do not know how the languages without this element can lose it. The symbol < > means that the item enclosed is an orthographic transcription. I have also used the symbols ← → to indicate the development of forms by metathesis, assimilation, syncope, etc. The following abbreviations were used for the following languages:

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[5]  This analysis of Ifugao phonology is from Leonard E. Newell's "Phonology of the Guhang Ifugao Dialect". The Guhang dialect varies very slightly from the Bayninan dialect reported here.

| | | |
|---|---|---|
| Bk. = Bicol | Jv. = Javanese | Png. = Pangasinan |
| Fu. = Futunan | Ka. = Kankanay | Se. = Cebuano |
| Hi. = Hiligaynon | Ml. = Malay | SL. = Samar-Leyte |
| Ib. = Ibanag | Mly. = Malagasy | Sm. = Samoan |
| If. = Ifugao | NgD. = Ngadju-Dayak | TB. = Toba-Batak |
| Il. = Ilocano | Pmp. = Pampango | Tg. = Tagalog |
| | | To. = Tongan |

2.2.5    In the following table of basic correspondence, a number is assigned to each set of correspondences. In the row which immediately follows these numbers, the phonemes which have been reconstructed so far for Proto-Malayo-Polynesian (PMP.) and the various mergers of these phonemes in Proto-Philippines (Ph.) are given. In the third row, the Proto-Philippine phonemes are given. These represent the basic correspondences which are found in all the nine Philippine languages under study. Finally, the reflexes of these Proto-Philippine languages in the nine Philippine languages under study are given. The table is as follows:

| | PMP. | Ph. | Tg. | Se. | Hi. | SL. | Bk. | Il. | Ib. | If. | Ka. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | a | a | a | a | a | a | a | a | a | a | a |
| 2. | i | i | i | i | i | i | i | i | i | i | i |
| 3. | u | u | u | u | u | u | u | u | u | u | u |
| 4. | e | e | i | u | u | u | -a-x- | e | a | o | e |
| 5. | | | | | | | -x-u- | | | | |
| 6. | p | p | p | p | p | p | p | p | p | p | p |
| 7. | | | | | | | | | -q | | |
| 8. | t, T | t | t | t | t | t | t | t | t | t | t |
| 9. | | | | | | | | | -q | | |
| 10. | k | k | k | k | k | k | k | k | k | q | k |
| 11. | | | | | | | | | -q | | |
| 12. | b | b | b | b | b | b | b | b | b | b | b |
| 13. | d-, D-, Z-, z- | d- | d- | d- | d- | d- | d- | d- | d- | d- | d- |
| 14. | -d- | -d- | -r- | -r- | -d- | -d- | -d- | -d- | -d- | -d- | -d- |
| 15. | -d, -D | -d | -d | -d | -d | -d | -d | -d | -d | -d | -d |
| 16. | -D- | -D- | -l- | -l- | -l- | -r- | -r- | -d- | -r- | -d- | -d- |
| 17. | -z- | -z- | -r- | -r- | -r- | -d- | -d- | -d- | -r- | -d- | -d- |
| 18. | j | j | d- | d- | d- | d- | d- | g- | ?- | d- | ?- |

| | PMP. | Ph. | Tg. | Se. | Hi. | SL. | Bk. | Il. | Ib. | If. | Ka. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19. | | | -l- | -l- | -l- | -r- | -r- | -g- | -g- | -l- | -l- |
| 20. | | | -d | -d | -d | -d | -d | -g | -g | -g | -g |
| 21. | g-, $R_2$-, $R_4$- | g- | g- | g- | g- | g- | g- | g- | g- | g- | g- |
| 22. | -g-, -$R_3$- | -g- | -g- | -g- | -g- | -g- | -g- | -g- | -g- | -g- | -g- |
| 23. | -g, -$R_2$ | -g | -g | -g | -g | -g | -g | -g | -g | -g | -g |
| 24. | $R_1$-, $R_3$- | $R_1$- | g- | g- | g- | g- | g- | r- | g- | l- | l- |
| 25. | -$R_1$- | -$R_1$- | -g- | -g- | -g- | -g- | -g- | -r- | -g- | -l- | -l- |
| 26. | -$R_1$ | -$R_1$ | -g | -g | -g | -g | -g | -r | -g | -l | -l |
| 27. | -$R_2$-, -$R_4$- | -$R_2$- | -g- | -g- | -g- | -g- | -g- | -r- | -g- | -l- | -g- |
| 28. | -$R_3$ | -$R_3$ | -g | -g | -g | -g | -g | -r | -g | -g | -g |
| 29. | -$R_4$ | -$R_4$ | -g | -g | -g | -g | -g | -g | -g | -l | -g |
| 30. | r | r | l- | l- | l- | r- | r- | r- | r- | l- | l- |
| 31. | | | -l- | -l- | -l- | -r- | -r- | -r- | -r- | -l- | -l- |
| 32. | | | -l | -l | -l | -l | -l | -r | -? | -g | -l |
| 33. | -Z- | -Z- | -l- | -l- | -l- | -l- | -r- | -d- | -r- | -d- | -d- |
| 34. | l | l | l | l | l | l | l | l | l | l | l |
| 35. | m | m | m | m | m | m | m | m | m | m | m |
| 36. | n, ñ | n | n | n | n | n | n | n | n | n | n |
| 37. | ŋ | ŋ | ŋ | ŋ | ŋ | ŋ | ŋ | ŋ | ŋ | ŋ | ŋ |
| 38. | s, c | s | s | s | s | s | s | s | t | h | h |
| 39. | | | | | | | | -q | | | |
| 40. | w | w | w | w | w | w | w | w | w | w | w |
| 41. | y | y | y | y | y | y | y | y | y | y | y |
| 42. | -aw | -aw | -aw | -aw | -aw | -aw | -aw | -aw | -aw | -aw | -aw |
| 43. | -ew | -ew | -aw | -aw | -aw | -aw | -aw | -aw | -aw | -o | -ew |
| 44. | -iw | -iw | -iw | -iw | -iw | -iw | -iw | -yu | -yu | -yiw | -iw |
| 45. | -ay | -ay | -ay | -ay- | -ay | -ay | -ay | -ay | -ay | -e | -ay |
| 46. | -ey | -ey | -ay | -ay | -ay | -ay | -ay | -ay | -ay | -e | -ey |
| 47. | -uy | -uy | -uy | -uy | -uy | -uy | -uy | -uy | -uy | -uy | -uy |
| 48. | q-, W-, $x_1$-, $x_2$-, $x_3$-, ♯V- | q- | q- | q- | q- | q- | q- | q- | q- | q- | q- |
| 49. | -q- | -q- | -q- | -q- | -q- | -q- | -q- | -q- | -X- | -X- | -X- |
| 50. | -q | -q | -q | -q | -q | -q | -q | -X | -X | -X | -X |
| 51. | h- | h- | h- | h- | h- | h- | h- | q- | q- | q- | q- |
| 52. | -h- | -h- | -h- | -h- | -h- | -h- | -h- | -q- | -X- | -X- | -X- |
| 53. | -h | -h | -X | -X | -X | -X | -X | -X | -X | -X | -X |

In the table above: a hyphen after a phoneme means it occurs in initial position; a hyphen before and after a phoneme means it occurs in medial position; a hyphen before a phoneme means it occurs in final position; ‡V- means 'vowel in initial position; X means 'loss of phoneme'.

2.2.6    The evidence for the correspondences given above is presented as follows: a) the particular number of the set of correspondences being established is given: these numbers refer to the numbers on the table above (2.2.5); b) a reconstructed form is given; c) a meaning is given for this reconstructed form: this meaning is either the meaning Demp-

| | PMP. | Tg. | Se. | Hi. | SL. |
|---|---|---|---|---|---|
| 1. | *[a]sawa 'spouse' | qasa:wa | qasa:wa | qasa:wa | qasa:wa |
| 2. | *inum 'drink' | qinúm | qinúm | qinúm | qinúm |
| 3. | *ubi 'yam' | qu:bi | qu:bi | qu:bi | qu:bi |
| 4. | *etut 6 'flatulence' | qutút | qutút | qutút | qutút |
| 5. | *Dakep 'attach' | dakíp | dakúp | dakúp | dakúp |
| 6. | *pitu 'seven' | pitú | pitú | pitú | pitú |
| 7. | *qatep 'roof' | qatíp | qatúp | qatúp | qatúp |
| 8. | *telu 'three' | tatlú 9 | tulú | tatlú | tulú |
| | *TukTuk 'knock' | tuktúk | tuktúk | tuktúk | tuktúk |
| 9. | *uR₂at 'sinew' | qugát | qugát | qugát | qugát |
| 10. | *kuku 'claw' | kukú | kukú | kukú | kukú |
| 11. | *manuk 'hen' | manúk | manúk | manúk | manúk |
| 12. | *batu 'stone' | batú | batú | batú | batú |
| 13. | *dilaq 'tongue' | di:laq | di:laq | di:laq | di:laq |
| | *Dewha 'two' | dalawá 15 | duhá | duhá | duhá |
| | *Zalan 'road' | daqán 16 | da:lan | da:lan | da:lan |
| | *zeket 'adhere' | dikít | dukút | dukút | dukút |

6  The Tg., Bk., Il., Ib., If., and Ka. forms show assimilation of vowels to /u/ in the final syllable.

7  Ibanag shows a regular /o/ reflex in a final syllable for *e, when this syllable ends in a glottal stop /q/.

8  The medial /p/ in this Ifugao form may be due to assimilation of an expected /q/ to /p/ before /p/ in final position.

9  The Tg. form shows reduplication and syncope as follows: *telu → *tatelu (by reduplication) → tatlú (by syncope of vowel in penult). This is also true of the Hi. form.

10  The Il. form shows an unexplained a in the penult, and may be a loanword from Ib.

11  The /o/ vowel in the penult of this Ib. form may be due to assimilation to the /o/ vowel in the final syllable; progressive assimilation of consonant

wolff has assigned to it, or it is the common meaning of the various forms involved in the set of cognates; d) the corresponding cognates in the nine Philippine languages are given; e) two numbers enclosed in brackets are given: the first number indicates the number of equations in my files in which all the nine languages have cognates; the second number indicates the number of equations in my files in which not all nine languages have cognates. If any of the forms in the various equations have to be explained, I try to give the explanation in the notes. The following is the evidence for the sets of correspondences given above:

| Bk. | Il. | Ib. | If. | Ka. | | |
|-----|-----|-----|-----|-----|---|---|
| qasa:wa | qasa:wa | qata:wa | qaha:wa | qaha:wa | [85 + | 241] |
| qinúm | qinúm | qinúm | qinúm | qinúm | [48 + | 134] |
| qu:bi | qu:bi | qu:bi | qu:bi | qu:bi | [69 + | 144] |
| qutút | qutút | qutúq | qutút | qutút | [20 + | 35] |
| dakúp | dakép | dakóq 7 | dopóp 8 | dakép | [17 + | 16] |
| pitú | pitú | pi:tu | pi:tu | pitú | [22 + | 66] |
| qatúp | qatép | qatóq | qatóp | qatép | [4 + | 4] |
| tulú | tallú 10 | tallú | tulú | tulú | [29 + | 94] |
| tuktúk | tuktúk | tottóq 11 | toktok 12 | tuktúk | [2 + | 6] |
| qugát | qurát | qugáq | qulát | quát 13 | [12 + | 23] |
| kukú | kukú | kukú | ku:ku 14 | kukú | [23 + | 46] |
| manúk | manúk | manúq | manúq | man\|manúk | [6 + | 32] |
| batú | batú | batú | batú | batú | [28 + | 80] |
| di:laq | di:la | dilá | di:la | di:la | [2 + | 10] |
| duwá | duwá | duwá | duwá | duwá | [5 + | 9] |
| da:lan | da:lan | da:lan | dallan 17 | da:nan 18 | [1 + | 1] |
| dukút | dekkét | dikkóq 19 | doqót | dekét | [2 + | 1] |

cluster is regular in Ib.

12   The /o/ vowels and the /k/ consonants of this If. form are unexplained. The /k/ consonants perhaps indicate that the form is from the Kiangan dialect which regularly has the /k/ reflex for *k.

13   The /g/ reflex of *R₂ is regularly lost when *R₂ is preceded by *u and followed by *a.

14   The /k/ reflex in this word may indicate that it is a Kiangan Ifugao form.

15   This Tg. form shows reduplication.

16   The loss of /l/ in this Tg. form is unexplained.

17   The geminated /l/ in this If. form is unexplained.

18   The medial /n/ in this Ka. form may be due to assimilation to /n/ in final position.

19   The /i/ vowel in the penult of this Ib. form is unexplained.

|     | PMP. | Tg. | Se. | Hi. | SL. |
|-----|------|-----|-----|-----|-----|
| 14. | *gadiŋ [20] 'ivory' | ga:riŋ | ga:riŋ | ga:diŋ | ga:diŋ |
| 15. | *qañud 'float' | qa:nud | qa:nud | qa:nud | qa:nud |
|     | *likuD 'back' | likúd | likúd | likúd | li:kud |
| 16. | *tuDuq 'drip' | tu:luq | tu:luq | tulúq | turúq |
| 17. | *tazi [22] 'cockspur' | ta:riq | ta:riq | ta:riq | ta:di |
| 18. | *jaR₃ami 'straw' | daya:mi [23] | daga:mi | daga:mi | daga:mi |
| 19. | *maja 'dry' | malá | malá | malá | mará |
| 20. | *pusej 'navel' | pu:sud | pu:sud | pu:sud | pu:sud |
| 21. | *giliŋ 'grind' | gi:liŋ | galíŋ | galíŋ [24] | gilíŋ |
|     | *R₂atus 'hundred' | gatús | gatús | gatús | gatús |
|     | *R₄uqaŋ 'gap' | guwáŋ | ga:waŋ | gawáŋ [27] | guwáŋ |
| 22. | *[ ]gazi [29] 'saw' | la\|ga:riq [30] | la\|ga:riq | la\|ga:riq | la\|ga:di |
|     | *buR₃ew [31] 'drive away' | bu:gaw | bu:gaw | bu:gaw | bu:gaw |
| 23. | *durug [32] 'rush forward' | du:lug | du:lug | du:lug |  |
|     | *besuR₂ 'satisfied' | busúg [33] | busúg | busúg | busúg |
| 24. | *R₁amut 'root' | gamút | gamút | gamút | gamút |
|     | *R₃ebaq [34] 'ruin' | gibáq | gubáq | gubáq | gubáq |
| 25. | *taR₁uq 'hide' | ta:guq | ta:guq | ta:guq | ta:guq |
| 26. | *apuR₁ 'lime' | qa:pug | qa:pug | qa:pug | qa:pug |
| 27. | *huR₂as 'wash' | hu:gas | hu:gas | hu:gas | hu:gas |
|     | *kaR₄at [35] 'bite' | kagát | kagát | kagát | kagát |
| 28. | *[ ]amuR₃ [36] 'dew' | hamúg | ya:mug | hamúg | yamúg |
| 29. | *DapuR₄ 'hearth' | dapúg | dapúg | dapúg | dapúg |

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[20]  An example of Ib. /d/ reflex for *d is *kedut 'pain, smart': Ib. kaddúq 'prick'.

[21]  The If. form shows a regular /e/ for /i/ when the vowel in the next syllable is /o/; the geminated /q/ and the /o/ vowel in the final syllable are unexplained.

[22]  Examples of the /d/ reflex for *-z- in Bk. and Ka., and the /r/ reflex in Ib. are: *azar 'lesson': Tg. qa:ral, Bk., Il. qa:dal, Ib. qa:ral, If., Ka. qa:dal.

[23]  The /y/ semivowel in this Tg. form is unexplained and may indicate that it is a loanword from Pmp.

[24]  The /a/ vowel in the penult of the Se. and Hi. forms are unexplained.

[25]  If. shows /e/ regularly for *i in final syllable when this syllable ends in a nasal; in the penult /e/ for *i is also regular when the final syllable has /e/.

[26]  On the metathesized forms in Il., If., and Ka., see 2.3.3.

[27]  The /a/ vowel in the penult of the Se. and Hi. forms are perhaps the result of assimilation to the /a/ vowel in the final syllable.

[28]  The /i/ vowel in the penult of this Ib. form is unexplained.

| Bk. | Il. | Ib. | If. | Ka. | |
|-----|-----|-----|-----|-----|-----|
| ga:diŋ | ga:diŋ | | ga:deŋ | ga:diŋ | [0 + 4] |
| qa:nud | qa:nud | qa:nud | qa:nud | qa:nud | [3 + 9] |
| likúd | likúd | likúd | leqqód 21 | likúd | [1 + 1] |
| tu:ruq | tu:du | turú | tu:du | tu:du | [7 + 6] |
| | ta:di | | ta:di | | [1 + 3] |
| daga:mi | gara:mi | | daga:mi | | [0 + 1] |
| mará | magá | magá | magá | magá | [4 + 6] |
| pu:sud | pu:seg | pu:tag | pu:hog | pu:seg | [1 + 3] |
| gi:liŋ | gi:liŋ | giliŋ | ge:leŋ 25 | gi:liŋ | [2 + 9] |
| gatús | gasút | gatúq | gahút | gasút 26 | [1 + 1] |
| gu:qaŋ | giwáŋ | giwáŋ 28 | gu:waŋ | gu:waŋ | [1 + 2] |
| la\|ga:di | ra\|ga:di | | la\|ga:di | la\|ga:di | [0 + 3] |
| bu:gaw | bu:gaw | bugáw | bu:gaw | | [0 + 4] |
| | | | | | [0 + 1] |
| ba:sug | bussúg | battúg | bu:hug | buhúg | [3 + 1] |
| gamút | ramút | gamúq | lamút | lamút | [3 + 1] |
| gabáq | rebbá | | | | [0 + 3] |
| ta:guq | tagú | ta:gu | ta:lu | ta:gu | [2 + 13] |
| qa:pug | qa:pug | qa:pug | qa:pul | qa:pug | [3 + 13] |
| hu:gas | qu:gas | qugát | qu:lah | qu:was | [2 + 5] |
| kagát | kagát | kagáq | kalát | | [0 + 7] |
| yamúg | qa:mur | na:mug | | | [0 + 4] |
| dapúg | dapúg | dapúg | dapól 37 | da:pug | [1 + 6] |

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29  An example of the /g/ reflex in Ib. for *-g- is *teguq 'firm': Ib. taggu 'easily broken'.

30  The Tg., Se., and Hi. forms show final /q/. This may be due to analogical wrong division: see note 8 of chapter 4 below.

31  An example of the /g/ reflex in Ka. for *-R₃- is *peR₃es 'squeeze out': Ka. pegés 'sharp, acute', pegsén (from pegés plus suffix en, and syncope) 'strain oneself, exert'.

32  Examples of final *g in Dempwolff are sparse. However, here are some examples from my own files: *butig 'wart': Hi., SL. bu:tig, Bk. butíg, Il., If., Ka. bu:tig; *tenug 'sound': Tg., Se., Hi., SL., Bk. tunúg, Ib. tannúg.

33  The Tg., Il., If., and Ka. forms show assimilation of the vowel in the penult to the /u/ vowel in the final syllable.

34  Examples of the reflexes of *R₃ in If.: *R₃akit 'raft': Il. za:kit, If. la:qet. The /e/ vowel in the ultima is unexplained.

35  An example of the Ka. /g/ reflex for *-R₄- is *baR₄u[h] 'hibiscus': ba:gu.

36  An example of the If. /g/ reflex of *-R₃ is *aluR₃ 'channel of water': qa:lug. An example of Ka. /g/ reflex of *-R₃ is *huluR₃ 'fall, meaning': qu:lug.

37  The vowel /o/ in the final syllable in this If. form is unexplained.

| PMP. | Tg. | Se. | Hi. | SL. |
|---|---|---|---|---|
| 30. *ribu 'thousand' | li:bu | li:bu | li:bu | ri:bu |
| 31. *surat [39] 'write' | su:lat | su:lat | sulát | surát |
| 32. *tampar [40] 'slap' | tampál | | tampál | |
| 33. *taZem 'sharp' | talím | talúm | talúm | tarúm |
| 34. *lima 'five' | limá | limá | limá | limá |
| 35. *mata 'eye' | matá | matá | matá | matá |
| 36. *nanaq [41] 'pus' | na:naq | na:naq | na:naq | na:naq |
|     *ñamuk [42] 'mosquito' | namúk | namúk | namúk | namúk |
| 37. *ŋaŋa 'open mouth' | ŋaŋá | ŋaŋá | ŋaŋá | ŋaŋá |
| 38. *susu [43] 'female breast' | su:su | su:su | su:su | su:su |
|     *caremin [44] 'mirror' | salamín | salamín | salamíŋ [45] | salamíŋ |
| 39. *beR₂as 'unhusked rice' | bigás | bugás | bugás | bugás |
| 40. *walu 'eight' | walú | walú | walú | walú |
| 41. *buqaya 'crocodile' | buwa:ya | buwa:ya | buqa:ya | buqa:ya |
| 42. *Danaw [48] 'lake' | da:naw | danáw | danáw | da:naw |
| 43. *silew 'glare' | si:law | si:law | si:law | si:law |
| 44. *kahiw 'wood' | ka:huy [50] | ka:huy | ka:huy | ka:huy |
| 45. *sakay 'mount' | sakáy | sakáy | sakáy | sakáy |
| 46. *patey 'dead' | patáy | patáy | patáy | patáy |
| 47. *babuy [51] 'pig' | ba:buy | ba:buy | ba:buy | ba:buy |
| 48. *qutek 'brain' | qu:tak [53] | qu:tuk | qu:tuk | qu:tuk |
|     *Wanak 'child' | qanák | qanák | qanák | qanák |
|     *x₁apuy 'fire' | qapúy | | | |
|     *x₂epat 'four' | qa:pat [55] | qupát | qa:pat | qupát |
|     *x₃enem 'six' | qa:nim [57] | qunúm | qa:num | qu:num |
|     *asin 'salt' | qasín | qasín | qasín | qasín |

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[38] Bugarin gives the form dibú; the *Preliminary Studies* gives ribú.

[39] An example of If. /l/ reflex for *-r- is *guruq 'confused': gu:lu.

[40] Examples of the reflexes of Il., If., and Ka. for *-r are: *qampir 'draw near': Il. qampír; *kembar 'twin': Il., Ka. kambál; *sanDar 'lean': If. handág.

[41] Other examples of *n are *inum (no. 2), *manuk (no. 11), *Zalan (no. 13).

[42] Examples of *ñ in Il., Ib., If., and Ka. are *ña 'his, her, its': na.

[43] For other examples of *s, see *sakay (no. 45), *silew (no. 43).

[44] Other examples of *c are: *guci 'jar': Il., Ib. gu:si, Ka. gusí.

[45] The final -ŋ in the Hi., SL., Bk., Il., and If. forms is unexplained.

[46] The Il. form shows assimilation of the vowel in the penult to the /a/ vowel in the ultima.

[47] The loss of medial /l/ in this Ka. form is unexplained.

| Bk. | Il. | Ib. | If. | Ka. | |
|-----|-----|-----|-----|-----|---|
| ri:bu | ri:bu | dibú 38 | li:bu | li:bu | [2 + 5] |
| su:rat | su:rat | tu:raq | | su:lat | [0 + 8] |
| tampál | | | | | [0 + 6] |
| tarúm | tadém | tarám | tadóm | tadém | [1 + 2] |
| limá | limá | li:ma | limá | limá | [29 + 47] |
| matá | matá | matá | matá | ma:ta | [12 + 34] |
| na:naq | na:na | na:na | | | [20 + 36] |
| namúk | namúk | | | | [0 + 3] |
| ŋaŋá | ŋaŋá | ŋaŋá | ŋaŋa | | [14 + 51] |
| su:su | su:su | tutú | hu:hu | | [23 + 35] |
| salmíŋ | sarmíŋ | kalemmin | halmeŋ | | [0 + 5] |
| bagás 46 | bagás | baggáq | bogáh | begás | [5 + 25] |
| walú | walú | walú | walú | waú 47 | [4 + 9] |
| buqa:ya | buwa:ya | buwa:ya | buwa:ya | buwa:ya | [4 + 5] |
| da:naw | da:naw | | | | [1 + 6] |
| si:law | si:law | si:law 49 | hi:law | hi:lew | [3 + 1] |
| ka:huy | ka:yu | ka:yu | ka:yiw | ka:qiw | [1 + 1] |
| sakáy | sakáy | takáy | haké | hakay | [1 + 12] |
| patáy | patáy | patáy | paté | pa:tay | [3 + 2] |
| ba:buy | ba:buy | ba:buy 52 | ba:buy | | [0 + 4] |
| qu:tuk | qu:tek | qutóq | qutóq | qu:tek | [6 + 13] |
| qanák | qanák | qanaq | naq 54 | qanák | [1 + 2] |
| qapúy | qapúy | qapúy | qapúy | qapéy | [0 + 1] |
| qapát | quppát 56 | qappáq | qopát | qupát | [1 + 0] |
| qanúm | qinném 55 | qannám | qonóm | qeném | [1 + 1] |
| qasín | qasín | qasín | qahín | qahín | [12 + 23] |

48 An example of *-aw in Ib., If., and Ka. is *tunaw 'melt': Ib., If. tu:naw, Ka. tunáw.

49 The regular of Ib. for *s before *i is not /t/ but /s/.

50 The Tg., Se., Hi., SL., and Bk. forms show metathesis.

51 An example of *-uy in Ka. is *laŋuy 'swim': laŋúy.

52 The *Preliminary Studies* gives the form bavi 'pig'. This form is from Bugarin.

53 The Tg. form qu:tak shows an unexplained /a/ in the ultima, which may indicate that the form is a loanword, perhaps from Pmp.

54 The If. form naq shows an unexplained loss of an initial syllable.

55 The Tg. and Hi. form qa:pat shows an unexplained /a/ vowel in the penult.

56 The Il. and Ka. forms show an unexplained /u/ in the penult.

57 The Tg. and Hi. forms show unexplained /a/ in the penult; the Il. form has an unexplained /i/ in the penult.

| PMP. | Tg. | Se. | Hi. | SL. |
|------|-----|-----|-----|-----|
| 49. *paqit 'bitter' | paqít | paqít | paqít | paqít |
| 50. *panaq 'bow and arrow' | pa:naq | panáq | panáq | panáq |
| 51. *hiR₂up 'sip' | hi:gup | hi:gup | hi:gup | hi:gup |
| 52. *buhuk 'hair' | buhúk | buhúk | buhúk | buhúk |
| 53. *tebuh [59] 'sugar-cane' | tubú | tubú | tubú | tubú |

## 2.3 PHONOLOGICAL EVIDENCE FOR SUBGROUPING

2.3.1     The phonological evidence for the subgrouping of the nine Philippine languages under study consists chiefly in mergers of proto-phonemes,[60] and in metathesis which occurs regularly in a number of these languages.

2.3.2     The mergers may be conveniently divided into three groups: a) vowel mergers, b) consonant mergers, c) diphthong mergers.

2.3.2.1     The following mergers of Proto-Philippine vowels occurred: a) u, e > u in Se., Hi., SL.; b) u, e > u in final syllable in Se., Hi., SL., Bk.; c) a, e > a in medial syllable in Bk., and Ib.

2.3.2.2     In the consonants, it is convenient to divide the mergers according to the various reflexes which they yielded as follows: a) /g/ reflex; b) /d/ reflex; c) /r/ reflex; d) /l/ reflex; e) /q/ and /X/ reflexes.

2.3.2.2.1     The various mergers of Proto-Philippine consonants which yielded /g/ reflexes are: a) g, R₁, R₂, R₃, R₄ > g in Tg., Se., Hi., SL., Bk.; b) g, j > g in Il., Ib.; c) g, j > g in final position in Il., Ib., If., Ka.; d) g, R₄, j > g in final position in Ib., If., Ka.; e) g, R₃, j > g in final position in Il., Ib., Ka.; f) g, R₂ > g in medial position in Ib., Ka.

2.3.2.2.2     The various mergers of Proto-Philippine consonants which yielded /d/ reflexes are: a) d, j > d in initial and final positions in Tg., Se., Hi., SL., Bk.; b) d, z > d in medial position in SL., Bk., Il., If., Ka.; c) d, D > d in medial position in Il., If., Ka.

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[58] The /o/ vowel in the ultima of this Ib. form is unexplained.
[59] An example of *-h in If. is *tuzuh 'point out': tudú.
[60] For a thorough explanation of "mergers", see Henry M. Hoenigswald, *Language Change and Linguistic Reconstruction*.

| Bk. | Il. | Ib. | If. | Ka. | | |
|-----|-----|-----|-----|-----|---|---|
| paqít | paqít | pét | paét | paít | [4 | + 10] |
| pa:naq | pa:na | pa:na | pa:na | pa:na | [11 | + 33] |
| hi:gup | qi:gup | qigóq [58] | qi:gup | qi:gup | [3 | + 16] |
| buhúk | buqúk | búq | bu:uq | buúk | [3 | + 9] |
| tubú | tubbú | tabbú | | tubú | [1 | + 4] |

2.3.2.2.3   The various mergers of Proto-Philippine consonants which yielded /r/ reflexes are: a) d, z > r in medial position in Tg., Se.; b) D, r, j > r in medial position in SL., Bk.

2.3.2.2.4   The various mergers of Proto-Philippine consonants which yielded /l/ reflexes are: a) D, j, l, r > l in medial position in Tg., Se., Hi.; b) l, r > l in Tg., Se., Hi., If., Ka.; c) $R_1$, r, -j- > l in If., Ka.; d) l, r> l in final position in Tg., Se., Hi., SL., Bk., If., Ka.

2.3.2.2.5   Proto-Philippine q, h > /q/ in initial position, and /X/ in final position in Il., Ib., If., Ka.; -q, -X > -X in Il., Ib., If., Ka.

2.3.2.2.6   The following mergers occurred in the Proto-Philippine diphthongs: a) aw, ew > aw in Tg., Se., Hi., SL., Bk., Il., Ib.; b) ay, ey > ay in Tg., Se., Hi., SL., Bk., Il., Ib.

2.3.2.3     Of the mergers enumerated above, the following should be excluded as evidence for subgrouping since they also occur in the following languages:

a) a, e > a in medial syllable — also in Pmp.;
b) d, j > d in initial and final positions — also in Pmp.;
c) d, z > r in medial position — also in Pmp., Png.;
d) l, r > l — also in Pmp., Png.;
e) l, r > l in final position — also in Pmp., Png.;
f) q, h > q in initial and X in final position — also in Png.;
g) -q, -h > -X — also in TB., NgD., Mly., To., Fu., Sm., Png.;
h) aw, ew > aw — also in Pmp.;
i) ay, ey > ay — also in Pmp.

This leaves only 13 mergers which are exclusively shared and which are evidence for subgrouping.

2.3.3    In addition to the mergers of proto-phonemes enumerated above, additional evidence for the subgrouping of the nine Philippine languages under study is furnished by the regular metathesis of proto-forms which begin with *t and end in *s in Il., If., and Ka. Whether this metathesis likewise occurs in Ib. is not clear since in Ib. *s and *t > t. Examples of this metathesis are:

2.3.3.1    *tebus >    Tg., Se., Hi., SL., Bk. tubús 'redeem', Il. subbút, Ib. tubbúq 'redeem', If. hubút 'buy or sell slave', Ka. subút 'save, rescue'.

2.3.3.2    *tamqis >    Tg. tamís, Se., Hi., SL. tamqís, Il. samqít, Ka. hamqít 'sweet'.

2.3.3.2    *taŋis >    Tg., Hi., SL., Bk. ta:ŋis, Il. sa:ŋit, Ib. ta:ŋiq 'weep'.

2.3.3.3    *getas >    Il. gessát 'snap', If. gohát 'cutting of ha:bal', Ka. gesát 'snap, break'.

In addition, see *R₂atus (2.2.6, no. 21).

2.3.3.4    The exclusively shared phonological features which can be considered as evidence for the subgrouping of the nine languages under study may now be tabulated as follows:

| | | Tg. | Se. | Hi. | SL. | Bk. | Il. | Ib. | If. | Ka. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. u, e > u | 2.3.2.1 | | | x | x | x | | | | |
| 2. u, e> -u | 2.3.2.1 | | | x | x | x | x | | | |
| 3. g, R₁, R₂, R₃, R₄ > g | 2.3.2.2.1 | x | x | x | x | x | | | | |
| 4. g, j > g | 2.3.2.2.1 | | | | | | x | x | | |
| 5. g, j > -g | 2.3.2.2.1 | | | | | | x | x | x | x |
| 6. g, R₄, j > -g | 2.3.2.2.1 | | | | | | x | x | | x |
| 7. g, R₃, j > -g | 2.3.2.2.1 | | | | | | x | x | | x |
| 8. g, R₂ > -g- | 2.3.2.2.1 | | | | | | x | | | x |
| 9. d, z > -d- | 2.3.2.2.2 | | | | x | x | x | | x | x |
| 10. d, D > -d- | 2.3.2.2.2 | | | | | | x | | x | x |
| 11. D, r, j > -r- | 2.3.2.2.3 | | | | x | x | | | | |
| 12. D, j, l, r > -l- | 2.3.2.2.4 | x | x | x | | | | | | |
| 13. R₁, r, -j- > l | 2.3.2.2.4 | | | | | | | | x | x |
| 14. Metathesis of *t and *s | 2.3.3 | | | | | | x | | x | x |

# III. MORPHOLOGY

**3.1**    This section contains morphological evidence for the sub-grouping of the nine Philippine languages under study. The evidence may be divided into: a) numerals, b) personal pronominals, c) transients.[1]

**3.1.1**    The object of this part of the investigation is not to compare the forms and meanings of the various morphemes which the different languages involved in this study may possess, since this is the object of the next part of this study. Rather, the object here is to investigate the various morphological formations involved in the numeral, personal pronominal, and transient systems of the languages under study to see if exclusively shared morphological features can be discovered.

**3.1.2.1**    In looking for exclusively shared morphological features, I used the following sources for the nine Philippine languages: (see bibliography for details) Leonard Bloomfield, *Tagalog Texts with Grammatical Analysis,* John Wolff, *A Description of Cebuano Visayan,* John Kaufmann, *Principles of Visayan Grammar,* Antonio Figueroa, *Arte del Idioma de Samar y Leite,* Roman de Vera, *Gramática Hispano-Bicol,* Morice Vanoverbergh, *Iloko Grammar,* Fausto Cuevas, *Arte nuevo de la lengua Ybanag,* Morice Vanoverbergh, *A Grammar of Lepanto Igorot.* In addition, I consulted Harold C. Conklin for points on Ifugao morphology.

**3.1.2.2**    The following sources were used for outside languages: Diego Bergaño, *Arte de la lengua Pampango,* F. Pellicier, *Arte de la lengua*

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[1] The term "transient", as opposed to "static" is used by Leonard Bloomfield in his description of Tagalog grammar in *Tagalog Texts With Grammatical Analysis.* He defines the term "transient" as "words which express an element of experience viewed as impermanent, i.e. belonging to some limited portion of time", and "static" as "words which are not transients", p. 147. Certain types of morphological formations are used with transients, and certain other types are used with statics.

*Pangasinan,* Lewis, *Teach Yourself Malay,* O. Marcks, *Einführung in die Bataksprache,* A. Hardeland, *Versuch einer Grammatik der dajackschen Sprache,* P. Malzac, *Grammaire Malgache,* Churchward, *A Tongan Grammar,* Costenoble, *Die Chamoro Sprache.*

3.1.3     In addition to Pampango and Pangasinan, I have used the following languages as control languages for the sections on numerals and personal pronominals: Casiguran, Casiguran Negrito, Baler Negrito, Rizal Negrito, Cagayan Negrito, Isneg, Bontoc Igorot, Kalinga, Ibaloy and Ilongot. The numeral and personal pronominal systems of these languages are sufficiently well described by Morice Vanoverbergh in his book *Some Undescribed Languages of Luzon* to permit them to be included in the comparison in the sections mentioned. Likewise, I have included the Formosan languages as control languages in the section on personal pronominals, since I was able to secure materials on Formosan personal pronominals.

3.1.4     In this section, I have used the following symbols: { } to enclose a morpheme; a hyphen after a morpheme to indicate that it is a prefix; a hyphen before and after a morpheme to indicate that it is an infix; a hyphen before a morpheme to indicate that it is a suffix; a bar | to indicate morpheme boundary; R to indicate reduplication; the symbol + to indicate concatenation of elements. I have used the same abbreviations for the various languages involved in the comparison as those used in the previous section (2.2.4.2) ; in addition, I use the term "central Philippine languages" (CPh) to refer to Tagalog, Cebuano, Hiligaynon, Samar-Leyte, and Bicol as a group, and the term "northern Philippine languages" (NPh) to refer to Ilocano, Ibanag, Ifugao, and Kankanay as a group (the groupings here are based on their geographical location).

3.2     NUMERALS

3.2.1     In the cardinal numerals, exclusively shared morphological features are found in the words for 'ten', 'twenty', 'thirty' etc., 'second'. Other shared features which were examined turned out to be either probable common retentions, or were easily so interpreted. As an example, Se., Hi., SL. duhakagatús 'two hundred' appear clearly to contain the morphemes duhá 'two', gatús 'hundred', and an element

ka,[2] which occurs between and joins them together. Both the forms
duhá and gatús are inherited forms: duhá continues *Dewha,[3] and gatús
continues *R₂atus.[4] The element ka, which joins duhá and gatús to-
gether is also found in Tg. and Bk., (e.g. Tg. sampu ka táo 'ten men'),
but it occurs only after a numeral and before a head, not between two
numerals. The form duhakagatús shows a feature which is exclusively
shared by Se., Hi., and SL., since the combination of the morphemes
duhá and gatús and the element ka which joins them together in a
cardinal numeral for 'two hundred' is found nowhere else in the various
languages investigated. However, this form does not seem to show a
morphological innovation for the following reason: the process of using
a morpheme with the meaning 'two' and a morpheme with the meaning
'hundred' and an element which joins the two morphemes together is
likewise found in the other languages involved in this comparison:
e.g. To. uaŋeau ({ua} 'two' + ŋ + {eau} 'hundred'), Ch. hūgwa na
gātus ({hūgwa} 'two' + na + {gātus} 'hundred'), Bk. duwaŋgatús
({duwá} 'two' + ŋ + {gatús} 'hundred'), Il. saŋagasút ({sa-} 'one'
+ ŋa + {gasút} 'hundred'), If. duwangahút ({duwá} 'two + n +
{gahút} 'hundred'), Ka. duangahút ({duá} 'two' + n + {gahút}
'hundred') 'two hundred'. The shapes of the morphemes used with the
meanings 'two' and 'hundred', and the shapes of the elements which
join the two morphemes together do not all appear identical — and
this must be taken into account in the following part of this study,
namely, lexicon — but the morphological formations involved in all
these forms of the cardinal numeral for 'two hundred' are identical,
namely, the combination of a morpheme with the meaning 'two' and
a morpheme with the meaning 'hundred', and an element which stands
between and joins these two morphemes together.

3.2.2       There are two independent sets among the words for 'ten'
which appear to have exclusively shared features: a) If. himpu:lu,

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[2]  It is perhaps debatable whether the element ka should be called a morpheme
     or not. The difficulty is that one cannot assign a meaning to this morph,
     although its function is clearly to connect two morphemes together. It fits the
     description of what Charles F. Hockett calls an "empty morph" ("Problems
     in Morphemic Analysis"), and its occurrence is predictable in terms of non-
     empty morphemes. I do not enclose such elements within braces { }.
[3]  For a reconstruction of this word, see Isidore Dyen, "The Malayo-Polynesian
     Word for 'Two' ".
[4]  For a reconstruction of this word, see Isidore Dyen, "Dempwolff's R".

Ka. hinpú, b) Se., Hi., SL. napu:luq. Both sets have an element which is prefixed to the morpheme *puluq 'ten' (Mlgy. folo, and the second morpheme in Ml. sa|puloh, Jv. se|puluh, Tg. sa|m|púq 'ten'). The forms in the other languages for 'ten' are either: a) a combination of the morpheme *sa- (which appears to be an alternant of the morpheme *esa: Ml., Jv. ĕsa, Mlgy. isa, Tg. qisá, Se. qusá, Hi. qisá, qusá, SL. qusá, Bk. qisa, If. qohá, Ka. qehá 'one'; and occurs in compounds: e.g. see Ml. sa|puloh, Jv. se|puluh, Tg. sa|m|púq above), and the morpheme *puluq 'ten': e.g. NgD. sapulu 'ten', and the forms for 'ten' in Ml. and Jv. above; or b) a combination of the morpheme *sa-, the morpheme *puluq, and an element which joins the two morphemes together: e.g. TB. sa|m|pulu, To. ho|ŋo|fulu, Tg. sa|m|púq, Bk. sa|m|pu:luq, Il. sa|ŋa|-pu:lu 'ten'. The connecting element in the forms cited under b) above all have a nasal phoneme, and a later study may reveal that they are all related. At any rate, the set mentioned above does not resemble any of the forms mentioned in a) and b).

3.2.2.1    With regard to the first set: If. himpu:lu and Ka. hinpú imply a proto-form sinpuluq.[5] It is difficult to determine what the element *sin- is here. It may be that this *sin- really contains two elements, and that the form *sinpuluq is a combination of *si-, plus *puluq, and an element *n which connects the two elements together. Perhaps *si- is a reflex of *sa-: in which case the form *sinpuluq belongs to the b) category of forms for 'ten' cited in 3.2.2, and does not show a morphological innovation. However, this hypothesis does not seem plausible because: a) it is difficult to see how the *a* vowel in *sa- could be reflected in If. and Ka. as *i*; b) the element *sin- occurs elsewhere in If. and Ka., and its meaning in these occurrences could be interpreted as identical with the meaning which *sin- has in *sinpuluq. Thus, in If., there is a prefix {hin-} with the meaning 'a group taken as a unit', e.g. hintutlú 'in groups of three' ({hin-} + R + {tulú} 'three' + syncope), hillimu:ta 'the land holdings of a man taken together' ({hin-} + assimilation of final *n* to *l* before the initial *l* of the base {lu:ta} 'earth' {-um-}); in Ka. there is a prefix {hin-} with the meaning 'a collection

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[5] I have used reconstructions whenever I found these convenient for economy of expression. Thus, for example, with the reconstruction *telunpuluq, I can refer to the set of Il. tulumpulú and Ka. tulunpú 'thirty' without repeating each of the forms. Reconstructions are also useful as a reference point to explain the differences between the forms which belong to the same set.

of ten's', e.g. hinba:kid 'ten chickens, plates, utensils, etc.' ({hin-} +
{ba:kid} 'any useful item, e.g. chicken, utensil, rice, plates, etc.'), hinbaá
'ten bundles' ({hin-} + {baá} 'a small bundle'); there are certain
instances, when this prefix means 'several units taken together', e.g.
hintaku:yu 'one double handful' ({hin-} + {taku:yu} 'what can be
held in both outstretched arms'). If the morpheme *sin- in *sinpuluq
is identical with the prefix, which means 'collectivity' in If. and Ka.,
then the meaning of *sinpuluq must be something like 'ten units taken
collectively'. Since the morphological formation is not found in any of
the other languages compared, it is probably an exclusively shared
feature.[6]

3.2.2.2     With regard to the second set: it is conceivable that the
element na- in napu:luq 'ten' was originally *sa-, but the initial is now
*n*, instead of the expected *s,* because of an analogical wrong division:
when the prefix paŋ- is added to a base with an initial *s* or *n,* its final *ŋ*
is lost, and the base with initial *s* appears with an initial *n* instead,
while with base with initial *n* is unchanged: e.g. Se. panu:hul 'something
used for bribe' ({paŋ-} + {su:hul} 'bribe), Hi. panagúp 'something
used for saving someone' ({paŋ-} + {sagúp} 'save'), SL. panu:lay 'some-
thing used as temptation' ({paŋ-} + {su:lay} 'tempt'). The prefix paŋ-
has several meanings in Se., Hi., and SL., among which is the instru-
mental meaning. It is conceivable that there was a form *panapu:luq
'something used as ten', and even perhaps for this form to be an ordinal
numeral for 'tenth', like Tg. panampúq 'tenth' ({paŋ-} + {sampúq}
'tenth').[7] This form *panapu:luq may then have been interpreted to

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[6]  I have found further witnesses of *sinpuL₃uq in Bontoc Igorot sinpúo, and
    Kalinga simpúlo 'ten' (see Morice Vanoverbergh, *Some Undescribed Lan-*
    *guages,* pp. 120—121). The position of these languages in the family tree
    of Philippine languages has not been determined. However, Bontoc Igorot
    and Kankanay are probably dialects of the same language, since Kankanay
    is also an Igorot language (see M. Vanoverbergh, *A Dictionary of Lepanto*
    *Igorot or Kankanay as it is Spoken at Bauco*), and Kalinga has so many
    similarities with Ifugao and the Igorot languages (e.g. loss of Ph. *h and
    final *q; numeral forms, pronominal forms, etc.), that they probably belong
    to the same subgroup as these languages. Hence, it seems true to say that
    *sinpuL₃uq is probably an exclusively shared innovation, i.e. limited to these
    languages.

[7]  The form commonly used in modern Tagalog for 'tenth' is qikasampúq, but
    the form panampúq also occurs in the language: see P. S. Laktaw, *La Lengua*
    *Tagálog,* p. 299. 'Tenth' in Se. is qikanapu:luq; in Hi. it is qikapu:luq; in
    SL. it is qikapu:luq, qikanapu:luq.

have been originally from {paŋ-} + {napu:luq}, instead of from {paŋ-} + *{sapu:luq}. The difficulty with this explanation is that there is no ordinal numeral form *panapu:luq in Se., Hi., and SL., nor is there any form *panapu:luq at all in these languages. However, this does not mean that the form *panapu:luq did not once exist in these languages. This analogic wrong division could also have occurred, if there were forms like *manapu:luq, or *nanapu:luq in these languages, since these forms could have been interpreted to have been originally from {maŋ-} or {naŋ-} (which are transient prefixes, and likewise lose their final ŋ, when added to bases with initial n or s, and bases with initial s appear with initial n instead, while bases with initial n remain unchanged) + {napu:luq}, instead of from {maŋ-} or {naŋ-} + *{sapu:luq}. However, as far as I have been able to find out, there are no such forms as *manapu:luq, or *nanapu:luq in Se., Hi., or SL.

3.2.2.2.1    If the hypothesis above is right, namely, that Se., Hi., and SL. napu:luq 'ten' was originally *sapu:luq, then this form does not exhibit a morphological innovation, since it shows the same combination of the morphemes *sa- and the morpheme *puluq which is exhibited by the forms for 'ten' listed in 3.2.2 above. However, there is another probable explanation for this element na- in napu:luq, namely, that it is identical with the prefix na-, which is found in Se., Hi., and SL. The difficulty with this interpretation is that this na- prefix is usually used with transient bases, and signals passive action which is completed, in contrast with the prefix ma-, which signals action which is incomplete. However, there are instances in Se., Hi., and SL., when this prefix is used with static bases with the meaning 'has become', or 'has turned into' whatever meaning is conveyed by the base: e.g. Se., Hi., SL. naba:lu sya 'she has become a widow' ({na-} + {ba:lu} 'widow'), napri:su sya 'he was put in prison, i.e. he became a prisoner' ({na-} + {pri:su} 'prisoner'). If the na- element in napu:luq is identical with this transient prefix na-, then the meaning implied by the form napu:luq is something like '(the counting) has become (i.e. has reached) ten'. What is in favor of this interpretation are two facts: a) there are numeral forms in Se. and Hi., which seem to contain transient affixes, e.g. Se., Hi. ginatús 'by the hundred', Se., Hi. lini:bu 'by the thousand', Se. tinagpu:luq 'by tens', Hi. tinagpu:luq 'ten each'. The form ginatús clearly contains the morpheme gatús 'hundred', and an infix -in-, which is perhaps identical with the transient passive infix -in-; likewise, the form lini:bu clearly contains the morpheme li:bu 'thousand' and an infix -in-,

which may be identical with the transient passive infix -in-; finally, the form tinagpu:luq seems to contain the morpheme pu:luq 'ten', the prefix tag- (which has distributive meaning, when used with numerals, e.g. Se. tinagqusá 'one each': {tag-} + {-in-} + {qusá} 'one', tagsá 'each': {tag-} + {sa}, Hi. tagqisá 'one each': {tag-} + {qisá} 'one', tagduhá 'two each': {tag-} + {duhá} 'two') and the infix -in-, which again may be identical with the transient passive infix -in-. The difficulty with this attempt to identify the infix -in- in these forms with the passive transient infix -in- in Se., Hi., and SL., is the fact that the passive infix -in- conveys the meaning that the action signified by the base has been executed or completed, e.g. Se., Hi., SL. linu:tuq 'cooked' ({lu:tuq} 'cook' + {-in}). It is difficult to see how the distributive meaning in the forms cited above could have developed from this, but it is not inconceivable that the infix -in- may have had the distributive meaning also in the proto-language; at any rate, the forms above, like napu:luq, appear to contain a transient affix; b) it is interesting to note that if both the na- element in napu:luq, and the infix -in- in ginatús, lini:bu, etc. are transient affixes, both happen to be passive affixes. This may mean that the use of the passive transient affixes is found in the numeral systems of these languages.

3.2.2.2.2    At any rate, whatever the explanation for the na- element in napu:luq, the cardinal numeral form napu:luq shows an innovation: if it was originally *sa-, then the innovation is not morphological (3.2.2.1), but one which is the result of an analogical wrong division; if it is a transient prefix, then the form napu:luq shows a morphological innovation, for the combination of a transient prefix and the morpheme *puluq in a cardinal numeral form for 'ten' is not found anywhere else in the other languages involved here.

3.2.3    Se. kaluha:qan, and SL. karuha:qan 'twenty' both contain the form *Dewha 'two' (3.2.1), and the affixes {ka- -an}. Similarly, Se., Hi., SL. katlu:qan 'thirty' contains the form *telu (Ml., Jv. tĕlu, TB. tolu, NgD. telo, Mlgy. telo, To. tolu, Se., SL., Bk. tulú, Il., Ib. tallú, If., Ka. tulú), a syncope of *e in the penult, and the affixes {ka- -an}. The same affixes are used by Se., Hi., and SL. with the numerals for 'four' (Se. qupát, Hi. qa:pat, SL. qupát), 'five' (Se., Hi., SL. limá), 'six' (Se. qunúm, Hi. qa:num, SL. qunúm) etc. to form words for 'forty', 'fifty', 'sixty' etc. The morphological formation appears to be a shared innovation of Se., Hi., and SL. since it is not found in the other

languages involved in this comparison. In the other languages, the words
for 'twenty', 'thirty' etc. show: a) either a combination of the morphemes
*Dewha 'two' (3.2.1), *telu 'three', and *puluq (3.2.2), e.g. Ml. dua-
puloh, TB. duapulu, NgD. duepulu, Mlgy. roapolo, To. uofulu, Il.
duwapu:lu, Ib. duwapulú 'twenty': TB. tolupulu, NgD. telopulu, Mlgy.
telopolo, Il. tallupu:lu, Ib. tallupulú 'thirty', or b) a combination of the
morphemes *Dewha, *puluq, and an element which connects the two
morphemes together, e.g. Ch. hūgwa|na|fūluq, Jv. rô|ŋ|puloh, Tg.
dalawa|m|púq, Bk. duwa|m|pu:luq, If. duwa|m|pu:lu, Ka. dua|n|pú
'twenty'; Jv. tělo|ŋ|puloh, To. tolu|ŋo|fulu, Ch. tūlu|na|fūluq, Tg.
tatlu|m|púq, Bk. tulu|m|pu:luq, If. tulu|m|pulú, Ka. tulu|n|pú 'thirty'.
It is difficult to determine precisely what use of the affix {ka- -an} gave
rise to these forms in Bisayan; perhaps the meaning 'collectivity' fits
best (e.g. Se. kalapa:san 'transgressions' ({la:pas} 'transgress'), Hi.
kaduta:qan 'fields' ({du:taq} 'earth'), SL. kakawaya:nan 'bamboo
woods' ({kawa:yan} 'bamboo'). Perhaps, the forms Se. kaluha:qan,
SL. karuha:qan, and Se., Hi., SL. katlu:qan can be interpreted as
originally meaning something like 'a collection of two (i.e. ten's)', 'a
collection of three (i.e. ten's)'. It should be pointed out here that al-
though the morphological formation involved in *kaDewha:qan, and
*katelu:qan on the one hand, and *sinpuluq on the other are similar
in that they both employ a numeral morpheme and add to it a
morpheme meaning 'collectivity', still the formations are not identical:
the Se., Hi., and SL. forms use the affix {ka- -an}, which is a dis-
continuous morpheme, to express 'collectivity', whereas If. and Ka. use
{hin-}, a prefix, to express 'collectivity'. The formation of adding the
affix {ka- -an} to the numerals for 'two', 'three', etc. to form words for
'twenty', 'thirty' etc. are not found in any of the other languages
compared, and is probably and ESI of Se., Hi., and SL.

3.2.4    The following set of forms for 'second' appears to have
exclusively shared features: Tg. qikalawá, Se., Hi., SL., qikaduhá, Bk.,
Ka. qikaduwá. The forms all seem to have an element qika- prefixed
to the form *Dewha 'two' (3.2.1). None of the other languages
investigated for this study shows such a morphological combination in
their forms for 'second'; hence, these forms are probably innovations.

3.3    PERSONAL PRONOUNS
3.3.1    In the personal pronominals, probable exclusively shared
morphological features are found in: a) the predicator nominative free

forms for: (1) the first person singular *siqaken 'I' of the NPh languages, (2) the second person singular *siqika 'you' of Ilocano, Ifugao, and Kankanay, (3) the plural *Da forms of Ilocano, Ifugao, and Kankanay, (4) the third person plural *DaiDa 'they' of Ifugao and Kankanay; b) the free possessive forms of the NPh languages. Other shared features which were investigated turned out to be either probable common retentions, or were easily so interpreted.

3.3.1.1    The personal pronominal forms of the nine Philippine languages under study are either bound or free. For example, Tg. *qakú* 'I' is a free form as in the sentence *qakú* 'It it I', whereas Tg. *ku* 'of me' (which occurs only after another word) is a bound form, as in the sentence ba:hay *ku* 'it's my house'. Similar differences in distribution are found in the personal pronominal forms of these nine languages.

3.3.1.2    In the CPh languages, there are distinct forms for the nominative (e.g. Hi. *qakú* 'I'), and for the oblique [8] (e.g. Hi. *qa:kun* 'mine', *sa qa:kun* 'to, for me'). The nominative forms function as predicators (e.g. Tg. *qaku* aŋ naglulu:tuq 'the one-who-is-cooking is I, i.e. I am cooking') and as topics in relation to the predicate (e.g. Tg. *qaku* y naglulu:tuq 'I am cooking'). As topics the nominative forms have two positions:[9] a) enclitic — after the first orthotonic word of the phrase (e.g. hindí *siya* naglulu:tuq 'he is not cooking', naglulu:tu *sya* naŋ ka:nin 'he is cooking rice') or b) non-enclitic — before the predicate (e.g. Tg. *siyá* y naglulu:tuq 'he is cooking'). The oblique free forms function as predicators, (e.g. Hi. *qa:kun* qiní 'this is mine'), as preceding attributes (e.g. Hi. *qa:kun* ŋa balay 'my house'), and in local expressions (e.g. Hi. qiha:tag mu qini *sa qa:kun* 'be-given by-you this to me'). The bound oblique forms function only as attributes (e.g. Hi. balay *na:kun* 'my house').

3.3.1.3.    In the NPh languages, there are distinct forms for the nominative (e.g. Il. siyák 'I') and for the possessive (e.g. Il. kuwák

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[8] The term "oblique" is here used as a cover term for forms which occur in non-nominative positions.

[9] Here I have paraphrased Bloomfield's description of enclitic forms in Tagalog, which I found valid also in the case of the CPh languages involved in this comparison. (See *Tagalog Texts,* p. 143).

'mine'). The nominative free forms function as predicators (e.g. Il. *siyak* ti nagagét 'the diligent-one is I, i.e. I am the diligent one'), and the nominative bound forms function as topics in relation to predicates (e.g. Il. mapa:nak 'I go', kabsátn*ak* 'I am his brother'. The possessive free forms are used as predicators (e.g. Il. *kuwák* ti baláy 'the house is mine'), and the possessive bound forms are used as attributives (e.g. baláy*ku* 'my house'). The possessive free forms appear to be actually substitutives, in the sense that their forms seem to be a combination of the morpheme meaning 'something', and the possessive bound forms: thus, for example, Il. *kuwák* 'mine' seems to be a combination of *kuwá* 'something' and *k* 'my'.

3.3.2      The following set of nominative free forms for the first person singular: Ib. sa:kan, If. haqqén, and Ka. hakqén, hiakqén 'I' imply a proto-form siqaken. This proto-form can be taken to contain a particle *si, which no doubt is the same particle as that which occurs before proper names and certain special substantives in various languages, e.g. Ml. *si* Kasim 'Kasim', TB. *si Horas* 'Horace', Jv. *si* Tômô 'Tômô', Chamorro *si* nana 'mother', Tg. *si* ama 'father', Se. *si* tu:ni 'Tony', Hi. *si* pídru 'Peter', If. *hi* wi:gan 'Wigan', Ka. *hi* bihtáy 'Bistay' etc. The second element is $*x_3$aken (3.3.6.9). The Ib. form seems to have originated from *siqaken, which by loss of q became *siaken, and then by contraction sa:kan. The If. form could have originated from *siqaken, which by metathesis became *hiaqqon (*k > If. q: 2.2.5), and finally by contraction of vowels became haqqon, which is the form for 'I' in Guhang Ifugao; the vowel e in the Bayninan form haqqén is un-explained (but notice that it is like Ka. hakqén, and in fact may be the Ka. word itself). The Ka. forms may have originated from *siqaken, which by metathesis became *siakqen, which yielded hiakqen, and also by contraction hakqén. The Il. form for the nominative free form of the first person singular is siyák 'I', which appears to be a combination of *si plus the bound form *ak 'I'.[10] It is conceivable that the original

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[10]  A proto-form *ak is implied by the following bound forms for 'I': Il., Ib. ak, If. aq, Ka. ak. Since this form is not attested in any of the CPh, and other languages involved in this comparison, the question arises whether this form exhibits a morphological innovation or not, and whether such an innovation is exclusively shared by these languages or not. With regard to the first question, the proto-form *ak, as an enclitic alternant of the morpheme for 'I' appears to exhibit a morphological innovation, because it seems that the free nominative form for 'I' in the proto-language was $*x_1$aku (see note 12).

form was *siyaken, which was replaced by siyák on the analogy of the second person singular form siká 'you (sg.)'. The latter is a combination of *si plus the bound form *ka 'you (sg.)' (3.3.3). The analogy would be based on the relation between qagbalbaláyka 'you are building a house' to qagbalbaláyak 'I am building a house'. If this is so, then the

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The form *ak, therefore, appears to be the result of the loss of the final vowel of Ph *aku (*x₁- becomes q- in Ph, and this q- disappears in enclitic forms). Although the relationship between the alternants *aku and *ak appears to be identical to that between *mu and *m, and *ku and *k (in that *m, *k, and *ak are the result of the loss of the final vowel of *mu, *ku, and *aku respectively), still there are two important differences: a) the *m and *k alternants occur only after words which end in a vowel, whereas *ak occurs after words which end in a vowel or consonant; b) the *mu, *m, *ku, *k alternants are all enclitic bound forms, whereas *aku is an independent form and only *ak is an enclitic bound form. The form *ak, therefore, exhibits a probable morphological innovation. Whether this morphological innovation is exclusively shared or not is difficult to determine at this time, because the form *ak is also attested by the following: Casiguran Negrito ëk, Baler Negrito ëq, Rizal Negrito âk, Cagayan Negrito ak, Isneg āq, Bontoc Igorot, Kalinga, Ibaloy and Ilongot ak (see Morice Vanoverbergh, *Some Undescribed Languages*, pp. 123—127), and the position of these languages in the family tree of Philippine languages has not been determined. However, the following points should be considered: a) these languages are spread out over a wide area on the island of Luzon: Isneg, Cagayan Negrito, Bontoc Igorot, Kalinga, Ibaloy, and Ilongot are located in the northern section of the island, where Il., Ib., If., and Ka. are, whereas Casiguran Negrito, Baler Negrito, and Rizal Negrito are located in the central area, where Tg. is; b) Bontoc Igorot and Kankanay are probably dialects of the same language; Kalinga and Ifugao have so many similarities with one another, that they probably belong to the same subgroup (see note 6 above); the pronominal and numeral forms, as well as the lexical items of Ilongot and Ibaloy are so different from the other Ph languages mentioned here (e.g. Ilongot has a kind of quinary-decimal system instead of the usual Philippine decimal system: sic Vanoverbergh, *op. cit.*, pp. 196—197), that they probably belong to different subgroups from one another and from all the other Ph languages mentioned here. As for the other languages, their positions are not as evident: it is nevertheless clear that the lexical, pronominal, and numeral forms of the Negrito languages and Isneg are so different from the forms of the CPh languages, that they probably do not belong to the same subgroup as these CPh languages. On the other hand, the forms of these languages resemble so many of the forms of the NPh languages, that one would not be surprised if later more evidence is found which would indicate that they belong to the same subgroup — not perhaps to the same immediate subgroup, but to a larger subgroup, which would, at any rate, be different from the subgroup to which the CPh languages belong. In view of the fact, therefore, that *ak is attested in languages which are geographically spread out over a wide area, and that it is attested in Ilongot and Ibaloy, which appear to belong neither to the CPh nor to the NPh languages, it seems that the morphological innovation it exhibits is not limited to the NPh languages, but is perhaps traceable to Proto-Philippines.

form *siqaken would appear to be limited to the NPh. languages.[11]
It would also represent an innovation, since the form which is implied
by the following for the proto-language is *$x_1$aku:[12] Ml., Jv.Ng., NgD.
aku, TB. ahu, Mlgy. aho, Ch. gwāho, Pazeh (Formosa) jakuq, Tg., Se.,
Hi., SL., Bk. qakú 'I'.

3.3.3     The following set of nominative free forms for the second
person singular: Il. siká, If. heqqá, and Ka. hikqá 'you' imply a proto-
form siqika. This proto-form can be taken to contain a particle *si
(3.3.2), and *qika (e.g. Bk. qiká 'you'). The form *qika, in turn, can
be taken to contain a particle *i, which no doubt is the same particle
as that which occurs before substantives in various languages, e.g. Pmp.
qi ta:wu 'the man', Ib. qi qabbíŋ 'the child', Ch. i hagon 'the leaf' etc.
The second element is the bound form *ka 'you (sg.)'.[13] The If. form
may have originated from *siqika, which by metathesis became *siiqka,
and finally by contraction became *hiqqa; the e vowel in the form
heqqá is unexplained. The Ka. form may have originated from *siqika,
which by metathesis became *siikqa, and finally bij contraction hikqá.
The form *siqika is found only in Il., If., and Ka. It may also represent
an innovation since the form which is implied by the following for the
proto-language is *ikaw: NgD. ikaw, Tg., Se., Hi., SL. qikáw 'you',
which in turn appears to be a combination of *i (see above) and *kaw:
To. kaw, Fi. ko, Chamorro haw 'you (sg.)'.

3.3.4     The following sets of nominative plural free *Da forms
exhibit a probable innovation: a) If. dituqú, Ka. datakú 'we (inclusive)',

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[11]  The proto-form *siqaken is also attested by Casiguran Negrito sakën, Bontoc
Igorot sakqén, and Kalinga sákon: sakën may have been originally *siakën,
but became sakën by contraction of vowels; sakqén may have been originally
*siqakén, but by metathesis it became *siakqén, and by contraction of vowels
it became sakqén; sákon may have been originally *siákon, but by con-
traction of vowels became sákon. Since these languages probably belong to
the same subgroup, it is possible to say that the form *siqaken is limited
to the NPh languages.

[12]  On the reconstruction of *$x_1$aku, see Isidore Dyen, "Some New Proto-Malayo-
Polynesian Initial Phonemes"

[13]  The bound form *ka appears to be a retention, at least from Proto-Philippines,
since it is attested in all the nine Ph languages under study and also in
Casiguran, Casiguran Negrito, Rizal Negrito, Cagayan Negrito, Isneg, Bontoc
Igorot, Ibaloy, Kalinga, Ilongot, etc. See Morice Vanoverbergh, *Some Un-
described Languages,* pp. 122—127.

b) Il. dakamí, If. daqmí, Ka. dakamí 'we (exclusive)', c) Il. dakayú, If. daqyú, Ka. dakayú 'you'. All these forms appear to contain an element da- plus a pronominal form. This da- is, apparently, the second element in *siDa: Ch. siha, TB. na|sida, Tg., Se., Hi. silá, SL. sirá 'they'.

3.3.4.1    If. dituqú, and Ka. datakú 'we (inclusive)' imply a proto-form Dataku, which appears to contain *Da and *taku. The form *taku, in turn, seems to be a combination of the bound form *ta (3.3.6.4), and the bound form *ku (3.3.6.1). The If. form may have originated from datakú, which is the form in Kiangan Ifugao; by analogy with didá 'they' (3.3.5), it became dituqú.

3.3.4.2    Il. dakamí, If. daqmí, Ka. dakamí 'we (exclusive)' imply a proto-form Dakami, which appears to contain *Da and *kami: Ch. hãmi, Ml. kami, TB. hami, Tg., Se., Hi., SL., Bk. kamí 'we (exclusive)'. The If. form may have originated from dakamí, which is still the form in Kiangan Ifugao, but by syncope it became daqmí.

3.3.4.3    Il. dakayú, If. daqyú, and Ka. dakayú imply a proto-form Dakayú, which appears to contain *Da and *kayu. The form *kayu is attested in Tg., Il. kayú, If. qayú, Ka. kayú, and perhaps Ch. hamju 'you (pl.)', although the nasal cluster of the Chamorro form is unexplained. The morphology of *kayu is unclear: the element *yu seems to be identical with the bound form *yu (3.3.6.7), but the element *ka is a problem. However, the following remarks can be made about it: first, it seems to be clearly identical with the *ka element in *kami, *kamu (3.3.4.4), which seem to be from *ka and *mi (3.3.6.6), and from *ka and *mu (3.3.6.2); second, this *ka does not seem to be identical with the bound form *ka (3.3.3), since the semantic content of this bound form does not match that of *ka in *kami, *kayu, *kamu; third, *ka may be some sort of a prefix, with a meaning which is undetermined at this time.

3.3.4.4    From a comparison of the personal pronominal forms in the languages involved in this comparison, it seems clear that: a) the form for 'we (exclusive)' in Proto-Malayo-Polynesian (PMP.) was kami (3.3.4.2); b) the form for 'we (inclusive)' in PMP. was kita: Ml. kita, TB. hita, Ch. hīta, Se., Hi., SL., Bk. kita; c) the form for 'you (pl.)' in PMP. was kamu: Ml. kamu (dial.), TB. hamu, Yami (Botel Tobago

Is.) kamu, Ami (Formosa) kamo, Tg.,[14] Se., Hi., SL., Bk. kamú. The morphological combination of adding *Da to a pronominal form is found only in the NPh. languages,[15] and appears to be an innovation.

3.3.5    The following set of free nominative plural forms: If. didá, Ka. daidá 'they' imply a proto-form DaiDa, which appear to contain *Da (3.3.4), *i (3.3.3), and *Da again. The If. form may conceivably have been *daida, but became didá by a contraction of vowels. Since the forms in the other languages for the free nominative 'they' imply a Pmp. siDa (3.3.4), and since the form *DaiDa is found only in If. and Ka.,[16] it appears to be an innovation of these languages.

3.3.6    The following sets of free possessive forms exhibit a probable innovation: a) Il., Ib. kuwák, If. kuwáq, Ka. qukák 'mine'; b) Il., Ib., If. kuwám, Ka. qukám 'yours (sg.)'; c) Il., Ib., If. kuwa:na, Ka. quka:na 'his, hers, its'; d) Il., Ib., If. kuwa:ta, Ka. quka:ta 'of us two'; e) If. kuwatuqú, Ka. quka:taku 'ours (inclusive)'; f) Il., Ib., If. kuwa:mi, Ka. quka:mi 'ours (exclusive)'; g) Il., If. kuwa:yu, Ka. quka:yu 'yours (pl.)'; h) Il., If. kuwa:da, Ib. kuwa:ra, Ka. quka:da 'theirs'. All these forms appear to contain an element *kuwa, which is perhaps continued by Il. kuwá (general term for anything), Ib., Ka. kuwá 'thing, property',Tg. kuwán (designation for something undetermined): the Tg. form may have been originally *kuwa plus -an (suffix indicating abstraction of what the base conveys); then by contraction it became kuwan.[17]

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[14]    In modern Tagalog, the form for 'you (pl.)' is kayú, but kamú is also found: see S. P. Laktaw, *La Lengua Tagálog*, p. 57.

[15]    In Isneg, this formation occurs in dakamí 'we (exclusive)', dattadá 'we (inclusive)', dattá 'we (two)', dakayó 'you (pl.)'; in Bontoc Igorot, it occurs in čakami 'we (exclusive)', čaytá 'we (two)', čakayó 'you (pl.)'; in Kalinga it occurs in diaḳamí 'we (exclusive)', and diaḳayó 'you (pl.)'. However, since there are good grounds for saying that these languages belong to the NPh languages, it is possible to say that the *Da forms are limited to the NPh languages. Note, however, that there is not a single form in Ib. which might indicate that this formation is likewise found in this language.

[16]    The formation appears also in Bontoc Igorot čayča, but as mentioned above, Bontoc Igorot, like Lepanto Igorot or Kankanay, seems to belong to the same language.

[17]    The following forms of the following Formosan languages may also be cognates: Bunun qúka, Thao qúkaq, Tsou ukqá 'there is none'. There may have been a metathesis in these forms. The difficulty is that the meaning of these forms is somewhat distant.

3.3.6.1   Il., Ib. kuwák, If. kuwáq, Ka. qukák 'mine' imply a proto-form kuwak, which appears to contain *kuwa, and the bound form *k, which is an alternant of *ku 'my', and occurs after words with final vowels,[18] e.g. qagúŋku 'my nose' ({qagúŋ} 'nose'), but matak 'my eye' ({matá} 'eye'); Ib. qigókku 'my nose' ({qigóŋ} 'nose'): the final ŋ of this word is assimilated to the following k, but maták 'my eye' ({matá} 'eye'); If. qolóŋku 'my nose' ({qolóŋ} 'nose'), but maták ({matá} 'eye'); Ka. qéŋku 'my nose' ({qeŋ} 'nose'), but matak 'my eye' ({matá} 'eye'). The form *ku is also attested in Ml., Jv. Ng., NgD. ku, TB. hu, Mlgy. ko, Ch. ko, ho, Tg., Se., Hi., SL., Bk. ku 'my'. The Ka. form may have been originally *kuak; by metathesis it became qukák.

3.3.6.2   Il., Ib., If. kuwám, Ka. qukám 'yours (sg.)' imply a proto-form kuwám, which seems to contain *kuwa and the bound form *m, which is an alternant of *mu and occurs after words with a final vowel, e.g. TB. manukmu  'your hen' ({manuk} 'hen'), but aŋgim 'your younger brother' ({aŋgi} 'younger brother'); Il. ra:maymu 'your finger' ({ra:may} 'finger'), but ta:wam 'your window' ({ta:wa} 'window'); Ka. ba:begmu 'your spear' ({ba:beg} 'spear'), but dadám 'your blood' ({dadá} 'blood'). The form *mu is attested also in Jv.Ng., Ch. mu, Tg., Se., Hi., SL., Bk. mu 'your'. The Ka. form may have been originally *kuam; by metathesis, it became qukám.

3.3.6.3   Il., Ib., If. kuwa:na, Ka. quka:na 'his, hers, its' imply a proto-form kuwa:na, which seems to contain *kuwa, and Pmp. *ña: TB. na, Ml., Ch. ña, Il., Ib., If., Ka. na 'his, hers, its'. The Ka. form may have been originally *kua:na; by metathesis it became quka:na.

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[18] The bound form *k 'my', as an alternant of *ku, is attested not only in Il., Ib., If., and Ka., but also in Cagayan Negrito (e.g. qigoŋ ko 'my nose', but maták 'my eye'), Kalinga (e.g. biloy ko 'my house', but qaták 'my eye'), Ibaloy (baléy ko 'my house', but maták 'my eyes'), Rizal Negrito (e.g. biâlây ko 'my house', but saŋok 'my nose', etc.). See Morice Vanoverbergh, *Some Undescribed Languages*, pp. 128—131. However, since there are good reasons for thinking that these languages belong also to the same subgroup as Il., Ib., If., and Ka., the question arises whether this shared feature is an innovation or not. Since the alternation between *ku and *k involves the dropping of a final vowel *u* after words ending in a vowel, and since this same alternation is found in *mu and *m, I have not considered it as a different type of alternation, but another instance of the same. The alternation of *mu and *m is a retention (3.3.6.2).

3.3.6.4    Il., Ib., If. kuwa:ta, Ka. quka:ta 'ours (dual)' imply a proto-form kuwata, which appears to contain *kuwa and PMP. ta: To., Il., Ib., If., Ka. ta 'ours (dual)'. The Ka. form may have been originally *kua:ta; by metathesis it became quka:ta.

3.3.6.5    If. kuwatuqú, Ka. quka:takú 'ours (inclusive)' imply a proto-form kuwataku, which appears to contain *kuwa and *taku, which is the If. and Ka. free nominative form for the first person plural inclusive. The form *taku appears to contain the bound forms *ta (3.3.6.4) and *ku (3.3.6.1). The If. form may have been originally *kuwataqú; by assimilation, the *a* vowel of the penult became *u* before the *u* in the ultima. The Ka. form may have been originally *kua:takú; by metathesis, it became quka:takú. The Il. form which corresponds to *kuwataku is kuwa:tayu, which is a combination of kuwá and the bound form tayú 'ours (inclusive)'. The Ib. form here is kuwa:tam, which is a combination of kuwá and the bound form tam 'our (inclusive)'.

3.3.6.6    Il., Ib., If. kuwa:mi, Ka. quka:mi 'ours (exclusive)' imply a proto-form kuwami, which seems to contain *kuwa and the bound form *mi: Il., Ib., If., Ka. mi 'our (exclusive)'.[19] The Ka. form may have been originally *kua:mi; by metathesis it became quka:mi.

3.3.6.7    Il., If. kuwa:yu, Ka. quka:yu 'yours (pl.)' imply a proto-form kuwayu, which seems to contain *kuwa and the bound form *yu: Il., Ib., If., Ka. yu 'your (pl.)'.[20] The Ka. form may have been originally *kua:yu; by metathesis it became quka:yu. The Ib. form here is kuwa:mu 'yours (pl.)', which is a combination of kuwa and the bound form mu (3.3.6.2).

3.3.6.8    Il., If. kuwa:da, Ib. kuwa:ra, Ka. quka:da 'theirs' imply a proto-form kuwaDa, which appears to be a combination of *kuwa and *Da (3.3.4). The Ka. form hay have been originally *kua:da; by metathesis, it became quka:da.

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[19]  The bound form *mi is probably a retention at least from Proto-Philippines, since it is found in Il., Ib., If., Ka., Casiguran, Casiguran Negrito, Baler Negrito, Rizal Negrito, Cagayan Negrito, Isneg, Bontoc Igorot, Kalinga, Ibaloy, Ilongot. See Morice Vanoverbergh, *Some Undescribed Languages*, pp. 122—127.

[20]  The bound found *yu is probably a retention at least from Proto-Philippines, since it is found in Il., If., Ka., Rizal Negrito, Bontoc Igorot, Kalinga, Ibaloy, and Ilongot See Morice Vanoverbergh, *Some Undescribed Languages*, pp. 123—127.

3.3.6.9    These free possessive forms of the NPh. languages appear to be innovations, because they are found nowhere else in the other languages included in this investigation. The forms of the CPh. languages which correspond to these forms of the NPh. languages are the free oblique forms, e.g. Tg. qa:kin 'mine', qa:tin 'ours (inclusive)', etc. The Tg. form qa:kin can be compared with Se. qa:kuq,[21] Hi., SL. qa:kun, Pazeh (Formosa) ni|aken, Yami (Botel Tobago Is.) jaken 'mine', and imply a proto-form *x₃aken; and Tg. qa:min 'ours (exclusive)', can be compared with Se. qa:muq, Hi., SL. qa:mun, Pazeh ni|amen, Yami jamen 'ours (exclusive)', and imply a proto-form *x₃amen. Yami jaken 'mine', and jamen 'ours (exclusive)' together with the CPh. forms imply a free possessive pronominal *x₃aken and *x₃amen. Some observers consider Yami (spoken on the island of Botel Tobago off Formosa) as a Philippine language; hence, perhaps these forms are at least Proto-Philippine forms. This means that the possessive free forms of the NPh. languages are probably innovations.

3.4    TRANSIENTS

3.4.1    In the transients, a probable shared innovation is found in the four-way morphological distinction of aspects and modes exhibited by the CPh. language forms. The system may be described as follows:[22]

| *Modes* | *Aspects* |
| --- | --- |
| Contingent | Durative |
| | Punctual |
| Actual | Durative |
| | Punctual |

The contingent mode is used to signal action which has not taken place: the durative aspect signals action which is future from the point

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[21]  The Se. -q for -n may be the result of analogical wrong division: the particle ŋa has the variant ŋ when the word to which it is attached ends in a vowel, n, or q. In a construction like qa:kuŋ baláy 'my house' ({baláy} 'house'), the form qa:kuŋ may have been interpreted to have come originally from qa:kuq plus ŋ, instead of from *qa:kun plus ŋ.

[22]  This description of the modes and aspects of the transients is a paraphrase of Leonard Bloomfield's description of Tagalog transients, which I found to be valid also for the transients of the CPh languages. See L. Bloomfield, *Tagalog Texts,* p. 217.

of view of past or present, and the punctual aspect signals action which is possible, hypothetical, or commanded. The actual mode signals action which has taken place or is taking place: the durative aspect signals action which is going on, and the punctual aspect signals action which is completed. The morphemes used for the contingent mode are identical for the durative and the punctual aspects, but the durative is distinguished from the actual by the addition of another morpheme: {-a-} as in Se., and Hi., or reduplication plus length as in Tg., SL., and Bk. The same is true with the actual mode: identical morphemes are used for the durative and punctual aspects, but the durative is distinguished from the punctual by the addition of another morpheme: {-a-} in Se., and Hi.; reduplication plus length in Tg., SL., and Bk.

3.4.1.1    This four-way distinction of modes and aspects in Tg. may be illustrated by the following examples:

Contingent {
  Durative: maglu:lu:tuq 'will cook' ({mag-} + R + length + {lu:tuq} 'cook').
  Punctual: maglu:tuq 'cook' ({mag-} + {lu:tuq} 'cook').
}

Actual {
  Durative: naglu:lu:tuq 'cooking' ({nag-} + R + length + {lu:tuq} 'cook').
  Punctual: naglu:tuq 'cooked' ({nag-} + {lu:tuq} 'cook').
}

3.4.1.2    Here are some examples in Se.:

Contingent {
  Durative: magasúlti 'will talk' ({mag-} + {-a-} + {súlti} 'talk').
  Punctual: magsúlti 'talk' ({mag-} + {súlti} 'talk').
}

Actual {
  Durative: nagasúlti 'talking' ({nag-} + {-a-} + {súlti} 'talk').
  Punctual: nagsúlti 'talked' ({nag-} + {súlti} 'talk').
}

3.4.1.3    Here are some examples in Hi.:

Contingent {
  Durative: magalakát 'will walk' ({mag-} + {-a-} + {lakát} 'walk').
  Punctual: maglakát 'walk' ({mag-} + {lakát} 'walk').
}

Actual {
  Durative: nagalakát 'walking' ({nag-} + {-a-} + {lakát} 'walk').
  Punctual: naglakát 'walked' ({nag-} + {lakát} 'walk').
}

3.4.1.4    Here are some examples in SL.:

Contingent $\Big\{$ Durative: maglu:lu:tuq 'will cook' ({mag-} + R + length + {lu:tuq} 'cook').

Punctual: maglu:tuq 'cook' ({mag-} + {lu:tuq} 'cook').

Actual $\Big\{$ Durative: naglu:lu:tuq 'cooking ({nag-} + R + length + {lu:tuq} 'cook').

Punctual: naglu:tuq 'cooked' ({nag-} + {lu:tuq} 'cook').

3.4.1.5    Here are some examples in Bk.:

Contingent $\Big\{$ Durative: magqi:qinúm 'will drink' ({mag-} + R + length + {qinúm} 'drink').

Punctual: magqinúm 'drink' ({mag-}+{qinúm} 'drink').

Actual $\Big\{$ Durative: nagqi:qinúm 'drinking' ({nag-} + R + length + {qinúm} 'drink').

Punctual: nagqinúm 'drank' ({nag-} + {qinúm} 'drink').

3.4.2    There is evidence that this four-way morphological distinction of aspects and modes is an innovation of the CPh. languages, because it is not found in the other languages investigated for this subgrouping project. In the NPh. languages, the transient system shows a two-way morphological distinction of aspects, as follows: a) present — this is used to indicate action which is not completed, and is signalled by a set of affixes, some of which are prefixes with a characteristic {m} morpheme in initial position, and contrasts with a corresponding set of prefixes with a characteristic {n} morpheme in initial position for the past aspect; b) past — this is used to indicate action which is completed, and is signalled by a set of affixes, some of which are prefixes with a characteristic {n} morpheme in initial position (see above).

3.4.2.1    Examples of this two-way morphological distinction of aspects are:

Il. *ma*tu:rugak 'I sleep' ({*ma*-} + {tu:rug} 'sleep'), *na*tu:rugak 'I slept' ({*na*-} + {tu:rug} 'sleep'),

Ib. *ma*si:ŋan 'is seen' ({*ma*-} + {si:ŋan} 'see'), *na*si:ŋan 'was seen' ({*na*-} + {si:ŋan} 'see'),

If. *mun*ha:pit 'speaks' ({*mun*-} + {ha:pit} 'word'), *nun*ha:pit 'spoke' ({*nun*-} + {ha:pit} 'word',

Ka. *men*ha:pit 'tells a tale' ({*men*-} + {ha:pit} 'tale', *nen*ha:pit 'told a tale' ({*nen*-} + {ha:pit} 'tale').

3.4.2.2    This system is, in part, identical to the Malagasy verb system, which shows a three-way morphological distinction of tenses,[23] namely, a) present tense — which indicates action going on, and is signalled by the {m} morpheme, e.g. *maniraka* 'I send' ({m} + {aniraka} 'send'), b) past — which indicates action completed and is signalled by {n}, e.g. *naniraka* 'I sent' ({n} + {aniraka} 'send'), and c) future — which indicates action which is to take place, and is signalled by the {h} morpheme, e.g. *haniraka* 'I will send' ({h} + {aniraka} 'send'). The use of the {m} morpheme to signal action which is not completed, and the use of the morpheme {n} to signal action which has been completed, are comparable to the transient two-way distinction of aspects in the NPh. languages. The Malagasy future tense is not comparable to the future aspect formation found in the CPh. languages, since this tense is signalled in the CPh. languages by a prefix plus reduplication and length or by a prefix and an infix plus reduplication and length whereas in Malagasy it is signalled only by a prefix {h}. Neither is it comparable to the future system of the NPh. languages, which uses the form of the present plus a particle indicating future time, e.g. Il. mapa:naktu 'I shall go' ({ma-} + {pan} 'go' + {ak} 'I' + {to} (particle indicating future time)). It seems, therefore, that at least in PH., there was this two-way morphological distinction of aspects, namely, a) present — signalled by the morpheme {m}, and b) past — signalled by the morpheme {n}.

3.4.2.3    Perhaps a third aspect, namely, the durative, is also implied by a comparison of the morphological systems of the transients in the various languages. Such an aspect is signalled by reduplication. It is not clear what type of reduplication was used by the proto-language, since some languages reduplicate the first CV. of the base (e.g. Tg., Chamorro etc.), some reduplicate the first CVC. of the base (e.g. Il., If., Ib., Ka.,

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[23]  R. P. Malzac uses the term "tenses" instead of "aspects" in his book *Grammaire Malgache*, pp. 53—56, but it seems clear that it is not so much the *time when* the action takes place that is signalled by the various verb forms, as the *type* of action (as described above). An indication of this are the following remarks by Malzac: "L'unique forme du présent malgache traduit le présent de l'indicatif, de l'infinitif et du participe .... l'unique forme du passé traduit nos différents passés: imparfait, passé défini, indéfini et antérieur, plus-que-parfait et participe passé .... la forme du futur sert pour le futur simple, le conditionnel présent, le présent et l'imparfait du subjonctif et le participe futur".

Trukese etc.), some reduplicate the entire base or the first CV. of the base (e.g. TB.), some reduplicate part of the base (e.g. Tongan) etc.

3.4.2.3.1 Some examples of this reduplication are:
Tg. na*tutu*:lug 'sleeping' ({na-} + R + {tu:lug} 'sleep'),
Chamorro *li*liqi 'seeing' ({liqi} 'see' + R),
Il. ma*turtu*:rug 'sleeping' ({ma-} + R + {tu:rug} 'sleep'),
Ib. ma*sissi*:ŋan 'being seen' ({ma-} + R + {si:ŋan} 'see'),
If. mun*hap*ha:pit 'continually speaking' ({mun-} + R + {ha:pit} 'a tale'),
Ka. men*hap*ha:pit 'telling a tale' ({men-} + R + {ha:pit} 'a tale),
Trukese *mö*mmööt 'sitting' ({mööt} 'sit'),[24]
TB. mar*me*meam, or mar*meam*meam 'playing' ({meam} 'play'),
To. *vaka*vakai 'looking' ({vakai} 'look').

## 3.5 MORPHOLOGICAL EVIDENCE FOR SUBGROUPING

3.5.1 The exclusively shared morphological features which can be considered as evidence for the subgrouping of the nine Philippine languages under study may now be tabulated as follows:

| | | Tg. | Se. | Hi. | SL. | Bk. | Il. | Ib. | If. | Ka. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. *sinpuluq | 3.2.2.1 | | | | | | | | x | x |
| 2. napu:luq | 3.2.2.2 | | x | x | x | | | | | |
| 3. *kaDewha:qan etc. | 3.2.3 | | x | x | x | | | | | |
| 4. *qikaDewha | 3.2.4 | x | x | x | x | x | | | | x |
| 5. *siqaken | 3.3.2 | | | | | | x | x | x | x |
| 6. *siqika | 3.3.3 | | | | | | x | | x | x |
| 7. *Da plural forms | 3.3.4 | | | | | | x | | x | x |
| 8. *Free possessives | 3.3.6 | | | | | | x | x | x | x |
| 9. Aspect-Mode System | 3.4.1 | x | x | x | x | x | | | | |

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24 This form is from the files of Isidore Dyen.

# IV. LEXICON [1]

4.1      This section contains lexical evidence for the subgrouping of the nine Philippine languages under study. Such evidence consists of exclusively shared vocabulary items.

4.1.1.      The object of this part of the investigation is to examine the vocabulary lists of the various languages involved in the comparison to see if cognate lexical items can be found which are possessed exclusively by less than all nine of the Philippine languages under study.

4.1.2      To determine such exclusively shared cognate vocabulary items, it is first necessary to match the forms and meanings of the lexical items to see if they systematically correspond (1.4.3). The systematic correspondence of forms requires that the phonemic shape of words be exactly matched or if there is a discrepancy, this discrepancy can be reasonably explained as the result of such phenomena of linguistic change as assimilation, metathesis, analogy, etc. The systematic correspondence of meanings requires that the meanings be exactly matched, or that they resemble each other to such an extent that their resemblance immediately identifies them to be related to one another. Thus, for example, if a word in language A means 'five' and a word in language B means 'hand', even though the matching is not exact, still the meanings of these words resemble each other to such an extent that their resemblance identifies them to be related. This criterion of systematic correspondence of meanings is, admittedly, less precise than the criterion of correspondence of forms, but at least the limits are clear beyond which all will agree that the meanings do not correspond.

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[1] The term lexicon has been used by Bloomfield in the sense of an appendix to the grammar of a language which lists the total stock of the morphemes of that language, and deals especially with the irregularities of its linguistic forms (*Language* 158—169; 264 ff.). On the other hand, Karl Brugmann uses the term in a less rigorous and restricted way: for him lexicon is synonymous with vocabulary (Wortschatz), or the list of the words of the language. It is in this sense that I use the term.

**4.1.3**     Secondly, it is necessary to determine whether the sets of lexical items are exclusively shared. Two criteria are used: a) the lexical items are not found in all the nine Philippine languages under study; b) nor are they found in any related language outside our study group.

**4.1.3.1**     With regard to the first criterion: the following vocabularies of the nine Philippine languages were used:

| | Language | Title | Author | Abbre-viation | Date | Entries |
|---|---|---|---|---|---|---|
| 1. | Tagalog | Diccionario Tagálog-Hispano | P. S. Laktaw | (Tg.L.) | 1914 | 16,714 |
| 2. | Cebuano | Visayan-English Dictionary | R. Cabonce | (Se.Ca.) | 1950 | 4,876 |
| 3. | Hiligaynon | Visayan-English Dictionary | J. Kaufmann | (Hi.Ka.) | 1937 | 17,153 |
| 4. | Samar-Leyte | Diccionario Bisaya-Español | A. de la Rosa | (SL.R.) | 1895 | 9,240 |
| | | Diccionario Hispano-Bisaya | | (SL.R.) | 1895 | 40,592 |
| 5. | Bicol | Vocabulario de la lengua Bicol | M. de Lisboa | (Bk.Li.) | 1865 | |
| | | Bicol-Español | | | | 10,008 |
| | | Español-Bicol | | | | 14,560 |
| 6. | Ilocano | Iloko-English Dictionary | M. Vanoverbergh | (Il.V.) | 1956 | 9,888 |
| 7. | Ibanag | Diccionario Ybanag-Español | J. Bugarin | (Ib.B.) | 1854 | 6,259 |
| 8. | Ifugao [2] | First Ifugao-English Word-book | R. F. Barton | (If.B.) | 1942 | 4,000 |
| 9. | Kankanay | A Dictionary of Lepanto Igorot or Kankanay | M. Vanoverbergh | (Ka.V.) | 1917 | 13,000 |

**4.1.3.2**     With regard to the second criterion: I eliminated sets of shared lexical items which were also found in Otto Dempwolff's *Vergleichende Lautlehre* Band III, Sydney H. Ray's "The Languages of Borneo", or *Preliminary Studies*. The *Preliminary Studies* (abbrev.: P.) also covered the vocabularies of Maguindanao, Ivatan, Pampango, and Pangasinan, besides those of Tagalog, Cebuano, Hiligaynon, Samar-Leyte, Bicol, Ilocano, and Ibanag.[3]

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[2]  The Ifugao items in this section were, for the most part, found in Barton's dictionary and then checked and transcribed according to the Bayninan dialect form by Harold C. Conklin. These words are identified by the abbreviation *If.C.* Barton's entries are from Kiangan dialect and vary with the forms of the Bayninan dialect most notably in substituting /k/ for Bayninan /q/.

[3]  I have in addition used Diego Bergaño's *Vocabulario de la lengua Pampango*, and Lorenzo Fernandez Cosgaya's *Diccionario Pangasinan-Español, Vocabulario Hispano-Pangasinan.*

4.1.3.3    With regard to these vocabulary lists: it is desirable that these lists be of equal size and compiled by the same authors. Obviously, dictionaries with fewer entries are less satisfactory than dictionaries with more entries, and it is a known fact that the author's language background, point of view, etc. play significant roles in the compilation of lexicons. In our case, however, this requirement cannot be met, since we can use only those dictionaries which are available, and these are uneven in size and compiled by different authors as may be seen above (4.1.3.1).

4.1.4    Third, it is necessary to eliminate loanwords from the list of exclusively shared vocabulary items. Certain criteria are helpful in distinguishing loanwords from cognates. Those here used are: first, it is generally conceded that certain words which belong to the "basic vocabulary" [4] of a language are much less likely to be borrowed by one language from another; second, languages which are in contact either geographically or culturally tend to have loanwords from each other;[5] third, the forms and meanings of cognates are more often similar than identical, whereas the forms and meanings of loanwords are more often identical than similar;[6] fourth, cognates show form and meaning correspondences but loanwords do not necessarily do so.[7]

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[4]  For the notion of "basic vocabulary" see M. Swadesh "Lexico-statistic Dating of Prehistoric Ethnic Contacts", and "Towards Greater Accuracy in Lexicostatistic Dating".

[5]  Evidence for this is copious: see for example, Cecilio Lopez, *Tagalog Words for Spanish Loanwords*.

[6]  Thus, for example, if we take a look at the table of correspondences in 2.2.5, we notice that the Tagalog reflex of Ph -d- is -r-, whereas its reflexes of Ph $R_1$, $R_2$, $R_3$, $R_4$ are all g, and the reflex of Ph r is l. Since Tagalog has r, it seems surprising that this is not the reflex of $*R_1$, $*R_2$, $*R_3$, $*R_4$ and $*r$. This observation is helpful in determining loanwords in cases like the following: Tagalog and Ilocano both have the g reflex for $*R_1$, but Ilocano also has the r reflex in addition to the g which appears clearly in doublets, e.g. $*baqeR_1u$: Il. ba:gu, ba:ru 'new' (syncope), $*bibiR_1$: bibíg, bibír 'lip'. The words with the r reflex do not indicate that this r is positionally conditioned; the question, therefore, arises: how do we explain these doublets? The answer is that it is probable that the words with g reflex are loanwords, perhaps from Tagalog, and the words with the r reflex are the Ilocano cognates.

[7]  This criterion is helpful in determining loanwords in cases like the following: Tagalog and Samar-Leyte both have the word lu:raŋ 'concavity'. As far as I have been able to find out, however, Tagalog -r- does not correspond with Samar-Leyte -r-. Hence, it is probable that this word is not cognate but a loanword, though it is difficult to determine which way the borrowing went, i.e. whether Tagalog borrowed from Samar-Leyte or vice versa.

**4.1.5**      In this section, the following symbols are used: the bar | to indicate morpheme boundary; a hyphen after a morpheme to indicate that it is a prefix; the symbols ← → to indicate development of forms by morphological process; the symbols { } to enclose morphemes, the plus sign + to indicate concatenation of elements.

**4.1.6**      In citing the sets of exclusively shared cognate lexical items below, it seems convenient to sort out the data according to some form of classification. The classification used here is as follows:

|   | *Forms* | *Meanings* |
|---|---|---|
| A. Identical | identical | identical |
|   | identical | near-identical |
|   | near-identical | identical or near-identical |
|   |   |   |
| B. Non-Identical | identical | similar |
|   | near-identical | similar |
|   | different stress placement | identical |
|   | different stress placement | near-identical |
|   | different stress placement | similar |
|   | different segmental phonemes | identical |
|   | different segmental phonemes | near-identical |
|   | different segmental phonemes | similar |
|   | with glottal stop problem | identical, near-identical, similar |

**4.1.6.1**    The first division distinguishes between sets with identical forms and meanings and those with non-identical forms and meanings. The reason for this division is that it is of interest to know how many of the sets which the different language pairings possess are identical in form and meaning: as pointed out above (4.1.4), loanwords tend to have identical forms and meanings; on the other hand, it is reasonable to expect that languages which are closely related and which have identical structures should possess a large number of sets with identical forms and meanings.

**4.1.6.2**    The sets with identical forms and meanings are further sub-divided into: a) those sets which show exactly identical forms and meanings, e.g. Se.Ca., Hi.Ka., SL.R. li:su 'seed'; b) those sets which show exactly identical forms and near-identical meanings, e.g. Tg.L.

la:mun 'gormandize', Se.Ca., Hi.Ka., SL.R la:mun 'devour'; c) those sets which show near-identical forms and exactly identical meanings, e.g. Il.V. qa:kas, Ka.V. qa:kah 'gather'. The reason for sorting out the sets which show exactly identical meanings from those which show near-identical meanings is that the meanings given by the various dictionaries are so close that there is reason to suspect that they are, as a matter of fact, identical. With regard to the forms which are exactly identical and those which are near-identical: it is a well known fact that when one language borrows a lexical item from another and it does not have a particular sound which the donor language has, it will substitute one of its sounds for that sound in the donor language. An example of this phenomenon of phonetic substitution is Tg. *sabún* 'soap' for Spanish *jabón*. Although Tg. *sabún* and Spanish *jabón* are not exactly identical, still these lexical items are near-identical.

4.1.6.3    The sets with non-identical forms and meanings are further subdivided into: a) those sets which show forms which are identical or near-identical but their meanings are similar; b) those sets which show forms with different stress placement, but their meanings are either identical, near-identical, or similar; c) those sets which show forms with different segmental phonemes, but their meanings are identical, near-identical, or similar; and finally, d) those sets which show forms with the glottal stop problem,[8] but the meanings are either identical, near-identical, or similar. The reason for these subdivisions is that it seems convenient to sort out the sets which show non-identical forms and meanings in some such classification as this.

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[8] With regard to the glottal stop problem: some cognates in Tg., Se., Hi., SL. and Bk. do not exhibit a final *q* although the other cognates indicate that final *q* should be there, and conversely final *q* appears when the other cognates indicate that it should not be there. This situation may be due to analogical wrong division, and the morphological process involved is suffix-ation. The general rule in these languages is that if a suffix beginning with a vowel is added to a base ending in a vowel, the base shows /h/ between the base and the suffix. However, if the base ends in a glottal stop, the suffix is added to the base without an intervening /h/. Thus, for example: {ba:sa} 'read' + {-an} → /basa:han/ 'be read to', {pa:luq} 'beat' + {-in} → /palu:qin/ 'be beaten'. However, in certain words, the rule is not followed, e.g., {ki:ta} 'see' + {-an} → /kina:kita:qan/ 'place where (something) is seen', {qamá} 'father' + {-in} → /qama:qín/ 'uncle'. It is then conceivable, on the model of such bases as these, that a base which originally did not have a glottal stop in final position, e.g., *{pa:lu} 'beat' should, by suffixation become /palu:qin/ 'be beaten', and then be reinterpreted to have an original

## 4.2 EXCLUSIVELY SHARED LEXICAL ITEMS

4.2.1 The following sets of plausible cognates are exclusively shared by less than all nine Philippine languages under study:

4.2.2 Exclusively Shared by Se., Hi., and SL.:

4.2.2.1 The following sets show identical forms and meanings:

| 1 | Se.Ca., | Hi.Ka., | SL.R. | qaguy | 'ouch!' |
| 2 | Se.Ca., | Hi.Ka., | SL.R. | bagúl | 'half a coconut shell' |
| 3 | Se.Ca., | Hi.Ka., | SL.R. | badbád | 'loosen' [9] |
| 4 | Se.P., | Hi.Ka., | SL.R. | bagkús | 'girdle' |
| 5 | Se.P., | Hi.P., | SL.R. | bántut | 'effeminate' |
| 6 | Se.P., | Hi.P., | SL.P. | batáq | 'uncle' |
| 7 | Se.P., | Hi.Ka., | SL.P. | bugnús | 'hoist up yards' |
| 8 | Se.Ca., | Hi.Ka., | SL.R. | bugsúk | 'peg' |
| 9 | Se.P., | Hi.P., | SL.R. | bu:kut | 'apartment' |
| 10 | Se.P., | Hi.P., | SL.P. | buntál | 'harpoon' |
| 11 | Se.P., | Hi.Ka., | SL.P. | gamáy | 'slim' |
| 12 | Se.Ca., | Hi.Ka., | SL.R. | gin- | (passive prefix) [10] |
| 13 | Se.P., | Hi.Ka., | SL.R. | halú | 'big lizard' |
| 14 | Se.Ca., | Hi.Ka., | SL.R. | hi:kap | 'touch' |
| 15 | Se.Ca., | Hi.Ka., | SL.R. | hubúg | 'drunken' |
| 16 | Se.P., | Hi.Ka., | SL.R. | qi:gut | 'creak' |
| 17 | Se.P., | Hi.P., | SL.R. | qi:si | 'harpoon' |
| 18 | Se.Ca., | Hi.Ka., | SL.R. | kabúg | 'bat' |

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final glottal stop, i.e., /pa:luq/. On the other hand, it is conceivable that a base which originally had a final glottal stop should by suffixation and analogical wrong division lose such a glottal stop, e.g., *{gulúq} 'confusion' + {-in} → /guluhín/ 'be troubled': the base could then be reinterpreted to be /gulú/. An example of this analogical wrong division is the following: PH *taR₄aq > Ml. tarah 'plane with adze', NgD. tarah 'hew, trim', Tg.L. tagáq 'cut, slash', Se.P. tagáq 'fish hook, cut down big tree', Hi.P. tagáq 'chop down big tree', Sl.P. tagá 'cut branches of trees', Bk.P. ta:ga 'same as Tg.', Il.P. tagá 'hew', Ib.P. tagá 'hew wood or stone', If.C. talá 'start incision'.

This explanation does not cover the loss of glottal stop in consonant cluster position. The regular correspondences for this is as follows: (let $C$ represent a consonant): Tg. -C-: Se. -Cq-: Hi. -Cq-: SL. -Cq-; Bk. -Cq-: Il. -qC-: Ib. -C-: If. -C-: Ka. -qC-.

[9] Whenever words have a closed syllable in the penult, I have found that they are stressed sometimes in the penult and sometimes in the ultima without distinction in meanings. I have transcribed such words always with the stress in the ultima, e.g. Tg. tuktúk 'knock'.

[10] gin- (passive prefix indicating that what is conveyed by the base is done by the agent) e.g. Se. ginabu:hat 'is being made' ({gin-} + {-a-} + {bu:hat} 'make'), Hi. ginha:tag 'was given' ({gin-} + {ha:tag} 'give'), SL. ginha:tag 'was given' ({gin-} + {ha:tag} 'give').

| 19 | Se.P., | Hi.Ka., | SL.R. | la:qaŋ | 'noose' |
|----|--------|---------|-------|--------|---------|
| 20 | Se.P., | Hi.Ka., | SL.R. | la:bag | 'twist' |
| 21 | Se.P., | Hi.P., | SL.R. | lantúŋ | 'floodtide at highest point' |
| 22 | Se.Ca., | Hi.Ka., | SL.R. | libát | 'crosseyed' |
| 23 | Se.Ca., | Hi.Ka., | SL.P. | lipák | 'bamboo slit' |
| 24 | Se.Ca., | Hi.Ka., | SL.R. | li:pay | 'console' |
| 25 | Se.Ca., | Hi.Ka., | SL.R. | li:su | 'seed' |
| 26 | Se.P., | Hi.P., | SL.R. | lu:baq | 'behead' |
| 27 | Se.P., | Hi.Ka., | SL.R. | píntas | 'ferocious' |
| 28 | Se.Ca., | Hi.Ka., | SL.R. | sa:qad | 'promise' |
| 29 | Se.P., | Hi.Ka., | SL.P. | sa:bak | 'put anything on lap' |
| 30 | Se.Ca., | Hi.Ka., | SL.P. | sagúnsun | 'consecutive' |
| 31 | Se.P., | Hi.P., | SL.P. | sálqut | 'mix' |
| 32 | Se.Ca., | Hi.P., | SL.R. | su:buk | 'pith' |
| 33 | Se.Ca., | Hi.Ka., | SL.R. | su:gat | 'meet' |
| 34 | Se.Ca., | Hi.Ka., | SL.R. | su:si | 'investigate' |
| 35 | Se.Ca., | Hi.Ka., | SL.R. | taga- | (prefix) [11] |
| 36 | Se.Ca., | Hi.Ka., | SL.R. | tapat | 'resolve' [12] |
| 37 | Se.Ca., | Hi.Ka., | SL.R. | tiláw | 'taste' |
| 38 | Se.P., | Hi.P., | SL.R. | tíŋkal | 'fibered cotton' |
| 39 | Se.Ca., | Hi.Ka., | SL.R. | tiŋáq | 'agonize' |
| 40 | Se.Ca., | Hi.Ka., | SL.R. | tiŋa:la | 'marvel' |
| 41 | Se.Ca., | Hi.Ka., | SL.R. | tuŋúd | 'because' |
| 42 | Se.P., | Hi.Ka., | SL.R. | tuqún | 'learn' |
| 43 | Se.Ca., | Hi.P., | SL.R. | tu:tuk | 'stare' |
| 44 | Se.Ca., | Hi.Ka., | SL.R. | qúlqul | 'pain' |
| 45 | Se.Ca., | Hi.P., | SL.R. | qu:sig | 'bark' |

4.2.2.2    The following sets show forms which are identical; the meanings are near-identical:

| 1 | Se.Ca. | ba:lak | 'poem' |
|---|--------|--------|--------|
|   | Hi.P. | ba:lak | 'a kind of poem' |
|   | SL.R. | ba:lak | 'couplet; verse' |
| 2 | Se.P. | bu:tas | 'divide' |
|   | Hi.P. | bu:tas | 'divide' |
|   | SL.R. | bu:tas | 'separate' |

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[11] taga- (prefix indicating height or depth of something as measured according to what the base indicates) e.g. Se.Ca. tagali:qug 'up to the neck' ({taga-} + {li:qug} 'neck'), Hi.Ka. tagatu:hud 'up to the knees' ({taga-} + {tu:hud} 'knee'), SL.R. tagatu:hud 'up to the knees' ({taga-} + {tu:hud} 'knee').

[12] Tg. tapát 'sincere' may be a cognate here, but the meaning is somewhat distant.

| 3 | Se.Ca. | ha:gad | 'invite; provoke' |
| | Hi.Ka. | ha:gad | 'incite; tempt' |
| | SL.R. | ha:gad | 'incite' |
| 4 | Se.P. | halúghug | 'insert tying string in fold' |
| | Hi.Ka. | halúghug | 'a running string' |
| | SL.R. | halúghug | 'seam through which string is inserted; string' |
| 5 | Se.P. | hi:buk | 'movement of worms' |
| | Hi.Ka. | hi:buk | 'move; wriggle' |
| | SL.R. | hi:buk | 'move; stir' |
| 6 | Se.Ca. | lámba | 'strike with club' |
| | Hi.Ka. | lámba | 'push, thrash' |
| | SL.R. | lámba | 'give a blow, etc.' |
| 7 | Se.Ca. | layáw | 'wander' |
| | Hi.Ka. | layáw | 'roam about freely' |
| | SL.R. | layáw | 'roam about freely' |
| 8 | Se.P. | puŋús | 'ribbon for knotting hair' |
| | Hi.Ka. | puŋús | 'hair knot' |
| | SL.R. | puŋús | 'hair knot; ribbon for knotting hair' |
| 9 | Se.P. | núqnúq | 'press down' |
| | Hi.Ka. | núqnúq | 'press against' |
| | SL.R. | núqnúq | 'press against' |
| 10 | Se.P. | sámsam | 'make sounds in eating' |
| | Hi.Ka. | sámsam | 'munch' |
| | SL.R. | sámsam | 'munch' |
| 11 | Se.P. | subú | 'put out fire with water' |
| | Hi.Ka. | subú | 'put out fire with water' |
| | SL.R. | subú | 'put water on fire' |
| 12 | Se.Ca. | tístis | 'joker' |
| | Hi.Ka. | tístis | 'knave' |
| | SL.R. | tístis | 'knave; joker' |
| 13 | Se.Ca. | wákwak | 'witch' |
| | Hi.Ka. | wákwak | 'witch' |
| | SL.P. | wákwak | 'phantom' |

4.2.2.3    The following sets show forms which are identical; the meanings are similar:

| 1 | Se.P. | bi:gaq | 'venereal disease' |
| | Hi.Ka. | bi:gaq | 'harlotry' |
| | SL.R. | bi:gaq | 'harlot' |
| 2 | Se.P. | límbu | 'rebound, as wind' |
| | Hi.P. | límbu | 'deflection of wind on hitting land' |
| | SL.P. | límbu | 'rebound' |
| 3 | Se.Ca. | lu:git | 'scrape, as coconut meat' |
| | Hi.Ka. | lu:git | 'ferret out with stick, as from box, etc.' |
| | SL.R. | lu:git | 'extract meat from coconut' |

| 4 | Se.Ca. | tupád | 'beside' |
|---|--------|-------|----------|
|   | Hi.P.  | tupád | 'beside' |
|   | SL.R.  | tupád | 'place near each other' |
| 5 | Se.Ca. | qubús | 'below; lower part of object' |
|   | Hi.Ka. | qubús | 'lower part of hill, town, river, etc.' |
|   | SL.R.  | qubús | 'put one thing below another' |
| 6 | Se.Ca. | qu:sap | 'chew' |
|   | Hi.Ka. | qu:sap | 'chew' |
|   | SL.R.  | qu:sap | 'eat only rice' |

4.2.2.4     The following sets show forms with different stress placement; the meanings are identical:

| 1 | Se.P.  | bu:kas | 'discharge crossbow' |
|---|--------|--------|----------------------|
|   | Hi.P.  | bukás  | 'discharge crossbow' |
|   | SL.R.  | bukás  | 'discharge crossbow' |
| 2 | Se.P.  | hilíŋ  | 'search minutely' |
|   | Hi.P.  | hi:liŋ | 'search minutely' |
|   | SL.P.  | hilíŋ  | 'search minutely' |
| 3 | Se.P.  | lawíg  | 'drop anchor' |
|   | Hi.P.  | la:wig | 'drop anchor' |
|   | SL.R.  | la:wig | 'drop anchor' |
| 4 | Se.Ca. | lu:tas | 'wean' |
|   | Hi.Ka. | lutás  | 'wean' |
|   | SL.R.  | lutás  | 'wean' |
| 5 | Se.P.  | lukúp  | 'surround' |
|   | Hi.Ka. | lu:kup | 'surround' |
|   | SL.R.  | lukúp  | 'surround' |
| 6 | Se.Ca. | pugúŋ  | 'restrain' |
|   | Hi.Ka. | pugúŋ  | 'restrain' |
|   | SL.R.  | pu:guŋ | 'restrain' |
| 7 | Se.Ca. | sipúl  | 'small knife' |
|   | Hi.Ka. | si:pul | 'small knife' |
|   | SL.R.  | sipúl  | 'small knife' |
| 8 | Se.P.  | suŋád  | 'snout' |
|   | Hi.Ka. | su:ŋad | 'snout' |
|   | SL.R   | suŋád  | 'snout' |
| 9 | Se.Ca. | qu:lat | 'scar' |
|   | Hi.P.  | qu:lat | 'scar' |
|   | SL.R.  | qulát  | 'scar' |
| 10 | Se.P. | walís  | 'tuck up skirt' |
|    | Hi.P. | walís  | 'tuck up skirt' |
|    | SL.R. | wa:lis | 'tuck up skirt' |

4.2.2.5    The following sets show forms with different stress placement; the meanings are near-identical:

| | | | |
|---|---|---|---|
| 1 | Se.P. | qa:nib | 'lining' |
| | Hi.Ka. | qaníb | 'layer' |
| | SL.R. | qa:nib | 'lining' |
| 2 | Se.P. | bali:tuk | 'fling' |
| | Hi.P. | bali:tuk | 'fling stones' |
| | SL.R. | balitúk | 'fling' |
| 3 | Se.Ca. | batíq | 'perceive' |
| | Hi.Ka. | batíq | 'hear' |
| | SL.R. | ba:tiq | 'perceive' |
| 4 | Se.P. | hi:bat | 'crooked thing' |
| | Hi.Ka. | hibát | 'crooked thing' |
| | SL.R. | hibát | 'twist, bend' |
| 5 | Se.P. | qiríŋ | 'cat' |
| | Hi.Ka. | qiríŋ | 'kitten' |
| | SL.R. | qi:riŋ | 'cat' |
| 6 | Se.P. | lu:say | 'species of algae' |
| | Hi.P. | lusáy | 'edible sea weed' |
| | SL.R. | lusáy | 'species of sea weed' |
| 7 | Se.P. | tipás | 'round, hollow basket' |
| | Hi.Ka. | tipás | 'winnowing basket' |
| | SL.P. | ti:pas | 'winnowing basket' |

4.2.2.6    The following sets show forms with different stress placement; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Se.P. | palús | 'loosen' |
| | Hi.Ka. | palús | 'disentangle oneself' |
| | SL.R. | pa:lus | 'disentangle oneself' |
| 2 | Se.P. | pikát | 'open eyes wide' |
| | Hi.P. | pi:kat | 'blinking eyes when dazzled' |
| | SL.R. | pikát | 'open eyes wide' |
| 3 | Se.Ca. | pikít | 'fasten with or as with glue' |
| | Hi.Ka. | pikít | 'very tight, narrow' |
| | SL.P. | pi:kit | 'rattan or wire for tightening hold' |

4.2.2.7    The following set shows forms with different segmental phonemes; the meanings are identical:

| | | | |
|---|---|---|---|
| 1 | Se.P. | balakáŋ | 'thorny accumulation at foot of fruit trees' |
| | Hi.P. | balakáŋ | 'thorny accumulation at foot of fruit trees' |
| | SL.R. | barakáŋ | 'thorny accumulation at foot of fruit trees' |
| 2 | Se.P. | bu:las | 'dirt of foreskin' |
| | Hi.P. | bu:las | 'dirt of foreskin' |
| | SL.R. | bu:ras | 'dirt of foreskin' |

3  Se.Ca.  dirí    'here' [13]
   Hi.P.   dirí    'here'
   SL.R.   didí    'here'
4  Se.Ca.  ka:raŋ  'stilts'
   Hi.P.   ka:raŋ  'stilts'
   SL.R.   ka:daŋ  'stilts'
5  Se.Ca.  pu:lak  'falling of fruit, flower, leaf, etc.'
   Hi.P.   pu:lak  'falling of fruit, flower, leaf, etc.'
   SL.R.   pu:rak  'falling of fruit, flower, leaf, etc.'
6  Se.Ca.  saráŋ   'sufficient' [14]
   Hi.P.   saráŋ   'sufficient'
   SL.R.   sadáŋ   'sufficient'

4.2.2.8   The following set shows forms with different segmental phonemes; the meanings are near-identical:

   Se.Ca.  qirúg   'move a little forward'
   Hi.P.   qi:rug  'move towards'
   SL.R.   qi:dug  'approach'

4.2.2.9   The following set shows forms with different segmental phonemes; the meanings are similar:

1  Se.P.   gu:lut  'slice of anything'
   Hi.Ka.  gulút   'to slice, cut, etc.'
   SL.R.   gurút   'slice of meat'
2  Se.P.   li:luŋ  'hide the truth' [15]
   Hi.Ka.  li:luŋ  'keep a secret'
   SL.R.   li:ruŋ  'not to confess a misdeed'
3  Se.P.   pa:lag  'find'
   Hi.P.   pa:lag  'find out'
   SL.R.   pa:rag  'find'

4.2.2.10   The following sets show forms which involve the glottal stop problem; the meanings are identical or similar:

1  Se.Ca.  bu:saq  'therefore'
   Hi.P.   bu:saq  'therefore'
   SL.R.   bu:sa   'therefore'

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[13]  Bk.Li. dígdi 'here' may be a cognate, but the consonant cluster is unexplained.

[14]  *seDaŋ (Jv. sĕdĕŋ 'be suitable') is called to mind by this equation; however, the vowels and consonants of the cognates in this equation do not match *seDaŋ.

[15]  This set recalls Tg.L. li:luŋ, Ib.B. lirúŋ, Pmp. li:luŋ 'shade', but the meanings are distant.

| 2 | Se.Ca. | butú | 'explosion; burst' |
| | Hi.P. | bu:tuq | 'firearms' |
| | SL.R. | butú | 'explosion; burst' |
| 3 | Se.Ca. | kapákapá | 'flutter like a bird' (doubled) |
| | Hi.P. | ka:paq | 'fowls spreading wings' |
| | SL.R. | ka:pa | 'fowls spreading wings' |
| 4 | Se.Ca. | saká | 'ascend' |
| | Hi.Ka. | sa:kaq | 'ascend' |
| | SL.R. | sa:ka, saká | 'ascend' |
| 5 | Se.Ca. | túkluq | 'throttle' |
| | Hi.P. | túkluq | 'hold somebody tightly' |
| | SL.R. | túkluq | 'hold somebody by the neck' |

4.2.2.11   The following set shows forms which involve an unexplained loss of glottal stop in cluster position; the meanings are identical:

| | Se.P. | púqpuq | 'pick fruits' |
| | Hi.P. | púqpuq | 'pick fruits' |
| | SL.P. | pu:puq | 'pick fruits' |

4.2.3     Exclusively Shared by Se. and Hi.:

4.2.3.1     The following sets show identical forms and meanings:

| 1 | Se.P., | Hi.Ka. | qa:lay | 'fatigued' [16] |
| 2 | Se.P., | Hi.P. | qa:luk | 'witchcraft' |
| 3 | Se.P., | Hi.P. | qalu:luŋ | 'funnel of leaves or coconut shell' |
| 4 | Se.P., | Hi.P. | qa:yap | 'imitate' |
| 5 | Se.P., | Hi.P. | bagkát | 'stomach ache' |
| 6 | Se.P., | Hi.P. | ba:ŋa | 'confused things' |
| 7 | Se.P., | Hi.P. | ba:ŋal | 'mouthful' |
| 8 | Se.P., | Hi.P. | bu:lat | 'shampoo' |
| 9 | Se.Ca., | Hi.P. | ga:sa | 'gift' |
| 10 | Se.P. | ga:luŋ, | Hi.P. galuŋga:luŋ (repeated) 'hook' |
| 11 | Se.Ca., | Hi.P. | ka:was | 'disembark' |
| 12 | Se.P., | Hi.P. | ku:mut | 'crumple' |
| 13 | Se.Ca., | Hi.P. | lagáy | 'testicles' |
| 14 | Se.P., | Hi.P. | la:gut | 'anger' |
| 15 | Se.P., | Hi.Ka. | lambíŋ | 'tie together' |
| 16 | Se.P., | Hi.Ka. | lúnlun | 'pure' |
| 17 | Se.P., | Hi.Ka. | lu:qub | 'incubate (hen)' |
| 18 | Se.Ca., | Hi.Ka. | lu:tus | 'run after' |
| 19 | Se.Ca., | Hi.Ka. | manug- | (prefix) [17] |

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[16]   This set calls to mind Tg. ŋa:lay 'numb; fatigued', but the initial ŋ is unexplained.

[17]   manu- (prefix indicating occupation with what the base implies) e.g. Se. manuglu:tuq 'cook' ({manug-} + {lu:tuq} 'cook'), Hi. manugdumúg 'wrestler' ({dumíg} 'wrestle').

| 20 | Se.P., | Hi.P. | múqmuq | 'bump one's face on ground' |
| 21 | Se.P., | Hi.P. | pa:ka | 'shoot of sugarcane' |
| 22 | Se.P., | Hi.P. | pátqul | 'press against anything hard' |
| 23 | Se.P., | Hi.Ka. | salúŋsuŋ | 'a kind of fish' |
| 24 | Se.P., | Hi.P. | sa:yaŋ | 'find' |
| 25 | Se.P., | Hi.P. | si:buq | 'equalize' |
| 26 | Se.P., | Hi.P. | silág | 'species of fish' |
| 27 | Se.P., | Hi.Ka. | sukúl | 'mushroom sprout' |
| 28 | Se.P., | Hi.P. | sudyáq | 'reproach one for discovered lie' |
| 29 | Se.Ca., | Hi.P. | ta:bil | 'curtain' |
| 30 | Se.P., | Hi.P. | tílqas | 'species of hairy worm' |
| 31 | Se.P., | Hi.P. | tula:li | 'species of herb' |
| 32 | Se.P., | Hi.P. | tu:lus | 'semen' |
| 33 | Se.Ca., | Hi.P. | qumúg | 'moist' [18] |
| 34 | Se.P., | Hi.P. | yágyag | 'scatter' |

4.2.3.2    The following sets show forms which are identical; the meanings are near-identical:

| 1 | Se.P. | máŋmaŋ | 'species of brass bell' |
|   | Hi.P. | máŋmaŋ | 'small bells' |
| 2 | Se.P. | sapatsa:pat | 'species of insect' |
|   | Hi.Ka. | sapatsa:pat | 'vermin; parasite, etc.' |

4.2.3.3    The following sets show forms which are identical; the meanings are similar:

| 1 | Se.P. | hi:las | 'horror caused by indecent talk' |
|   | Hi.P. | hi:las | 'horror of incest' |
| 2 | Se.Ca. | lámbug | 'luxuriant growth of leaves' |
|   | Hi.Ka. | lámbug | 'healthy vitality; growth' |

4.2.3.4    The following sets show forms with different stress placement; the meanings are identical:

| 1 | Se.P. | bi:nit | 'edge of table, bench, etc.' |
|   | Hi.Ka. | binít | 'edge of table, bench, etc.' |
| 2 | Se.P. | bulúŋ | 'admire, wonder' |
|   | Hi.Ka. | bu:luŋ | 'admire, wonder' |
| 3 | Se.P. | duŋúq | 'bow head' |
|   | Hi.P. | du:ŋuq | 'bow head' |

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[18]    This set reminds one of *amuR₃ 'dew', though the vowels of the Se. and Hi. words in the penult do not correspond with initial *a of *amuR₃.

4 Se.P.
    himanhi:man 'expression denoting unexpected effect' (repeated)
    Hi.P.    himán      'expression denoting unexpected effect'
5 Se.P.    la:guq      'dirty'
    Hi.Ka.    lagúq      'dirty'
6 Se.P.    lukúb      'door'
    Hi.P.    lu:kub      'door'
7 Se.P.    tiladti:lad 'species of worm'
    Hi.P.    tiladtilád  'species of worm'
8 Se.P.    qutúŋ      'hold one's breath'
    Hi.P.    qu:tuŋ    'hold one's breath'

4.2.3.5    The following set shows forms which involve the glottal stop problem; the meanings are identical:

    Se.Ca.    yu:taq    'earth, soil, land'
    Hi.P.    yu:ta      'earth, soil, land'

4.2.4      Exclusively Shared by Hi. and SL:
4.2.4.1    The following sets show identical forms and meanings:

| 1 | Hi.P., | SL.R. | da:yu | 'slave who keeps guard at tomb of master' |
|---|---|---|---|---|
| 2 | Hi.P., | SL.R. | ga:saŋ | 'ashes for making salt' |
| 3 | Hi.P., | SL.R. | hínhin | 'winnow rice' |
| 4 | Hi.P., | SL.R. | kaladkád | 'boiling' |
| 5 | Hi.P., | SL.P. | kámbaŋ | 'painted animal' |
| 6 | Hi.P., | SL.P. | ki:nis | 'shrimp' |
| 7 | Hi.P., | SL.R. | la:but | 'different' |
| 8 | Hi.P., | SL.R. | li:pus | 'surround' |
| 9 | Hi.Ka., | SL.R. | lisá | 'mistake' |
| 10 | Hi.P., | SL.R. | lu:lut | 'affection, love' |
| 11 | Hi.P., | SL.R. | ŋa:wa | 'suspect' |
| 12 | Hi.P., | SL.R. | pu:quk | 'hurt one who is sleeping' |
| 13 | Hi.Ka., | SL.R. | sa:gap | 'seek' |
| 14 | Hi.Ka., | SL.R. | sala:kut | 'mix' |
| 15 | Hi.P., | SL.P. | su:way | 'bamboo trap for birds' |
| 16 | Hi.P., | SL.R. | ta:kut | 'reef' |
| 17 | Hi.P., | SL.R. | ta:quŋ | 'woman's mantle' |
| 18 | Hi.Ka., | SL.R. | qu:mal | 'worn-out tools' |

4.2.4.2    The following sets show forms which are identical; the meanings are near-identical:

1 Hi.P.    liŋíg      'round thing'
  SL.R.    liŋíg      'bent, curved object'

2  Hi.Ka.  pa:waq    'get bright, light'
   SL.R.   pa:waq    'light; clarity'

4.2.4.3    The following sets show forms which are identical; the meanings are similar:

1  Hi.P.   da:hik    'turtle laying eggs in a nook of the shore'
   SL.P.   da:hik    'turtle walking or leaving along the shore'
2  Hi.Ka.  da:lit    'venom, poison'
   SL.R.   da:lit    'tree with poisonous resin'

4.2.4.4    The following sets show forms with different stress placement; the meanings are identical:

1  Hi.Ka.  qa:gad    'serve'
   SL.R.   qagád     'serve'
2  Hi.P.   datá      'falling of leaves'
   SL.R.   da:ta     'falling of leaves'
3  Hi.P.   du:puŋ    'species of snake'
   SL.R.   dupúŋ     'species of snake'
4  Hi.Ka.  li:bag    'out of tune'
   SL.R.   libág     'out of tune'
5  Hi.Ka.  su:buŋ    'like, similar'
   SL.R.   subúŋ     'like, similar'

4.2.4.5    The following set shows forms with different stress placement; the meanings are similar:

   Hi.P.   kuyúg     'species of fish'
   SL.R.   ku:yug    'young fish'

4.2.4.6    The following sets show forms which involve the glottal stop problem; the meanings are identical or similar:

1  Hi.Ka.  ha:waq    'give way'
   SL.P.   ha:wa     'give way'
2  Hi.Ka.  la:saq    'slice'
   SL.R.   la:sa     'split lengthwise'
3  Hi.P.   tu:yaq    'big, tall person'
   SL.R.   tu:ya     'giant'
4  Hi.P.   yaqyáq    'wide-mouthed container'
   SL.R.   ya:ya     'wide-mouthed container'

4.2.4.7    The following set shows forms which involve an unexplained loss of glottal stop in cluster position; the meanings are identical:

|       |        |        |                              |
|-------|--------|--------|------------------------------|
| Hi.P. | la:wit | 'touch with tip of anything' |
| SL.P. | láwqit | 'touch with tip of anything' |

**4.2.5** Exclusively Shared by Se. and SL.:

**4.2.5.1** The following sets show identical forms and meanings:

| 1  | Se.P.,   | SL.R. | ba:gut          | 'accustom'                                    |
|----|----------|-------|-----------------|-----------------------------------------------|
| 2  | Se.P.,   | SL.R. | bala:gat        | 'place or go crosswise'                       |
| 3  | Se.P.,   | SL.R. | bi:lis          | 'wild palm'                                   |
| 4  | Se.P.,   | SL.P. | bu:yun          | 'white leaves emitting good odor on withering' |
| 5  | Se.P.,   | SL.P. | ka:si           | 'bet in gambling'                             |
| 6  | Se.P.,   | SL.R. | kuli:li         | 'decorative cordon on handle of weapons'      |
| 7  | Se.Ca.,  | SL.P. | dayanda:yan     | 'ornament'                                    |
| 8  | Se.P.,   | SL.R. | gánda           | 'species of plant resembling young onion'     |
| 9  | Se.P.,   | SL.P. | húdhud          | 'insert into earth as in planting'            |
| 10 | Se.Ca.,  | SL.R. | lagús           | 'gum of mouth'                                |
| 11 | Se.P.,   | SL.P. | la:may          | 'long standing ailment'                       |
| 12 | Se.P.,   | SL.P. | límbag          | 'writhe in pain'                              |
| 13 | Se.Ca.,  | SL.R. | li:was          | 'after'                                       |
| 14 | Se.P.,   | SL.R. | súgbu           | 'Cebu'                                        |
| 15 | Se.Ca.,  | SL.R. | ta:gak          | 'fall'                                        |
| 16 | Se.P.,   | SL.P. | tagúdtud        | 'solid sound in mouth when chewing'           |
| 17 | Se.Ca.,  | SL.R. | ta:mak          | 'tread underfoot'                             |
| 18 | Se.P.,   | SL.R. | tústus          | 'roll tobacco leaf'                           |

**4.2.5.2** The following sets show forms which are identical; the meanings are near-identical:

| 1 | Se.Ca. | la:bu  | 'cause to submerge'        |
|---|--------|--------|----------------------------|
|   | SL.P.  | la:bu  | 'sink in water'            |
| 2 | Se.P.  | pántuk | 'bump against hard object' |
|   | SL.R.  | pántuk | 'beat, strike'             |

**4.2.5.3** The following sets show forms with different stress placement; the meanings are identical:

| 1 | Se.P. | dawál  | 'stick out (tongue)'   |
|---|-------|--------|------------------------|
|   | SL.R. | da:wal | 'stick out (tongue)'   |
| 2 | Se.P. | puká   | 'detach, peel off'     |
|   | SL.P. | pu:ka  | 'detach, peel off'     |
| 3 | Se.P. | sa:paw | 'commit adultery'      |
|   | SL.R. | sapáw  | 'commit adultery'      |

4.2.5.4     The following set shows forms with different stress placement; the meanings are near-identical:

    Se.P.     pu:kul     'thorns of lemon or orange trees'
    SL.P.     pukúl     'thorn'

4.2.5.5     The following set shows forms with different stress placement; the meanings are similar:

    Se.P.     tahán     'relinquish anything used in gambling'
    SL.R.     ta:han     'detain; bet'

4.2.5.6     The following sets show forms which involve the glottal stop problem; the meanings are identical:

  1   Se.P.     ga:muq     'spoiling food by handling'
        SL.P.     gamú     'spoiling food by handling'
  2   Se.P.     lágdaq     'rule'
        SL.R.     lágda     'rule'

4.2.5.7     The following set shows forms which involve an unexplained loss of glottal stop in cluster position; the meanings are identical:

    Se.P.     dálqus     'slip off feet gradually'
    SL.P.     dalús     'slip off feet gradually'

4.2.6     Exclusively Shared by Tg., Se., Hi., SL. and Bk.:
4.2.6.1     The following sets show identical forms and meanings:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Tg.L., | Se.P., | Hi.P., | SL.R., | Bk.Li. | ba:qat | 'reinforcement of rattan' |
| 2 | Tg.L., | Se.Ca., | Hi.Ka., | SL.R., | Bk.Li. | buktút | 'hunchback' |
| 3 | Tg.L., | Se.P., | Hi.Ka., | SL.R., | Bk.Li. | da:git | 'snatch in flight' |
| 4 | Tg.L., | Se.Ca., | Hi.Ka., | SL.R., | Bk.Li. | ha:pun | 'afternoon' |
| 5 | Tg.Bl., | Se.Ca., | Hi.Ka., | SL.R., | Bk.Li. | ka | (particle after numerals) [19] |
| 6 | Tg.L., | Se.Ca., | Hi.Co., | SL.R., | Bk.P. | ka:luq | 'hat' |
| 7 | Tg.L., | Se.Ca., | Hi.Ka., | SL.R., | Bk.Li. | limbúŋ | 'deception' |
| 8 | Tg.L., | Se.Ca., | Hi.Ka., | SL.R., | Bk.P. | ma:ya | 'species of bird' |
| 9 | Tg.Co., | Se.Co., | Hi.Co., | SL.Co., | Bk.Co. | na | (particle for completed action) [20] |

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[19]   Ka (particle which occurs after numerals in attributive position), e.g. Tg. sampu *ka* ta:qu 'ten men' (cf. Bloomfield, *Texts*, p. 189, § 255), Hi.Ka. lima *ka* karabáw 'five carabaos', SL.R. duha *ka* ta:wu 'two men', Bk.Li. tulu *ka* ta:wu 'three men'.

[20]   These cognates are found in *Composite Vocabulary*.

10  Tg.L., Se.Ca., Hi.Ka., SL.R., Bk.P.   su:ŋay 'horn'
11  Tg.L., Se.Ca., Hi.Ka., SL.R., Bk.Li.  taklúb 'cover' [21]
12  Tg.L., Se.P., Hi.Ka., SL.R., Bk.P.     ta:tay 'father'
13  Tg.L., Se.Ca., Hi.Ka., SL.R., Bk.P.    tukáq 'beak of bird'

4.2.6.2    The following sets show forms which are identical; the meanings are near-identical:

1  Tg.L.   buha:wi   'cyclone'
   Se.Ca.  buha:wi   'water spout; whirlwind'
   Hi.P.   buha:wi   'cyclone'
   SL.R.   buha:wi   'cyclone'
   Bk. Li. buha:wi   'cyclone'
2  Tg.L.   ha:kut    'carry; transport'
   Se.Ca.  ha:kut    'carry to another place'
   Hi.Ka.  ha:kut    'carry; convey'
   SL.R.   ha:kut    'carry away; convey'
   Bk.Li.  ha:kut    'carry away; convey'
3  Tg.L.   la:mun    'gormandize'
   Se.Ca.  la:mun    'devour'
   Hi.Ka.  la:mun    'devour'
   SL.R.   la:mun    'devour'
   Bk.P.   la:mun    'gormandize'
4  Tg.L.   la:way    'saliva'
   Se.Ca.  la:way    'saliva'
   Hi.Ka.  la:way    'saliva'
   SL.R.   la:way    'drivel'
   Bk.P.   la:way    'saliva'
5  Tg.L.   paŋqít, paŋít 'gnaw'
   Se.P.   páŋqit    'gnaw'
   Hi.Ka.  páŋqit    'gnaw'
   SL.R.   páŋqit    'gnaw'
   Bk.P.   páŋqit, paŋít 'sink teeth into'
6  Tg.L.   sa:ŋit    'obstacle'
   Se.P.   sa:ŋit    'obstructed'
   Hi.P.   sa:ŋit    'obstructed'
   SL.R.   sa:ŋit    'obstructed'
   Bk.P.   sa:ŋit    'obstructed'
7  Tg.L.   saysáy    'relate'
   Se.P.   sáysay    'relate'
   Hi.Ka.  sáysay    'explain'

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[21] This set reminds one of *taŋkub 'cover', although the consonant clusters do not correspond.

|        | SL.R. | sáysay | 'explain' |
|--------|-------|--------|-----------|
|        | Bk.Li. | sáysay | 'explain' |
| 8 | Tg.L. | tu:lin | 'velocity' |
|        | Se.Ca. | tu:lin | 'fast' |
|        | Hi.Ka. | tu:lin | 'swiftness' |
|        | SL.R. | tu:lin | 'move swiftly' |
|        | Bk.P. | tu:lin | 'go very fast' |
| 9 | Tg.L. | tuwád | 'bend down low' |
|        | Se.Ca. | tuwád | 'bend over' |
|        | Hi.Ka. | tuwád | 'bend down very low' |
|        | SL.R. | tuwád | 'bend down low' |
|        | Bk.Li. | tuwád | 'put head down low' |
| 10 | Tg.L. | qunús | 'squall' |
|        | Se.Ca. | qunús | 'typhoon' |
|        | Hi.Ka. | qunús | 'squall' |
|        | SL.R. | qunús | 'tempest; squall' |
|        | Bk.Li. | qunús | 'tempest' |

4.2.6.3    The following sets show forms which are identical; the meanings are similar:

| 1 | Tg.L. | qa:ga | 'early' |
|---|-------|-------|---------|
|   | Se.P. | qa:ga | 'morning' |
|   | Hi.Ka. | qa:ga | 'morning' |
|   | SL.R. | qa:ga | 'morning' |
|   | Bk.Li. | qa:ga | 'morning' |
| 2 | Tg.L. | qaŋhít | 'offensive odor of armpit' |
|   | Se.P. | qáŋhit | 'offensive odor of armpit' |
|   | Hi.Ka. | qáŋhit | 'offensive odor of goat' |
|   | SL.R. | qáŋhit | 'offensive odor of armpit' |
|   | Bk.Li. | qáŋhit | 'offensive odor of kind of flower' |
| 3 | Tg.L. | ba:haw | 'cold victuals' [22] |
|   | Se.Ca. | ba:haw | 'food kept overnight' |
|   | Hi.Ka. | ba:haw | 'cold rice, food' |
|   | SL.R. | ba:haw | 'food kept A.M. to P.M.' |
|   | Bk.Li. | ba:haw | 'left over food' |
| 4 | Tg.L. | bana:qag | 'radiance' |
|   | Se.P. | bana:qag | 'radiance' |
|   | Hi.Ka. | bana:qag | 'daybreak' |
|   | SL.R. | bana:qag | 'radiance' |
|   | Bk.Li. | bana:qag | 'thing that shines' |
| 5 | Tg.L. | bugháw | 'light colored' [23] |

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[22]  Il. ba:qaw 'tepid' may be cognate here, but the meaning is distant.

[23]  Ib. bullagáw, and bugagáw 'blue-eyed person' may be cognate here, but the geminated *l* of the first form, and the *g* for *l* of the second form are unexplained.

|       |        |          |                                     |
|-------|--------|----------|-------------------------------------|
|       | Se.Ca. | bugháw   | 'blond'                             |
|       | Hi.P.  | bugháw   | 'discolored'                        |
|       | SL.R.  | bugháw   | 'reddish'                           |
|       | Bk.Li. | bugháw   | 'light blue'                        |
| 6     | Tg.L.  | bu:hay   | 'life'                              |
|       | Se.P.  | bu:hay   | 'life'                              |
|       | Hi.Ka. | bu:hay   | 'rich life' [24]                    |
|       | SL.R.  | bu:hay   | 'long life'                         |
|       | Bk.Li. | bu:hay   | 'long life'                         |
| 7     | Tg.L.  | da:pit   | 'go out to meet; call'              |
|       | Se.Ca. | da:pit   | 'invite'                            |
|       | Hi.Ka. | da:pit   | 'invite'                            |
|       | SL.P.  | da:pit   | 'invite'                            |
|       | Bk.Li. | da:pit   | 'invite; call'                      |
| 8     | Tg.L.  | habháb   | 'way of eating like pig'            |
|       | Se.Ca. | hábhab   | 'eat as a pig'                      |
|       | Hi.Ka. | hábhab   | 'eat like an animal'                |
|       | SL.R.  | hábhab   | 'gobble up; eat fast'               |
|       | Bk.P.  | hábhab   | 'eat without masticating'           |
| 9     | Tg.L.  | halayháy | 'hang out to dry'                   |
|       | Se.Ca. | haláyhay | 'hang out to dry'                   |
|       | Hi.Ka. | haláyhay | 'suspend from horizontal pole'      |
|       | SL.R.  | haláyhay | 'hang to dry'                       |
|       | Bk.Li. | haláyhay | 'hang clothes outside'              |
| 10    | Tg.L.  | ha:yup   | 'animal'                            |
|       | Se.Ca. | ha:yup   | 'animal'                            |
|       | Hi.Ka. | ha:yup   | 'domestic animal'                   |
|       | SL.R.  | ha:yup   | 'domestic animal'                   |
|       | Bk.Li. | ha:yup   | 'tame animal'                       |
| 11    | Tg.L.  | hi:taq   | 'thigh'                             |
|       | Se.P.  | hi:taq   | 'groin'                             |
|       | Hi.Ka. | hi:taq   | 'groin'                             |
|       | SL.R.  | hi:taq   | 'groin'                             |
|       | Bk.Li. | hi:taq   | 'groin'                             |
| 12    | Tg.L.  | kalibkíb | 'take coconut whole from shell'     |
|       | Se.P.  | kalibkíb | 'coconut left after grating'        |
|       | Hi.P.  | kalibkíb | 'coconut left after grating'        |
|       | SL.R.  | kalíbkib | 'coconut left after grating'        |
|       | Bk.P.  | kalíbkib | 'coconut left after grating'        |
| 13    | Tg.L.  | sabát    | 'interrupt someone speaking'        |
|       | Se.Ca. | sabát    | 'answer (in prayer)'                |
|       | Hi.Ka. | sabát    | 'answer'                            |
|       | SL.R.  | sabát    | 'answer'                            |
|       | Bk.P.  | sabát    | 'answer verbally'                   |

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[24] Hi. bu:hiq 'life' shows unexplained final syllable discrepancy.

| | | | |
|---|---|---|---|
| 14 | Tg.L. | sa:haq | 'fibrous covering of banana plant' |
| | Se.Ca. | sa:haq | 'shoot or bud of plants' |
| | Hi.Ka. | sa:haq | 'banana shoot' |
| | SL.R. | sa:haq | 'banana shoot' |
| | Bk.Li. | sa:haq | 'banana shoot' |
| 15 | Tg.L. | siklát | 'toothpick' |
| | Se.P. | síklat | 'bamboo slits' |
| | Hi.Ka. | síklat | 'bamboo slits' |
| | SL.R. | síklat | 'bamboo slits' |
| | Bk.Li. | síklat | 'bamboo slits' |
| 16 | Tg.L. | si:lut | 'penalty' |
| | Se.Ca. | si:lut | 'punishment' |
| | Hi.Ka. | si:lut | 'punishment' |
| | SL.P. | si:lut | 'punishment' |
| | Bk.Li. | si:lut | 'penance' |
| 17 | Tg.L. | taghúy | 'lament, plaint' |
| | Se.Ca. | taghúy | 'whistle' |
| | Hi.Ka. | tághuy | 'sigh, whistle' |
| | SL.R. | tághuy | 'whistle' |
| | Bk.Li. | taghúy | 'whistle' |
| 18 | Tg.L. | takták | 'beat to cause contents to drop out' |
| | Se.Ca. | táktak | 'shake to let drop what is fastened' |
| | Hi.Ka. | táktak | 'let fall (leaves); shed (tears)' |
| | SL.R. | táktak | 'fall of body from high place' |
| | Bk.Li. | táktak | 'beat fish or bone to let pith fall' |
| 19 | Tg.L. | tugpá | 'go down (mountain)' |
| | Se.Ca. | túgpa | 'land as a bird' |
| | Hi.P. | túgpa | 'anything that flies and lands somewhere' |
| | SL.P. | túgpa | 'settling of bird that has flown' |
| | Bk.Li. | tugpá | 'bird landing, or falling of arrow' |
| 20 | Tg.L. | qu:bas | 'use *gogo* bark' |
| | Se.P. | qu:bas | 'anything the juice of which has been extracted' |
| | Hi.P. | qu:bas | 'bagasse of coconut' |
| | SL.P. | qu:bas | 'used *gogo* bark' |
| | Bk.P. | qu:bas | 'bagasse of coconut' |
| 21 | Tg.L. | qupús | 'cigarette tip' [25] |
| | Se.Ca. | qupús | 'cigarette butt' |
| | Hi.Ka. | qupús | 'cigarette butt' |
| | SL.R. | qupús | 'cigarette butt' |
| | Bk.P. | qupús | 'cigarette butt' |
| 22 | Tg.L. | qusqús, | 'slide down' |
| | Se.Ca. | qúsqus | 'slope downward' |

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[25] Ib. qupút 'exhaust' may be cognate here, but its meaning is distant.

|        |        |              |
|--------|--------|--------------|
| Hi.Ka. | qúsqus | 'slide down' |
| SL.R.  | qúsqus | 'slide down' |
| Bk.P.  | qúsqus | 'slide down' |

4.2.6.4    The following sets show forms which differ in stress placement; the meanings are identical:

| 1 | Tg.L.  | qa:gap | 'anticipate'        |
|---|--------|--------|---------------------|
|   | Se.P.  | qa:gap | 'anticipate'        |
|   | Hi.Ka. | qagáp  | 'anticipate'        |
|   | SL.R.  | qa:gap | 'anticipate'        |
|   | Bk.Li. | qa:gap | 'anticipate'        |
| 2 | Tg.L.  | qa:wit | 'song'              |
|   | Se.Ca. | qa:wit | 'song'              |
|   | Hi.P.  | qa:wit | 'song'              |
|   | SL.R.  | qawít  | 'song'              |
|   | Bk.Li. | qawít  | 'song'              |
| 3 | Tg.L.  | la:kip | 'include' 26        |
|   | Se.Ca. | lakíp  | 'include'           |
|   | Hi.Ka. | lakíp  | 'include'           |
|   | SL.R.  | la:kip | 'include'           |
|   | Bk.Li. | lakíp  | 'include'           |
| 4 | Tg.L.  | qubú   | 'cough'             |
|   | Se.Ca. | qubú   | 'cough'             |
|   | Hi.Ka. | qubú   | 'cough'             |
|   | SL.R.  | qubú   | 'convulsive cough'  |
|   | Bk.Li. | qa:bu  | 'cough' 27          |
| 5 | Tg.L.  | quhúy  | (interjection)      |
|   | Se.P.  | quhúy  | (interjection)      |
|   | Hi.P.  | quhúy  | (interjection)      |
|   | SL.R.  | quhúy  | (interjection)      |
|   | Bk.Li. | qu:huy | (interjection)      |
| 6 | Tg.L.  | qu:paw | 'bald-headed'       |
|   | Se.Ca. | qupáw  | 'bald-headed'       |
|   | Hi.Ka. | qupáw  | 'bald-headed'       |
|   | SL.R.  | qupáw  | 'bald-headed'       |
|   | Bk.Li. | qu:paw | 'bald-headed'       |
| 7 | Tg.    | walá   | 'left hand' 28      |
|   | Se.Ca. | walá   | 'left hand'         |

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[26] This set reminds one of *Dakep 'attach', but the initial consonants and the meanings do not correspond.

[27] The vowel *a* of the penult is unexplained.

[28] This Tagalog word was cited by Carlos Conant in his article on "the consonant l in Philippine languages".

| | | |
|---|---|---|
| Hi.Ka. | walá | 'left hand' |
| SL.R. | wa:la | 'left hand' |
| Bk.Li. | walá | 'left hand' |

4.2.6.5     The following sets show forms which differ in stress placement; the meanings are similar:

1  Tg.L.   bulagáw   'dark gray eyes'
   Se.Ca.  bulagáw   'blond'
   Hi.Ka.  bulagáw   'blond or bright red'
   SL.R.   bula:gaw  'blond or reddish'
   Bk.Li.  bulagáw   'blond'
2  Tg.L.   gu:mun    'rolling'
   Se.Ca.  gumún     'entangled hair, thread'
   Hi.Ka.  gu:mun    'entangled fibers'
   SL.R.   gu:mun    'entangled fibers'
   Bk.Li.  gu:mun    'entangled fibers'
3  Tg.L.   puqút     'suffocate'
   Se.P.   pu:qut    'have place filled with smoke to suffocation'
   Hi.Ka.  pu:qut    'suffocate'
   SL.R.   pu:qut    'suffocate'
   Bk.P.   pu:qut    'suffocating feeling in smoke-filled room'
4  Tg.L.   la:bug    'overcook in water'
   Se.P.   labúg     'stewed meat, etc.'
   Hi.Ka.  labúg     'kind of cooking fish, meat, etc.'
   SL.R.   labúg     'kind of cooking fish, meat, etc.'
   Bk.Li.  la:bug    'kind of cooking rice'
5  Tg.L.   sa:may    'kind of weaving'
   Se.P.   samáy     'weave abaca, piña, etc.'
   Hi.P.   sa:may    'cloth woven in a certain way'
   SL.R.   sa:may    'cloth woven in a certain way'
   Bk.Li.  sa:may    'cloth woven in a certain way'
6  Tg.L.   qu:kab    'strip off bark (banana)'
   Se.Ca.  qukáb     'open (chest, mouth)'
   Hi.Ka.  qukáb     'turn up (stone)'
   SL.R.   qukáb     'open (chest)'
   Bk.P.   qu:kab    'open (boxes, cans)'

4.2.6.6     The following sets show forms with different segmental phonemes; the meanings are identical:

1  Tg.L.   bu:qaŋ   'crazy' [29]
   Se.Ca.  buwáŋ    'crazy'
   Hi.Ka.  bu:waŋ   'crazy'

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[29] Tg. -q- for -w- is unexplained.

|   | | | |
|---|---|---|---|
| | SL.R. | bu:waŋ | 'crazy' |
| | Bk.Li. | bu:waŋ | 'crazy' |
| 2 | Tg.L. | ba:liq | 'fracture' |
| | Se.Ca. | ba:liq | 'fracture' |
| | Hi.Ka. | ba:liq | 'fracture' |
| | SL.R. | ba:riq | 'fracture' |
| | Bk.Li. | ba:riq | 'fracture' |
| 3 | Tg.L. | hantík | 'species of ant' [30] |
| | Se.P. | hámtik | 'species of ant' |
| | Hi.P. | hamtík | 'species of ant' |
| | SL.R. | hamtík | 'species of ant' |
| | Bk.Li. | hamtík | 'species of ant' |
| 4 | Tg.L. | lipád | 'fly' |
| | Se.Ca. | lupád | 'fly' |
| | Hi.Ka. | lupád | 'fly' |
| | SL.R. | lupád | 'fly' |
| | Bk.Li. | lupád | 'fly' [31] |
| 5 | Tg.L. | pala- | 'fond of doing what the base implies' [32] |
| | Se.Ca. | pala- | 'fond of doing what the base implies' |
| | Hi.Ka. | pala- | 'fond of doing what the base implies' |
| | SL.R. | para- | 'fond of doing what the base implies' |
| | Bk.Li. | para- | 'fond of doing what the base implies' |
| 6 | Tg.L. | pa:wid | 'sheet of nipa leaves' |
| | Se.Ca. | pa:wud | 'sheet of nipa leaves' |
| | Hi.Ka. | pawúd | 'sheet of nipa leaves' |
| | SL.R. | pa:wud | 'sheet of nipa leaves' |
| | Bk.Li. | pa:wud | 'sheet of nipa leaves' |
| 7 | Tg.L. | pusún | 'abdomen' [33] |
| | Se.Ca. | púsqun | 'abdomen' |
| | Hi.Ka. | púsqun | 'abdomen' |
| | SL.R. | púsqun | 'abdomen' |
| | Bk.Li. | puqsún | 'abdomen' |
| 8 | Tg.L. | sahíg | 'floor' [34] |

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[30] Tg. -n- for -m- may be the result of assimilation of *m* to *n* before a following *t*.

[31] This Bk. form has an unexplained *u* for *a* in the penult and may be a loan-word, perhaps from Hi. or SL.

[32] *pa[rD]a- (prefix which indicates fondness for doing what the base implies, e.g. Tg. pala|bi:ruq 'fond of joking' ({bi:ruq} 'joke'), Se. pala|a:way 'fond of quarreling' ({qa:way} 'quarrel'), Hi. pala|qinúm 'fond of drink' ({qinúm} 'drink'), SL. para|siŋbá 'fond of worshipping ({siŋbá} worship'), Bk. para|tabíl 'fond of talking' ({tabíl} 'talk').

[33] Il. pusqúŋ and Ib. putúŋ 'abdomen' have unexplained final ŋ.

[34] Tg. -h- sometimes correspond to Se., Hi., SL. -l-, e.g. Tg. bu:huq, Se., Hi., SL. bu:luq 'bamboo', Tg. ba:hay, Se., Hi., SL. baláy 'house'; but these correspondences remain to be investigated.

| | | |
|---|---|---|
| Se.Ca. | salúg | 'floor' |
| Hi.Ka. | salúg | 'floor' |
| SL.R. | salúg | 'floor' |
| Bk.Li. | salúg | 'floor' |

4.2.6.7      The following sets show forms with different segmental phonemes; the meanings are near-identical:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | pilik\|matá | 'eyelids' |
| | Se.Ca. | pilúk | 'eyelids' |
| | Hi.P. | pilúk | 'eyelids' |
| | SL.R. | pirúk | 'eyelash' |
| | Bk.Li. | pirúk | 'eyelash' |
| 2 | Tg.L. | sa:lig | 'confide' |
| | Se.Ca. | sa:lig | 'confide' |
| | Hi.P. | sa:lig | 'confide' |
| | SL.R. | sa:rig | 'confide' |
| | Bk.Li. | sa:rig | 'hope ; confidence' |

4.2.6.8      The following sets show forms with different segmental phonemes; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | bulí | 'corypha elata. Roxb.' [35] |
| | Se.P. | bulí | 'corypha elata. Roxb.' |
| | Hi.P. | bulí | 'corypha elata. Roxb.' |
| | SL.R. | burí | 'type of palm' |
| | Bk.Li. | burí | 'type of palm' |
| 2 | Tg.L. | pi:qit | 'tightened' |
| | Se.P. | piqít | 'press between' [36] |
| | Hi.Ka. | pi:qut | 'become tight' |
| | SL.R. | piqít | 'press between' |
| | Bk.Li. | pi:qut | 'pressed' |
| 3 | Tg.L. | sigáq | 'conflagration' |
| | Se.Ca. | sugáq | 'light' |
| | Hi.Ka. | sugáq | 'light' |
| | SL.R. | sugáq | 'light' |
| | Bk.Li. | sugáq | 'light' [37] |

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[35]  Tg. also has *burí* besides *bulí*: perhaps, *burí* came to Tg. through the *burí* hats which were sold in Manila by Bicolanos; Il. likewise has this word, though its own word for this plant is *si:lag*.

[36]  The Se. and SL. forms have unexplained *i* for *u,* and may be loanwords from Tg.

[37]  The Bk. form has unexplained *u* for *a* in the penult and may be a loanword from SL.

| 4 | Tg.L. | siŋá | 'blow nose' |
|   | Se.P. | suŋá | 'blow nose' |
|   | Hi.Ka. | suŋá | 'blow nose' |
|   | SL.R. | suŋá | 'sneeze' |
|   | Bk.Li. | suŋá | 'blow nose' [38] |

4.2.6.9    The following sets show forms which involve the glottal stop problem; the meanings are identical or similar:

| 1 | Tg.L. | ba:laq | 'intimation; hint' |
|   | Se.P. | ba:la | 'fortune' |
|   | Hi.Ka. | ba:laq | 'fortune' |
|   | SL.R. | ba:ra | 'fortune' |
|   | Bk.Li. | ba: | 'fortune' |
| 2 | Tg.L. | tambúq | 'reed grass' |
|   | Se.P. | támbuq | 'species of rattan' |
|   | Hi.Ka. | támbuq | 'shoots of cane, reeds' |
|   | SL.P. | tambú | 'species of rattan' |
|   | Bk.P. | tambúq | 'young shoots, sprouts' |
| 3 | Tg.L. | quhú | (interjection) |
|   | Se.P. | quhúq | (interjection) |
|   | Hi.Ka. | quhú | (interjection) |
|   | SL.R. | quhúq | (interjection) |
|   | Bk.Li. | qu:hu | (interjection) |
| 4 | Tg.L. | yukbú | 'genuflection' |
|   | Se.Ca. | yukbúq | 'bow down in greeting' |
|   | Hi.P. | yúkbu | 'obeisance' |
|   | SL.P. | yúkbu | 'bow down in courtesy' |
|   | Bk.Li. | yukbú | 'bow down in courtesy' |

4.2.6.10   The following sets show forms with unexplained loss of glottal stop in cluster position; the meanings are similar:

| 1 | Tg.L. | huhúq | 'pour out contents' |
|   | Se.P. | húqhúq | 'pour out contents' |
|   | Hi.Ka. | huhúq | 'pour out contents' |
|   | SL.P. | huhúq | 'pour out contents' |
|   | Bk.Li. | huhú | 'shake out contents' |
| 2 | Tg.L. | sipák | 'crack, open' [39] |
|   | Se.Ca. | sípqak | 'crack' |

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[38] The Bk. form has unexplained *u* for *a* in the penult and may be a loanword from SL.

[39] Il. seppák 'break' may be a cognate here, but the vowel in the penult and the geminated consonant *p* are unexplained.

Hi.P.   sípqak,  sipák      'split firewood'
SL.R.   sipák               'split firewood'
Bk.P.   si:pak,  sípqak     'split firewood'

4.2.7     Exclusively Shared by Tg., Se., Hi. and Bk.:
4.2.7.1   The following set shows identical forms and meanings:

Tg.L., Se.P., Hi.Ka., Bk.P. ga:tuŋ 'firewood'

4.2.7.2   The following set shows forms which are identical; the meanings are near-identical:

Tg.L.   balutbút    'pry into'
Se.P.   balutbút    'investigate'
Hi.P.   balutbút    'investigate'
Bk.Li.  balutbút    'investigate cargo'

4.2.7.3   The following sets show forms which are identical; the meanings are similar:

1   Tg.L.    balu:kag    'feathers around neck of birds'
    Se.P.    balu:kag    'mane of horses, etc.'
    Hi.Ka.   balu:kag    'bristles on neck of pig'
    Bk.Li.   balu:kag    'hair of animal, etc.'

2   Tg.L.    ha:puq      'extreme fatigue'
    Se.P.    ha:puq      'asthma'
    Hi.Ka.   ha:puq      'shortness of breath'
    Bk.Li.   ha:puq      'asthma'

3   Tg.L.    kibúq       'move, stir'
    Se.Ca.   kibúq       'quiver, as mouth, water, etc.'
    Hi.P.    kibúq       'stirring of water at stone's fall'
    Bk.Li.   kibúq       'water stirring inside container'

4.2.7.4   The following sets show forms with different stress placement; the meanings are similar:

1   Tg.L.    li:guy      'sluggishness'
    Se.P.    ligúy       'lazy'
    Hi.Ka.   ligúy       'lazy'
    Bk.P.    li:guy      'while away time'

2   Tg.L.    sa:lu       'eat together'
    Se.Ca.   sa:lu       'eat together'
    Hi.Ka.   sa:lu       'eat together'
    Bk.Li.   salú        'coax children to eat'

4.2.8       Exclusively Shared by Tg., Hi., SL. and Bk.:

4.2.8.1     The following sets show identical forms and meanings:

1  Tg.L.,   Hi.P.,    SL.R.,    Bk.P.     li:bay      'hind, female deer'
2  Tg.L.,   Hi.Ka.,   SL.R.,    Bk.P.     pu:gut      'behead'
3  Tg.L.,   Hi.P.,    SL.P.,    Bk.P.     putúk       'burst'
4  Tg.L.,   Hi.Ka.,   SL.R.,    Bk.P.     qugbús      'sprout'


4.2.8.2     The following sets show forms which are identical; the meanings are similar:

1  Tg.L.    hu:las     'humidity of sugar, salt, etc.'
   Hi.Ka.   hu:las     'to dry rice, etc. other than by sun'
   SL.R.    hu:las     'dry rice or corn over fire'
   Bk.P.    hu:las     'dry rice or corn over fire'

2  Tg.L.    tanda:yag  'whale'
   Hi.P.    tanda:yag  'whale'
   SL.R.    tanda:yag  'large fish'
   Bk.Li.   tanda:yag  'big snake said to turn to a whale in water'

3  Tg.L.    quntúg     'knock head against solid object'
   Hi.P.    qúntug     'throw down heavy thing with force'
   SL.P.    qúntug     'muffled sound caused by falling object'
   Bk.Li.   quntúg     'violent contusion from fall on floor'


4.2.8.3     The following set shows forms with different segmental phonemes; the meanings are similar:

   Tg.L.    diqín      'press against something with hand'
   Hi.P.    duqún      'press with fingers or hands; touch'
   SL.R.    duqún      'press or touch with fingers or hands'
   Bk.Li.   duqún      'touch with hands'


4.2.8.4     The following set shows forms which involve the unexplained loss of a glottal stop in cluster position; the meanings are near-identical:

   Tg.L.    qa:gag     'sift'
   Hi.Ka.   qágqag     'pick out, cull'
   SL.R.    qa:gag     'sift'
   Bk.Li.   qa:gag     'sift'


4.2.9       Exclusively Shared by Tg., Se., SL. and Bk.:

   Tg.L.    lihí       'conception'
   Se.Ca.   lihí       'birthmark'
   SL.P.    lihíq      'conception'
   Bk.P.    lihí       'conception'

4.2.10     Exclusively Shared by Tg., Hi. and Bk.:

4.2.10.1   The following set shows identical forms and meanings:

Tg.L., Hi.Ka., Bk.P. luslús 'hernia' [40]

4.2.10.2   The following set shows forms which are identical; the meanings are near-identical:

| Tg.L. | tuŋtúŋ | 'tread on' |
| Hi.P. | túŋtuŋ | 'step on' |
| Bk.Li. | tuŋtúŋ | 'step on' |

4.2.10.3   The following set shows forms which are identical; the meanings are similar:

| 1 | Tg.L. | hu:kay | 'excavate' |
| | Hi.P. | hu:kay | 'excavation' |
| | Bk.P. | hu:kay | 'turn up, e.g. clothes in trunk' |
| 2 | Tg.L. | sa:naw | 'overflowing' |
| | Hi.Ka. | sa:naw | 'ooze out' |
| | Bk.P. | sa:naw | 'overflowing' |

4.2.10.4   The following set shows forms with different segmental phonemes; the meanings are identical;

| Tg.L. | kurút | 'pinch' [41] |
| Hi.P. | kurút | 'pinch' |
| Bk.Li. | kudút | 'pinch' |

4.2.10.5   The following set shows forms with different stress placement; the meanings are identical:

| Tg.L. | laŋís | 'oil' |
| Hi.P. | la:ŋis | 'oil' |
| Bk.P. | laŋís | 'oil' |

4.2.10.6   The following sets show forms with different stress placements; the meanings are near-identical:

| 1 | Tg.L. | bu:qul | 'ankle' |
| | Hi.Ka. | buqúl | 'heel' |
| | Bk.Li. | bu:qul | 'heel' |

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[40] Se. luslús 'loosen one's attire', SL. luslús 'loosen' may be cognates here, but the meanings are somewhat distant.

[41] Se. kurút 'touch with finger as if to tickle' may be cognate here, but the meaning is somewhat distant.

2  Tg.L.    qi:put    'fowl's excreta'
   Hi.Ka.   qi:put    'excrement'
   Bk.P.    qipút     'fowl's excreta'

4.2.11    Exclusively Shared by Tg., SL. and Bk.:
4.2.11.1  The following sets show identical forms and meanings:
1  Tg.L.,   SL.R.,   Bk.P.    luwáy    'weakness'
2  Tg.L.,   SL.R.,   Bk.Li.   ta:nan   'flee'
3  Tg.L.,   SL.P.,   Bk.P.    su:paŋ   'young shoot'
4  Tg.L.,   SL.R.,   Bk.P.    qúlput   'sudden appearance'

4.2.11.2  The following sets show forms which involve the glottal stop problem, and the unexplained loss of glottal stop in cluster position; the meanings are similar:

1  Tg.L.    pigíq    'buttocks'
   SL.R.    pígqi    'hip'
   Bk.Li.   pi:gi    'buttocks'

2  Tg.L.    paní̱s    'stale, spoiled'
   SL.R.    pánqus   'stale, spoiled'
   Bk.Li.   panús    'spoiled food'

4.2.12    Exclusively Shared by Tg., Se., and Bk.:
4.2.12.1  The following set shows forms with different stress placement; the meanings are identical:

   Tg.L.    da:hik   'grounding of vessel'
   Se.Ca.   dahík    'grounding of vessel'
   Bk.P.    da:hik   'grounding of vessel'

4.2.12.2  The following set shows forms which involve the glottal stop problem; the meanings are identical:

   Tg.L.    laŋú     'drunk'
   Se.P.    laŋúq    'drunk'
   Bk.P.    laŋú     'drunk'

4.2.13    Exclusively Shared by Tg., Se., Hi., and SL.:
4.2.13.1  The following sets show identical forms and meanings:

1  Tg.L.,   Se.Ca.,   Hi.Ka.,   SL.R.    ba:taq   'child'
2  Tg.L.,   Se.Ca.,   Hi.Ka.,   SL.R.    hi:nay   'slowly'
3  Tg.L.,   Se.Ca.,   Hi.Ka.,   SL.R.    tindák   'kick'
4  Tg.L.,   Se.P.,    Hi.Ka.,   SL.R.    ti:yaw   'joke'
5  Tg.L.,   Se.Ca.,   Hi.Ka.,   SL.R.    li:mut   'forget'

4.2.13.2   The following sets show forms which are identical; the meanings are similar:

1  Tg.L.    hiŋá      'breath'
   Se.P.    hiŋá      'be out of breath'
   Hi.P.    hiŋá      'be out of breath'
   SL.R.    hiŋá      'pant, gasp'

2  Tg.L.    qití      'dysentery'
   Se.Ca.   qití      'excreta of fowls'
   Hi.Ka.   qití      'excreta of fowls'
   SL.R.    qití      'excreta of fowls'

3  Tg.L.    ka:hig    'scratching of ground by fowls'
   Se.Ca.   ka:hig    'rake'
   Hi.Ka.   ka:hig    'scratching of ground by fowls'
   SL.R.    ka:hig    'rake'

4  Tg.L.    su:hul    'bribery'
   Se.Ca.   su:hul    'salary'
   Hi.Ka.   su:hul    'salary'
   SL.R.    su:hul    'salary'

4.2.13.3   The following sets show forms with different stress placement; the meanings are identical:

1  Tg.L.    huŋút     'coconut shell (for drinking)'
   Se.Ca.   hu:ŋut    'coconut shell (for drinking)'
   Hi.P.    hu:ŋut    'coconut shell (for drinking)'
   SL.R.    hu:ŋut    'coconut shell (for drinking)'

2  Tg.L.    piyák     'chirping of chicks'
   Se.P.    piyák     'chirping of chicks'
   Hi.P.    pi:yak    'chirping of chicks'
   SL.P.    pi:yak    'chirping of chicks'

3  Tg.L.    puták     'cackling'
   Se.Ca.   puták     'cackling'
   Hi.P.    pu:tak    'cackling'
   SL.P     puták     'cackling'

4  Tg.L.    sa:ŋay    'namesake'
   Se.Ca.   saŋáy     'namesake'
   Hi.Ka.   saŋáy     'namesake'
   SL.R.    saŋáy     'namesake'

5  Tg.L.    qu:hay    'ripe grains before threshing'
   Se.Ca.   quháy     'ripe grains before threshing'
   Hi.Ka.   quháy     'ripe grains before threshing'
   SL.P.    qu:hay    'ripe grains before threshing'

4.2.13.4    The following set shows forms with different stress placement; the meanings are near-identical:

| | | |
|---|---|---|
| Tg.L. | si:piq | 'cluster' |
| Se.Ca. | sipíq | 'a cluster (e.g. bananas)' |
| Hi.Ka. | sipíq | 'a cluster (e.g. bananas)' |
| SL.R. | sipíq | 'a cluster (e.g. bananas)' |

4.2.13.5    The following set shows forms with different stress placement; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | qa:yaw | 'not to like' |
| | Se.Ca. | qayáw | 'no' |
| | Hi.Ka. | qayáw | 'no' |
| | SL.R. | qa:yaw | 'no' |
| 2 | Tg.L. | qapíd | 'adultery' |
| | Se.P. | qa:pid | 'joined things' |
| | Hi.Ka. | qapíd | 'join' |
| | SL.R. | qa:pid | 'joined things' |

4.2.13.6    The following set shows forms with different segmental phonemes; the meanings are identical:

| | | |
|---|---|---|
| Tg.L. | ti:naw | 'clear' |
| Se.Ca. | tínqaw | 'clear' |
| Hi.Ka. | tínqaw | 'clear' |
| SL.R. | tínqaw | 'clear' |

4.2.13.7    The following set shows forms with different segmental phonemes; the meanings are similar:

| | | |
|---|---|---|
| Tg.L. | y\|arí | 'this' |
| Se.Ca. | q\|arí | 'come here!' |
| Hi.Ka. | q\|adí | 'bring it here!' |
| SL.R. | q\|adí | 'this' |

4.2.13.8    The following sets show forms which involve the glottal stop problem; the meanings are identical or similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | bakúq | 'tortuosity' |
| | Se.Ca. | ba:kuq | 'bent' |
| | Hi.P. | ba:ku | 'a curved thing' |
| | SL.R. | ba:ku | 'tortuosity' |
| 2 | Tg.L. | lakí | 'great' |
| | Se.Ca. | dakúq | 'great' |
| | Hi.Ka. | dakúq | 'great' |
| | SL.R. | da:kuq | 'great' |

4.2.14    Exclusively Shared by Tg., Se., and Hi.:

4.2.14.1    The following set shows identical forms and meanings:

Tg.L., Se.Ca., Hi.Ka. tanán 'all'

4.2.14.2    The following sets show forms with different stress placements; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | karág | 'restlessness' |
| | Se.P. | ka:rag | 'hurry' |
| | Hi.P. | ka:rag | 'restlessness' |
| 2 | Tg.L. | lu:paq | 'ground' |
| | Se.P. | lupáq | 'depression on ground' |
| | Hi.P. | lu:paq | 'depression on ground' |

4.2.14.3    The following sets show forms which involve the glottal stop problem; the meanings are identical or similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | buqúq | 'whole' |
| | Se.P. | buqúq | 'whole' |
| | Hi.P. | bu:qu | 'whole' |
| 2 | Tg.L. | gapúq | 'rotten' |
| | Se.P. | gapúq | 'rotten' |
| | Hi.P. | gapú | 'rotten' |
| 3 | Tg.L. | hi:puq | 'touch' |
| | Se.P. | hipuhi:puq (doubled) 'put finishing touches before facing audience' | | |
| | Hi.Ka. | hi:pu | 'put finishing touches before facing audience' |

4.2.15    Exclusively Shared by Tg., Se., and SL.:

4.2.15.1    The following set shows identical forms and meanings:

Tg.L., Se.Ca., SL.R. gaqán 'light'

4.2.15.2    The following set shows forms with different stress placements; the meanings are near-identical:

| | | |
|---|---|---|
| Tg.L. | qinú | 'observation' |
| Se.P. | qinuqi:nu (doubled) 'consider well' | |
| SL.R. | qi:nu | 'consider well' |

4.2.16    Exclusively Shared by Tg., Hi., and SL.:

4.2.16.1    The following sets show identical forms and meanings:

| | | | | | |
|---|---|---|---|---|---|
| 1 | Tg.L., | Hi.P., | SL.R. | da:wi | 'hook' |
| 2 | Tg.L., | Hi.P., | SL.P. | huthút | 'suck' |
| 3 | Tg.L., | Hi.P., | SL.P. | lu:pak | 'whitening' |
| 4 | Tg.L., | Hi.P., | SL.R. | pa:gud | 'tired' |

4.2.16.2 The following sets show forms which are identical; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | lasgás | 'heartwood' |
| | Hi.Ka. | lásgas | 'heartwood' |
| | SL.R. | lasgás | 'hard object' |
| 2 | Tg.L. | qu:suŋ | 'carry by two or more' |
| | Hi.Ka. | qu:suŋ | 'carry in half-sitting position (e.g. while crossing river)' |
| | SL.R. | qu:suŋ | 'carry on shoulder' |

4.2.16.3 The following sets show forms with different stress placement; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | hi:ŋaw | 'ailment' |
| | Hi.P. | hiŋáw | 'headache' |
| | SL.R. | hiŋáw | 'headache' |
| 2 | Tg.L. | lu:puk | 'dent' |
| | Hi.P. | lupúk | 'dent' |
| | SL.R. | lu:puk | 'chip off' |
| 3 | Tg.L. | saqíd | 'entirely consumed' |
| | Hi.P. | sa:qid | 'entirely consumed' |
| | SL.R. | sa:qid | 'finish a job entirely' |

4.2.16.4 The following set shows forms with different segmental phonemes; the meanings are identical:

| | | |
|---|---|---|
| Tg.L. | ba:taw | 'Dolichos lablab L.' |
| Hi.Ka. | batqáw | 'Dolichos lablab L.' |
| SL.R. | batqáw | 'Dolichos lablab L.' |

4.2.16.5 The following set shows forms with different segmental phonemes; the meanings are similar:

| | | |
|---|---|---|
| Tg.L. | ta:piŋ | 'dirt, grime' |
| Hi.Ka. | tápqiŋ | 'dirt, grime' |
| SL.R. | tápqiŋ | 'have dirty face' |

4.2.16.6 The following set shows forms which involve the glottal stop problem; the meanings are identical:

| | | |
|---|---|---|
| Tg.L. | ha:ŋuq | 'extraction' |
| Hi.P. | haŋú | 'extraction' |
| SL.P. | ha:ŋu | 'extraction' |

4.2.17    Exclusively Shared by Tg., and Hi.:

4.2.17.1    The following sets show identical forms and meanings:

| | | | |
|---|---|---|---|
| 1 | Tg.L., | Hi.P. | ba:la | 'every, all' |
| 2 | Tg.L., | Hi.P. | ka:haŋ | 'barking of dog' |
| 3 | Tg.L., | Hi.P. | haní | 'eh?' |
| 4 | Tg.L., | Hi.Ka. | hi:lab | 'abdominal pain' |
| 5 | Tg.L., | Hi.P. | hithít | 'draw breath' |
| 6 | Tg.L., | Hi.P. | la:ŋap | 'aspiration' |
| 7 | Tg.L., | Hi.P. | latúd | 'taste' |
| 8 | Tg.L., | Hi.Ka. | lamíg | 'cold' |
| 9 | Tg.L., | Hi.P. | tiŋaláq | 'look upward' |

4.2.17.2    The following set shows forms which are identical; the meanings are near-identical:

    Tg.L.    hudhúd    'scrub'
    Hi.P.    húdhud    'scrape'

4.2.17.3    The following sets show forms which are identical; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | qiŋít | 'whine' |
| | Hi.Ka. | qiŋít | 'be angry' |
| 2 | Tg.L. | dahás | 'bravery' [42] |
| | Hi.Ka. | dahás | 'intrepid' |

4.2.17.4    The following set shows forms with different stress placement; the meanings are identical:

    Tg.L.    dilág    'splendor'
    Hi.P.    di:lag    'splendor'

4.2.17.5    The following sets show forms which involve the glottal stop problem; the meanings are identical:

| | | | |
|---|---|---|---|
| 1 | Tg.L. | kirí | 'libidinous' |
| | Hi.P. | kiríq | 'libidinous' |
| 2 | Tg.L. | ta:li | 'luck' |
| | Hi.Ka. | ta:liq | 'luck' |

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[42] SL. da:has 'villain' may be a cognate here, but its meaning is somewhat distant.

4.2.18     Exclusively Shared by Tg. and SL.:

4.2.18.1   The following sets show identical forms and meanings:

| 1 | Tg.L., | SL.R. | ga:wak | 'scratch' |
|---|--------|-------|--------|-----------|
| 2 | Tg.L., | SL.P. | gu:naw | 'desolation' |
| 3 | Tg.L., | SL.P. | qu:yad | 'walk with difficulty' |
| 4 | Tg.L., | SL.R. | lutúk | 'crack' |

4.2.18.2   The following set shows forms which involve the glottal stop problem; the meanings are identical:

| Tg.L. | katúq | 'tick' |
|-------|-------|--------|
| SL.R. | ka:tu | 'tick' |

4.2.19     Exclusively Shared by Tg. and Se.:

Tg.L., Se.P. sigáw 'shout'

4.2.20     Exclusively Shared by Se., Hi., SL., and Bk.:

4.2.20.1   The following sets show identical forms and meanings:

| 1 | Se.P., | Hi.P., | SL.R., | Bk.P. | qa:tas | 'ailment in mouth of babies' |
|----|--------|--------|--------|-------|--------|------|
| 2 | Se.Ca., | Hi.P., | SL.R., | Bk.P. | ha:las | 'snake' [43] |
| 3 | Se.P., | Hi.P., | SL.P., | Bk.P. | halághag | 'loose texture' |
| 4 | Se.P., | Hi.P., | SL.R., | Bk.P. | háyhay | 'sigh' |
| 5 | Se.Ca., | Hi.Ka., | SL.R., | Bk.Li. | kalág | 'soul' |
| 6 | Se.Ca., | Hi.Ka., | SL.R., | Bk.Li. | kaság | 'species of crabs' |
| 7 | Se.Ca., | Hi.Ka., | SL.P., | Bk.P. | la:tay | 'cross bridge' |
| 8 | Se.Ca., | Hi.Ka., | SL.P., | Bk.Li. | la:ya | 'fishing net' |
| 9 | Se.P., | Hi.P., | SL.R., | Bk.P. | luqgúq | 'clean bottle by shaking liquid in it' |
| 10 | Se.P., | Hi.Ka., | SL.P., | Bk.P. | mákmak | 'strike' |
| 11 | Se.Ca., | Hi.P., | SL.R., | Bk.P. | pilít | 'sticky rice' |
| 12 | Se.Ca., | Hi.P., | SL.R., | Bk.Li. | puspús | 'beat' |
| 13 | Se.Ca., | Hi.Ka., | SL.R., | Bk.P. | tambís | 'kind of tree' |
| 14 | Se.Ca., | Hi.Ka., | SL.R., | Bk.Li. | ta:qub | 'hightide' |
| 15 | Se.P., | Hi.Ka., | SL.R., | Bk.Li. | tilád | 'compound of *buŋa,* betel leaves, lime' |
| 16 | Se.Ca., | Hi.P., | SL.P., | Bk.P. | tu:ŋul | 'stomach' |
| 17 | Se.Ca., | Hi.Ka., | SL.R., | Bk.P. | ságalsal | 'tar' |
| 18 | Se.Ca., | Hi.Ka., | SL.R., | Bk.P. | sa:luŋ | 'tar' |
| 19 | Se.Ca., | Hi.Ka., | SL.R., | Bk.P. | sálsal | 'beat metal' |

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[43] Tg. qa:has 'snake' has unexplained loss of -l- and metathesis.

4.2.20.2    The following sets show forms which are identical; the meanings are near-identical:

| | | | |
|---|---|---|---|
| 1 | Se.Ca. | ha:pit | 'drop in' |
| | Hi.Ka. | ha:pit | 'drop in' |
| | SL.R. | ha:pit | 'stop in passing a place' |
| | Bk.Li. | ha:pit | 'pass by place along way' |
| 2 | Se.Ca. | lábqas | 'fresh (meat, fish)' |
| | Hi.Ka. | lábqas | 'fresh things' |
| | SL.R. | lábqas | 'fresh things' |
| | Bk.Li. | labqás | 'fresh fish' |
| 3 | Se.Ca. | pántaw | 'kitchen terrace' |
| | Hi.Ka. | pántaw | 'kitchen terrace' |
| | SL.R. | pantáw | 'back porch' |
| | Bk.P. | pantáw | 'back porch' |
| 4 | Se.Ca. | sa:lin | 'left over food' |
| | Hi.Ka. | sa:lin | 'left over food' |
| | SL.R. | sa:lin | 'left over food' |
| | Bk.Li. | sa:lin | 'left over (metal)' |
| 5 | Se.P. | tu:gun | 'make order' |
| | Hi.Ka. | tu:gun | 'order' |
| | SL.R. | tu:gun | 'order' |
| | Bk.Li. | tu:gun | 'order' |
| 6 | Se.Ca. | qúntul | 'rebound' |
| | Hi.Ka. | qúntul | 'rebound' |
| | SL.R. | qúntul | 'rebound' |
| | Bk. Li. | quntúl | 'bounce' |
| 7 | Se.Ca. | yúpyup | 'suck' |
| | Hi.Ka. | yúpyup | 'suck in' |
| | SL.R. | yúpyup | 'suck' |
| | Bk.P. | yúpyup | 'sip at' |

4.2.20.3    The following sets show forms which are identical; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Se.Ca | qámdam | 'prepare' |
| | Hi.Ka. | qámdam | 'carefulness' |
| | SL.R. | qámdam | 'arrange' |
| | Bk.Li. | qandám | 'something prepared' |
| 2 | Se.Ca. | butí | 'smallpox' |
| | Hi.Ka. | butí | 'smallpox' |
| | SL.R. | butí | 'inflammation of skin producing welts' |
| | Bk.Li. | butí | 'pustules' |
| 3 | Se.Ca. | háwqas | 'unload cargo' |
| | Hi.P. | háwqas | 'remove, set free' |
| | SL.R. | háwqas | 'unload cargo' |
| | Bk.Li. | háwqas | 'unload cargo' |

| 4 | Se.P. | pukúq | 'small tumor on foot' |
| | Hi.Ka. | púkuq | 'syphilis' |
| | SL.R. | púkuq | 'smallpox' |
| | Bk.Li. | púkuq | 'smallpox' |

| 5 | Se.P. | taluntún | 'gradual lowering of object attached to rope' |
| | Hi.Ka. | talúntun | 'let down gradually' |
| | SL.R. | taluntún | 'let down gradually' |
| | Bk.Li. | taluntún | 'cord lowered to carry something up' |

| 6 | Se.Ca | timúq | 'eat just enough to satisfy hunger' |
| | Hi.Ka. | timúq | 'have a little to eat' |
| | SL.R. | timúq | 'have a little to eat' |
| | Bk.P. | timuqtimúq | (repeated) 'eat little by little to pass time' |

| 7 | Se.P. | tuntún | 'let fall a suspended object' |
| | Hi.Ka. | túntun | 'let down by rope' |
| | SL.R. | túntun | 'let fall a suspended object' |
| | Bk.Li. | túntun | 'let fall a suspended object' |

| 8 | Se.P. | wálwal | 'wagging of tongue' |
| | Hi.Ka. | wálwal | 'prattle' |
| | SL.R. | walwál | 'coming out of tongue' |
| | Bk.Li. | wálwal | 'coming out of tongue' |

4.2.20.4    The following sets show forms with different stress placement; the meanings are identical:

| 1 | Se.P. | qabá | 'breast of fowl' |
| | Hi.Ka. | qabá | 'breast of fowl' |
| | SL.R. | qabá | 'breast of fowl' |
| | Bk.Li. | qa:ba | 'breast of fowl' |

| 2 | Se.P. | bu:lug | 'cataract of eye' |
| | Hi.P. | bu:lug | 'cataract of eye' |
| | SL.R. | bu:lug | 'cataract of eye' |
| | Bk.Li. | bulúg | 'cataract of eye' |

| 3 | Se.Ca. | bu:qut | 'will, desire' |
| | Hi.Ka. | bu:qut | 'will, desire' |
| | SL.R. | bu:qut | 'will, desire' |
| | Bk.Li. | buqút | 'will, desire' |

| 4 | Se.Ca. | dayág | 'public' |
| | Hi.Ka. | dayág | 'public' |
| | SL.R. | da:yag | 'public' |
| | Bk.Li. | dayág | 'public' |

| 5 | Se.Ca. | diqín | 'where' |
| | Hi.Ka. | diqín | 'where' |
| | SL.R. | di:qin | 'where' |
| | Bk.P. | di:qin | 'where' |

6  Se.P.    gibáŋ     'notch, dent'
   Hi.P.    gi:baŋ    'notch, dent'
   SL.R.    gibáŋ     'notch, dent'
   Bk.P.    gi:baŋ    'notch, dent'

7  Se.Ca.   ha:qin    'where'
   Hi.Ka.   haqín     'where'
   SL.R.    ha:qin    'where'
   Bk.P.    ha:qin    'where'

8  Se.P.    payág     'hut'
   Hi.Ka.   payág     'hut'
   SL.R.    payág     'hut'
   Bk.Li.   pa:yag    'hut'

9  Se.Ca.   ti:gib    'chisel'
   Hi.Ka.   tigíb     'chisel'
   SL.R.    tigíb     'chisel'
   Bk.Li.   tigíb     'chisel'

4.2.20.5    The following set shows forms with different stress placement; the meanings are near-identical:

1  Se.Ca.   hi:biq    'pout as when about to cry'
   Hi.P.    hibíq     'cry'
   SL.R.    hibíq     'cry like a child'
   Bk.Li.   hi:biq    'snivel'

2  Se.Ca.   hi:lum    'keep secret'
   Hi.P.    hilúm     'secret'
   SL.R.    hi:lum    'secret'
   Bk.Li.   hi:lum    'secret'

4.2.20.6    The following sets show forms with different stress placement; the meanings are similar:

1  Se.P.    gi:pak    'fragment'
   Hi.Ka.   gipák     'fracture'
   SL.R.    gi:pak    'break piece of wood'
   Bk.P.    gi:pak    'missing fragment'

2  Se.Ca.   hapín     'covering on object for sitting on'
   Hi.Ka.   hapín     'covering'
   SL.R.    ha:pin    'pads for saddles, etc.'
   Bk.Li.   ha:pin    'filling for cushions, etc.'

3  Se.P.    kakás     'blowing away of blanket, roof, etc.'
   Hi.P.    kakás     'displacement'
   SL.R.    ka:kas    'blowing away of blanket, roof, etc.'
   Bk.P.    kakás     'displacement'

| 4 | Se.P. | ka:lit | 'treachery' |
| | Hi.P. | kalít | 'kill another treacherously' |
| | SL.R. | kalít | 'accomplish by deception' |
| | Bk.Li. | ka:lit | 'deceit or fraud' |
| 5 | Se.P. | la:yaq | 'wither' |
| | Hi.Ka. | la:yaq | 'wither' |
| | SL.R. | la:yaq | 'wither' |
| | Bk.Li. | layáq | 'dry leaves' |
| 6 | Se.P. | palúŋ | 'person with no ears' |
| | Hi.Ka. | palúŋ | 'having drooping ears' |
| | SL.R. | palúŋ | 'person with no ears' |
| | Bk.Li. | pa:luŋ | 'ear severed or notched' |
| 7 | Se.Ca. | qu:laŋ | 'hinder' |
| | Hi.Ka. | quláŋ | 'impediment' |
| | SL.R. | qu:laŋ | 'impediment' |
| | Bk.Li. | quláŋ | 'impediment' |
| 8 | Se.Ca. | qusúk | 'stake' |
| | Hi.Ka. | qu:suk | 'stake' |
| | SL.R. | qusúk | 'stake' |
| | Bk.P. | qu:suk | 'stakes used in fish corrals' |

4.2.20.7   The following sets show forms with different segmental phonemes; the meanings are near-identical:

| 1 | Se.Ca. | ku:liq | 'difficulty' |
| | Hi.P. | ku:liq | 'difficulty' |
| | SL.R. | ku:riq | 'difficulty' |
| | Bk.Li. | ku:riq | 'difficulty (e.g. work, parturition, etc.)' |
| 2 | Se.Ca. | pa:luŋ | 'put out fire' |
| | Hi.P. | pa:luŋ | 'put out fire' |
| | SL.R. | pa:ruŋ | 'put out fire' |
| | Bk.Li. | pa:ruŋ | 'candle or fire extinguished' |

4.2.20.8   The following sets show forms which involve the glottal stop problem; the meanings are identical:

| 1 | Se.Ca. | hi:lu | 'poison' [44] |
| | Hi.Ka. | hilúq | 'poison' |
| | SL.R. | hilú | 'poison' |
| | Bk.P. | hi:lu | 'poison' |
| 2 | Se.P. | táŋsu | 'remove handle of tool' |
| | Hi.Ka. | táŋsu | 'remove handle of tool' |

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[44] Tg. hi:lu 'dizzy' may be cognate here, but its meaning is somewhat distant.

|       | SL.R. | táŋsu  | 'remove handle of tool' |
|       | Bk.Li. | táŋsuq | 'remove handle of tool' |

| 3 | Se.Ca. | tu:yu   | 'purpose' |
|   | Hi.Ka. | tu:yuq  | 'purpose' |
|   | SL.P.  | tu:yuq  | 'purpose' |
|   | Bk.Li. | tu:yu   | 'purpose' |

**4.2.20.9**   The following sets show forms which involve the glottal stop problem; the meanings are similar:

| 1 | Se.Ca. | qi:baq | 'Averrhoa bilimbi, L.' |
|   | Hi.P.  | qi:baq | 'Averrhoa bilimbi, L.' |
|   | SL.R.  | qibá   | 'a kind of shrub' |
|   | Bk.Li. | qi:baq | 'Averrhoa bilimbi, L.' |

| 2 | Se.Ca. | hayáq  | 'place dead in state' |
|   | Hi.Ka. | ha:yaq | 'weep, grieve' |
|   | SL.R.  | ha:ya  | 'weep' |
|   | Bk.P.  | ha:yaq | 'weep loudly' |

| 3 | Se.Ca. | lamáq  | 'stain mark' |
|   | Hi.P.  | la:ma  | 'dye red' |
|   | SL.R.  | lamá   | 'dye red' |
|   | Bk.Li. | la:ma  | 'dye red' |

**4.2.20.10**  The following set shows forms with an unexplained loss of a glottal stop in cluster position; the meanings are identical:

| Se.Ca. | baqú  | 'turtle' |
| Hi.Ka. | baqú  | 'turtle' |
| SL.R.  | ba:qu | 'turtle' |
| Bk.Li. | báwqu | 'turtle' |

**4.2.21**    Exclusively Shared by Se., Hi., and Bk.:

**4.2.21.1**   The following sets show identical forms and meanings:

| 1 | Se.P.,  | Hi.P.,  | Bk.Li. | ba:tas  | 'control prices' |
| 2 | Se.P.,  | Hi.P.,  | Bk.Li. | bu:qay  | 'scoria; dross' |
| 3 | Se.Ca., | Hi.Ka., | Bk.P.  | kusíq   | 'pinch' |
| 4 | Se.P.,  | Hi.P.,  | Bk.P.  | dulqáy  | 'vomit sucked milk' |
| 5 | Se.P.,  | Hi.Ka., | Bk.P.  | gisáw   | 'species of fish' |
| 6 | Se.P.,  | Hi.Ka., | Bk.P.  | lumát   | 'relapse' |
| 7 | Se.Ca., | Hi.Ka., | Bk.P.  | li:yab  | 'neckhold of clothes' |
| 8 | Se.Ca., | Hi.Ka., | Bk.P.  | sádsad  | 'dance' |
| 9 | Se.Ca., | Hi.P.,  | Bk.Li. | wáswas  | 'rinse' |

4.2.21.2    The following set shows forms which are identical; the meanings are similar:

| | | |
|---|---|---|
| Se.P. | músmus | 'rub another's face on floor' |
| Hi.P. | músmus | 'rub another's face on floor' |
| Bk.P. | músmus | 'crush (face)' |

4.2.21.3    The following set shows forms with different stress placement; the meanings are identical:

| | | |
|---|---|---|
| Se.P. | tulúy | 'species of sardine' |
| Hi.Ka. | tu:luy | 'species of sardine' |
| Bk.P. | tu:luy | 'species of sardine' |

4.2.21.4    The following set shows forms with different stress placement; the meanings are similar:

| | | | |
|---|---|---|---|
| Se.P. | qulugqu:lug | (repeated) | 'flatter' |
| Hi.Ka. | qulugqulúg | (repeated) | 'fawn' |
| Bk.P. | qu:lug | | 'fawn' |

4.2.21.5    The following set shows forms which involve the unexplained loss of a glottal stop in cluster position; the meanings are identical:

| | | |
|---|---|---|
| Se.P. | qísqis | 'exclamation to urge dogs' |
| Hi.Ka. | qísqis | 'exclamation to urge dogs' |
| Bk.P. | qi:sis | 'exclamation to urge dogs' |

4.2.22    Exclusively Shared by Se., SL., and Bk.:

4.2.22.1    The following sets show identical forms and meanings:

| | | | | |
|---|---|---|---|---|
| 1 | Se.Ca., | SL.R., | Bk.Li. | dagqúm | 'cloudy' |
| 2 | Se.P., | SL.R., | Bk.P. | gítgit | 'species of bird' |
| 3 | Se.P., | SL.R., | Bk.P. | wítwit | 'chirping of birds' |

4.2.22.2    The following set shows forms which are identical; the meanings are near-identical:

| | | |
|---|---|---|
| Se.Ca. | qu:kit | 'scrutinize; analyze' |
| SL.R. | qu:kit | 'verify; inquire; investigate' |
| Bk.P. | qu:kit | 'investigate' |

4.2.22.3    The following sets show forms which are identical; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | Se.Ca. | la:bay | 'throw' |
| | SL.R. | la:bay | 'kill chicken by throwing something at it' |
| | Bk.Li. | la:bay | 'throw' |

| 2 | Se.Ca. | táŋkas | 'undo, dismantle' |
| | SL.R. | táŋkas | 'untie' |
| | Bk.Li. | taŋkás | 'rip' |
| 3 | Se.P. | tirati:ra | 'sugar in taffy form' |
| | SL.P. | tirati:ra | 'sugar in taffy form' |
| | Bk.P. | tirati:ra | 'sugar in crystal form' |

4.2.22.4    The following set shows forms with different stress placement; the meanings are identical:

| Se.P. | lanát | 'run after' |
| SL.R. | la:nat | 'run after' |
| Bk.Li. | la:nat | 'run after' |

4.2.22.5    The following set shows forms with different stress; the meanings are similar:

| Se.P. | lapáy | 'species of long-shanked bird' |
| SL.R. | la:pay | 'edible bird with ashen color and long legs' |
| Bk.Li. | lapáy | 'species of bird' |

4.2.22.6    The following sets show forms which involve the glottal stop problem; the meanings are similar:

| 1 | Se.Ca. | dapáq | 'barn' |
| | SL.R. | da:pa | 'barn' |
| | Bk.Li. | da:paq | 'pile of rice' |
| 2 | Se.P. | bisúq | 'jug of water' |
| | SL.R. | bisú | 'vessel for water' |
| | Bk.Li. | bi:su | 'jar with small mouth' |

4.2.23    Exclusively Shared by Hi., SL., and Bk.:

4.2.23.1    The following sets show identical forms and meanings:

| 1 | Hi.Ka., | SL.R., | Bk.P. | du:qul | 'cork' |
| 2 | Hi.P., | SL.R., | Bk.P. | hu:lu | 'rowers' song' |
| 3 | Hi.Ka., | SL.R., | Bk.Li. | liwát | 'again' |
| 4 | Hi.Ka., | SL.R., | Bk.Li. | sukút | 'collect debts' |

4.2.23.2    The following set shows forms which are identical; the meanings are near-identical:

| Hi.P. | ki:wal | 'hook for alligator' |
| SL.R. | ki:wal | 'big hook' |
| Bk.Li. | ki:wal | 'hook for alligator' |

4.2.23.3    The following sets show forms which are identical: the meanings are similar;

| | | | |
|---|---|---|---|
| 1 | Hi.P. | dalandán | 'carry something running' |
| | SL.R. | dalandán | 'carried by current' |
| | Bk.P. | dalándan | 'carried by current' |
| 2 | Hi.P. | daluŋdúŋ | 'bewitch' |
| | SL.R. | daluŋdúŋ | 'herbs for bewitching' |
| | Bk.Li. | daluŋdúŋ | 'bewitch' |
| 3 | Hi.P. | da:qil | 'join boards or bricks' |
| | SL.R. | da:qil | 'thing well joined like boards' |
| | Bk.P. | da:qil | 'something well joined' |
| 4 | Hi.Ka. | qúlbu | 'appear' |
| | SL.R. | qúlbu | 'appear' |
| | Bk.P. | qúlbu | 'protrude' |
| 5 | Hi.Ka. | qutúd | 'cut' |
| | SL.R. | qutúd | 'cut' |
| | Bk.Li. | qutúd | 'knife used by women to cut abaca' |

4.2.23.4    The following sets show forms with different stress placement; the meanings are identical:

| | | | |
|---|---|---|---|
| 1 | Hi.Ka. | lapís | 'species of fish' |
| | SL.P. | la:pis | 'species of fish' |
| | Bk.P. | lapís | 'species of fish' |
| 2 | Hi.Ka. | la:qus, laqús | 'hoarse' |
| | SL.R. | la:qus | 'hoarse' |
| | Bk.P. | laqús | 'hoarse' |
| 3 | Hi.Ka. | sukúl | 'measure' |
| | SL.R. | sukúl | 'measure' |
| | Bk.Li. | su:kul | 'measure' |

4.2.23.5    The following sets show forms with different stress placement; the meanings are near-identical:

| | | | |
|---|---|---|---|
| 1 | Hi.P. | da:mu | 'wet fingers when kneading' |
| | SL.R. | damú | 'wet fingers so things held do not adhere to hand' |
| | Bk.Li. | damú | 'wet fingers when kneading' |
| 2 | Hi.Ka. | dulús | 'fine wire' |
| | SL.R. | du:lus | 'guitar string' |
| | Bk.Li. | dulús | 'guitar string' |
| 3 | Hi.Ka. | gayún | 'beautiful' |
| | SL.R. | ga:yun | 'beautiful thing' |
| | Bk.Li. | gayún | 'beauty' |

4  Hi.Ka.   sugúd      'prick of insects'
   SL.R.    sugúd      'bite of serpent'
   Bk.Li.   su:gud     'sting of bee'

5  Hi.P.    ta:kin     'tie two things together'
   SL.R.    ta:kin     'tie two coconuts together'
   Bk.Li.   takín      'two like things joined side by side'

4.2.23.6    The following set shows forms with different stress placement; the meanings are similar:

Hi.P.     higád     'go from place to place by water; border (bank)'
SL.R.     hi:gad    'go along border; border (bank)'
Bk.Li.    higád     'go by boat from place to place'

4.2.23.7    The following set shows forms which involve the glottal stop problem; the meanings are similar:

Hi.Ka.    bi:ru     'lamp soot'
SL.P.     bi:ruq    'dust or smoke produced by pitch'
Bk.Li.    bi:ruq    'dust or smoke produced by pitch'

4.2.24    Exclusively Shared by Hi. and Bk.:

4.2.24.1    The following sets show identical forms and meanings:

1  Hi.P.,   Bk.Li.   qa:tu      'companion'
2  Hi.Ka.,  Bk.P.    gamú       'disturbance' [45]
3  Hi.Ka.,  Bk.P.    lambút     'reach'
4  Hi.P.,   Bk.Li.   lu:gay     'be late'
5  Hi.Ka.,  Bk.P.    salaŋsáŋ   'a length of bamboo split'

6  Hi.Ka.,  Bk.P.    salíksik   'small insects injurious to trees'
7  Hi.P.,   Bk.P.    sa:yap     'hat of buri palms'
8  Hi.P.,   Bk.P.    taŋkúp     'enclosure for fish' [46]

4.2.24.2    The following sets show forms which are identical: the meanings are similar:

1  Hi.Ka.   qa:mak    'easily lighted material for starting fire'
   Bk.Li.   qa:mak    'feed fire'

2  Hi.P.    qu:luŋ    'heaping measure'
   Bk.Li.   qu:luŋ    'be filled and heaping'

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[45] SL. gamú 'embarrass' may be cognate here, but its meaning is somewhat distant.

[46] This set reminds one of *taŋkeb 'cover' but the final consonants do no correspond, and the meanings are somewhat distant.

4.2.24.3   The following sets show forms with different stress placement; the meanings are identical:

| 1 | Hi.P. | la:sug | 'testicles' |
|---|---|---|---|
|   | Bk.P. | lasúg | 'testicles' |
| 2 | Hi.P. | ta:pil | 'throw, fling' |
|   | Bk.P. | tapíl | 'throw, fling' |

4.2.24.4   The following sets show forms with different stress placement; the meanings are similar:

| 1 | Hi.Ka. | ga:nit | 'pull, tear at' |
|---|---|---|---|
|   | Bk.Li. | ganít | 'pull out edible roots from field' |
| 2 | Hi.Ka. | paláŋ | 'big slice of meat' |
|   | Bk.Li. | pa:laŋ | 'chop of meat' |

4.2.25   Exclusively Shared by SL. and Bk.:

4.2.25.1   The following sets show identical forms and meanings:

| 1 | SL.P., | Bk.P. | bu:kud | 'rice overflow in pot' |
|---|---|---|---|---|
| 2 | SL.R., | Bk.P. | ka:way | 'poisonous tentacle of polyp' |
| 3 | SL.R., | Bk.P. | diríq | 'impede' |
| 4 | SL.R., | Bk.P. | saklu:lu | 'take a thing in the hands' |
| 5 | SL.R., | Bk.P. | sakúb | 'include' |
| 6 | SL.R., | Bk.Li. | sa:pul | 'obtain' |
| 7 | SL.R., | Bk.Li. | taháw | 'species of bird' |

4.2.25.2   The following sets show forms with different stress placement; the meanings are identical:

| 1 | SL.R. | ga:nap | 'extend, spread' |
|---|---|---|---|
|   | Bk.P. | ganáp | 'extend, spread' |
| 2 | SL.R. | pisúŋ | 'put rice in mortar' |
|   | Bk.Li. | pi:suŋ | 'put rice in mortar' |
| 3 | SL.P. | pa:lis | 'pour liquid from one container to another' |
|   | Bk.P. | palís | 'pour liquid from one container to another' |

4.2.26   Exclusively Shared by Se. and Bk.:

4.2.26.1   The following sets show identical forms and meanings:

| 1 | Se.P., | Bk.P. | qa:lal | 'barking of dogs' |
|---|---|---|---|---|
| 2 | Se.Ca., | Bk.P. | palís | 'around 2 to 3 P.M.' |

4.2.26.2    The following set shows forms which are identical; the meanings are near-identical:

Se.P.    lundág    'sink to the bottom'
Bk.P.    lundág    'sink'

4.2.27    Exclusively Shared by Tg. and Bk.:
4.2.27.1    The following sets show identical forms and meanings:

1    Tg.L.,    Bk.P.    qu:buq    'transplant'
2    Tg.L.,    Bk.P.    bitháy    'sieve'
3    Tg.L.,    Bk.P.    da:yu    'stranger'
4    Tg.L.,    Bk.P.    ga:saq    'anger'
5    Tg.L.,    Bk.P.    hi:kaw    'earrings'

6    Tg.L.,    Bk.P.    pu:nit    'tear, rip up'
7    Tg.L.,    Bk.P.    tustús    'loosen'
8    Tg.L.,    Bk.P.    qu:nay    'kill lice by pressing'

4.2.27.2    The following set shows forms which are identical; the meanings are near-identical:

Tg.L.    gu:luk    'bolo'
Bk.P.    gu:luk    'a kind of knife'

4.2.27.3    The following sets show forms which are identical; the meanings are similar:

1    Tg.L.    qa:lay    'offering'
     Bk.Li.    qa:lay    'put something before someone'
2    Tg.L.    tu:nud    'unopened leaf of banana'
     Bk.Li.    tu:nud    'banana'

4.2.27.4    The following sets show forms with different stress placement; the meanings are identical:

1    Tg.L.    duqún    'there'
     Bk.P.    du:qun    'there'
2    Tg.L.    kaba:kab    'a big frog'
     Bk.Li.    kabakáb    'a big frog'
3    Tg.L.    suwág    'butt with horns'
     Bk.Li.    su:wag    'butt with horns'
4    Tg.L.    tuyáq    'mockery, irony'
     Bk.P.    tuyatu:yaq    (repeated) 'mockery, irony'
5    Tg.L.    qutúŋ    'teat, nipple'
     Bk.Li.    qu:tuŋ    'teat, nipple'

4.2.27.5    The following set shows forms which involve the glottal stop problem; the meanings are identical:

    Tg.L.   tantúq    'known'
    Bk.P.   tantú     'known'

4.2.28    Exclusively Shared by Il., Ib., If., and Ka.:

4.2.28.1    The following sets show forms which are identical; the meanings are similar:

| 1 | Il.V. | ba:lud | 'prisoner' |
|---|-------|--------|------------|
|   | Ib.B. | ba:lud | 'tie one's hand' |
|   | If.C. | ba:lud | 'imprison' |
|   | Ka.V. | ba:lud | 'imprison' |
| 2 | Il.V. | qi:li | 'fatherland' [47] |
|   | Ib.B. | qi:li | 'town, place' |
|   | If.C. | qi:li | 'foreign village' |
|   | Ka.V. | qi:li | 'town, country' |
| 3 | Il.V. | ta:ya | 'catch (grain)' |
|   | Ib.B. | ta:ya | 'hollow up to catch sugarcane juice' |
|   | If.C. | ta:ya | 'catch (grain)' |
|   | Ka.V. | ta:ya | 'catch (liquid, grain)' |

4.2.28.2    The following set shows forms with different stress placement; the meanings are identical:

    Il.V.   pu:ŋan   'pillow'
    Ib.B.   puŋán   'pillow'
    If.C.   puŋán   'pillow'
    Ka.V.   puŋán   'pillow'

4.2.28.3    The following sets show forms with different stress placement; the meanings are similar:

| 1 | Il.V. | qa:gub | 'smelling' |
|---|-------|--------|------------|
|   | Ib.B. | qagúb | 'smelling' |
|   | If.C. | qa:gub | 'stench' |
|   | Ka.V. | qa:gub | 'stench' |
| 2 | Il.V. | qa:wid | 'keep back' |
|   | Ib.B. | qa:wid | 'draw back' |
|   | If.C. | qa:wid | 'draw back' |
|   | Ka.V. | qawíd | 'draw back' |

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[47] Perhaps Png. qi:li 'stranger' is a cognate here, but its meaning is somewhat distant.

4.2.28.4    The following sets show forms with different segmental pho-
nemes; the meanings are identical:

1  Il.V.    payák     'wing'
   Ib.B.    payáq     'wing'
   If.C.    payáq     'wing'
   Ka.V.    payák     'wing'

2  Il.V.    takdér    'stand'
   Ib.B.    táddag    'stand'
   If.C.    taqdog    'stand'
   Ka.V.    takdég    'stand'

3  Il.V.    ta:ŋad    'look up'
   Ib.      ta:ŋab    'look up' [48]
   If.C.    ta:ŋad    'look up'
   Ka.V.    ta:ŋad    'look up'

4.2.28.5    The following sets show forms with different segmental pho-
nemes; the meanings are similar:

1  Il.V.    gebbá     'burn clay'
   Ib.B.    gabbá     'burn clay'
   If.C.    gobá      'burn'
   Ka.V.    gebá      'smoulder'

2  Il.V.    kami:riŋ    'semecarpus cuneiformis Blanco'
   Ib.B.    kami:giŋ    'wild plum tree'
   If.C.    qame:leŋ    'a poisonous tree'
   Ka.V.    kami:liŋ    'ficus pseudopalma Blanco'

4.2.29    Exclusively Shared by Il., If., and Ka.:
4.2.29.1    The following sets show identical forms and meanings:

1  Il.V.,    If.C.,    Ka.V.    ka:qag      'monkey'
2  Il.V.,    If.C.,    Ka.V.    tapa:ya     'hold in hand'

4.2.29.2    The following sets show forms which are near-identical; the
meanings are near-identical:

1  Il.V.    ba:sul    'fault, sin'
   If.C.    ba:hul    'fault, sin'
   Ka.V.    ba:hul    'fault, sin'

2  Il.V.    pu:kis    'have haircut'
   If.C.    pu:kih    'have haircut'
   Ka.V.    pu:kih    'have haircut'

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[48]  This Ib. form has unexplained final -b; it is a Tuguegarao Ib. form.

| 3 | Il.V. | ga:sat | 'fate' |
|   | If.C. | ga:hat | 'fate' |
|   | Ka.V. | ga:hat | 'fate' |
| 4 | Il.V. | saplít | 'whip, lash' |
|   | If.C. | haplít | 'whip, lash' |
|   | Ka.V. | haplít | 'whip, lash' |

4.2.29.3   The following set shows forms which are near-identical; the meanings are near-identical:

| 1 | Il.V. | qi:dus | 'spoon' |
|   | If.C. | qi:duh | 'spoon' |
|   | Ka.V. | qi:duh | 'wooden spoon' |
| 2 | Il.V. | la:sin | 'separate' |
|   | If.C. | lahhin | 'dissociate from commonality' [49] |
|   | Ka.V. | la:hin | 'move; remove' |

4.2.29.4   The following set shows forms which are identical; the meanings are near-identical:

| Il.V. | bigát | 'morning' |
| If.C. | bigát | 'morning' |
| Ka.V. | bigát | 'early' |

4.2.29.5   The following set shows forms with different stress placement; the meanings are identical:

| Il.V. | qupíg | 'basket' |
| If.C. | qu:pig | 'basket' |
| Ka.V. | qupíg | 'basket' |

4.2.29.6   The following set shows forms with different stress placement; the meanings are similar:

| Il.V. | pa:gat | 'cane, reed' |
| If.C. | pagát | 'thorny vine' |
| Ka.V. | pagát | 'thorn' |

4.2.29.7   The following sets show forms with different segmental phonemes; the meanings are identical:

| 1 | Il.V. | ba:daŋ | 'aid' |

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[49] If. forms often show geminated consonant when an Il., Ib., or Ka form has a single consonant preceded by length; this correspondence, however, remains to be investigated further.

|   | If.C. | baddaŋ | 'aid' [50] |
|---|---|---|---|
|   | Ka.V. | ba:daŋ | 'aid' |
| 2 | Il.V. | bayyék | 'tadpole' |
|   | If.C. | bayyóq | 'tadpole' |
|   | Ka.V. | bayyék | 'tadpole' |
| 3 | Il.V. | ki:teb | 'bedbug' |
|   | If.C. | ki:tob | 'bedbug' |
|   | Ka.V. | ki:teb | 'bedbug' |

4.2.29.8    The following set shows forms with different segmental phonemes; the meanings are near-identical:

| Il.V. | kawi:li | 'come back same day' |
|---|---|---|
| If.C. | qawi:li | 'come back same day' |
| Ka.V. | kawi:li | 'go home before night' |

4.2.29.9    The following sets show forms with different segmental phonemes; the meanings are similar:

| 1 | Il.V. | ga:meŋ | 'riches; furniture' |
|---|---|---|---|
|   | If.C. | ga:moŋ | 'property kept in house' |
|   | Ka.V. | ga:meŋ | 'movable furniture' |
| 2 | Il.V. | sawqít | 'small cup' [51] |
|   | If.C. | hawét | 'kind of rice wine jar' |
|   | Ka.V. | hawit | 'large olive-colored jar' |
| 3 | Il.V. | kutím | 'peel with teeth' |
|   | If.C. | qu:tim | 'process of shelling seeds' |
|   | Ka.V. | ku:tim | 'peel (young palay)' |
| 4 | Il.V. | laqí | 'the jute' |
|   | If.C. | la:i | 'plant whose fiber is used for making ropes' |
|   | Ka.V. | la:i | 'pipturus arborescens Rob.' |

4.2.30    Exclusively Shared by Il., Ib., and Ka.:

4.2.30.1    The following set shows forms with different stress placement; the meanings are identical:

| Il.V. | lu:paw | 'a kind of basket' |
|---|---|---|
| Ib.B. | lupáw | 'a kind of basket' |
| Ka.V. | lu:paw | 'a kind of basket' |

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[50] Another instance of what was mentioned above (note 49).

[51] The consonant cluster of the Il. form is unexplained.

4.2.30.2    The following sets show forms with different segmental pho-
nemes; the meanings are identical:

| 1 | Il.V. | balusbús | 'buy' |
|---|-------|----------|-------|
|   | Ib.B. | balubbút | 'buy' |
|   | Ka.V. | baluhbút | 'buy' |
| 2 | Il.V. | qadú | 'many' |
|   | Ib.B. | qarú | 'many' |
|   | Ka.V. | qadú | 'many' |
| 3 | Il.V. | salqít | 'lightning' |
|   | Ib.B. | tallíq | 'lightning' |
|   | Ka.V. | halqít | 'lightning' |

4.2.30.3    The following set shows forms with different segmental pho-
nemes; the meanings are near-identical:

| Il.V. | ki:wet | 'young eel' |
|-------|--------|-------------|
| Ib.B. | kiwóq | 'eel' |
| Ka.V. | ki:wet | 'young eel' |

4.2.30.4    The following set shows forms with different segmental pho-
nemes; the meanings are similar:

| 1 | Il.V. | qaliwadáṅ | 'collar bone' |
|---|-------|-----------|---------------|
|   | Ib.B. | qaliwaráṅ | 'first bone of ribs' |
|   | Ka.V. | qaliwadáṅ | 'rib' |
| 2 | Il.V. | ba:duk | 'nipa leaves covering ridge of roof' |
|   | Ib.B. | barúk | 'wool of palm so-called' |
|   | Ka.V. | ba:duk | 'arris of roof' |
| 3 | Il.V. | busa:li | 'boil, furuncle' |
|   | Ib.B. | buta:li | 'boil, furuncle' |
|   | Ka.V. | buha:li | 'boil, furuncle' |
| 4 | Il.V. | li:tem | 'be lived' |
|   | Ib.B. | li:tam | 'color of lead' |
|   | Ka.V. | li:tem | 'be lived' |

4.2.30.5    The following set shows forms which are identical; the mean-
ings are similar:

| Il.V. | balaybaláy 'hang' |
|-------|-------------------|
| Ib.B. | balaybaláy 'noose for wild chicken' |
| Ka.V. | balaybaláy 'hang' |

4.2.31    Exclusively Shared by Il., Ib., and If.:

| Il.P. | ga:taṅ | 'buy' |
|-------|--------|-------|
| Ib.P. | ga:taṅ | 'buy' |
| If.B. | gata:ṅ|an | 'thing received as bought or exchanged' |

4.2.32    Exclusively Shared by Ib., If., and Ka.:

4.2.32.1    The following set shows forms with different stress placement; the meanings are similar:

| Ib.B. | gayáŋ | 'crow' |
|-------|-------|--------|
| If.C. | ga:yaŋ | 'hawk' |
| Ka.V. | ga:yaŋ | 'crow' |

4.2.32.2    The following set shows forms with different segmental phonemes; the meanings are identical:

| Ib.B. | piŋít | 'edge, border' |
|-------|-------|----------------|
| If.C. | peŋŋet | 'edge, border' [52] |
| Ka.V. | pi:ŋit | 'edge, border' |

4.2.32.3    The following set shows forms with different segmental phonemes; the meanings are near-identical:

| 1 | Ib.B. | giggíp | 'cut to pieces' |
|---|-------|--------|-----------------|
|   | If.C. | gepgép | 'cut into small pieces' |
|   | Ka.V. | gipgíp | 'cut into slices' |
| 2 | Ib. | kekkéŋ | 'bell' [53] |
|   | If.C. | keŋkeŋ | 'bell' |
|   | Ka.V. | kiŋkíŋ | 'ring' |

4.2.33    Exclusively Shared by If. and Ka.:

4.2.33.1    The following sets show identical forms and meanings:

| 1  | If.C., | Ka.V. | qa:gid | 'point' |
|----|--------|-------|--------|---------|
| 2  | If.C., | Ka.V. | da:win | 'marry' |
| 3  | If.C., | Ka.V. | gaŋhá | 'gong' |
| 4  | If.C., | Ka.V. | hagapháp | 'remove weeds' |
| 5  | If.C., | Ka.V. | hidí | 'there' |
| 6  | If.C., | Ka.V. | lawá | 'bad, evil' |
| 7  | If.C., | Ka.V. | la:pa | 'foreleg' |
| 8  | If.C., | Ka.V. | li:gad | 'difficult' |
| 9  | If.C., | Ka.V. | lu:ta | 'earth' |
| 10 | If.C., | Ka.V. | nan | (particle) [54] |

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[52] The *e* vowel and the geminated ŋ in the penult are unexplained.

[53] The Ib. form has unexplained *e* for *i*; the If. form has *k* for *q* and is perhaps a Kiangan word.

[54] nan (particle which occurs before non-personal names) e.g. If. *nan* panni:qi 'the bat', Ka. *nan* ma:qek 'the one sleeping'.

| 11 | If.C., | Ka.V. | pa:nad | 'level' |
| 12 | If.C., | Ka.V. | panu:yu | 'accuse' |
| 13 | If.C., | Ka.V. | ti:li | 'vagina' |

4.2.33.2    The following sets show forms which are identical; the meanings are near-identical:

| 1 | If.C. | qa:gut | 'something that can be scraped off' |
|   | Ka.V. | qa:gut | 'scrape' |
| 2 | If.B. | qa:nad | 'shave off bark' |
|   | Ka.V. | qa:nad | 'pare, peel' |
| 3 | If.B. | dama:gan | 'anvil' |
|   | Ka.V. | dama:gan | 'chopping block' |
| 4 | If.C. | dawa:wa | 'hand over, offer' |
|   | Ka.V. | dawa:wa | 'hand, reach' |
| 5 | If.C. | diplút | 'muddiness of ricefield' |
|   | Ka.V. | diplút | 'dirty; full of weeds' |
| 6 | If.C. | gamán | 'headaxe' |
|   | Ka.V. | gamán | 'weapons' |
| 7 | If.C. | huŋhúŋ | 'fragrance' |
|   | Ka.V. | huŋhúŋ | 'scent' |
| 8 | If.B. | liglíg | 'flanking in battle' |
|   | Ka.V. | liglíg | 'deviate' |
| 9 | If.B. | lu:buŋ | 'European and lowland Filipino clothing' |
|   | Ka.V. | lu:buŋ | 'white dress (jacket and *tapis*)' |
| 10 | If.C. | luwád | 'tilt; put one end down' |
|   | Ka.V. | luwád | 'erect (e.g. fallen rice stalks)' |
| 11 | If.C. | nayubú | 'whisper' |
|   | Ka.V. | nayubú | 'scarcely audible' |
| 12 | If.B. | pagpág | 'knock (door)' |
|   | Ka.V. | pagpág | 'knock out (teeth)' |
| 13 | If.B. | pi:kat | 'pig that has borne litter' |
|   | Ka.V. | pi:kat | 'hog' |
| 14 | If.C. | tantán | 'needle' |
|   | Ka.V. | tantán | 'bamboo needle' |
| 15 | If.B. | tultúl | 'hammer' |
|   | Ka.V. | tultúl | 'peck' |
| 16 | If.C. | qubút | 'lancing boil' |
|   | Ka.V. | qubút | 'cut open (body) for healing' |
| 17 | If.B. | qu:lin | 'act of rolling heavy object' |
|   | Ka.V. | qu:lin | 'roll' |
| 18 | If.B. | wigi:wig | 'shaking the head on horizontal plane' |
|   | Ka.V. | wigi:wig | 'shake' |

4.2.33.3    The following sets show forms which are identical; the meanings are similar:

| 1 | If.B. | qa:yak | 'rites performed to will through sorcery by stealing and imprisoning the soul' |
|---|---|---|---|
|   | Ka.V. | qa:yak | 'bewitch, make ill' |
| 2 | If.C. | duddu:li | (reduplication) 'cicada' |
|   | Ka.V. | du:li | 'cocoon; pupa' |
| 3 | If.B. | ha:baŋ | 'floodhead of water after rain' |
|   | Ka.V. | ha:baŋ | 'be submerged' |
| 4 | If.C. | hiná | 'there' |
|   | Ka.V. | hiná | 'here' |
| 5 | If.C. | hudhúd | 'epic, story' |
|   | Ka.V. | hudhúd | 'narrate' |
| 6 | If.B. | paldáŋ | 'beside' |
|   | Ka.V. | paldáŋ | 'put one's arm over someone's shoulder' |
| 7 | If.C. | ta:maŋ | 'stop to listen to baying of dogs' |
|   | Ka.V. | ta:maŋ | 'look' |
| 8 | If.C. | waŋwáŋ | 'river' |
|   | Ka.V. | waŋwáŋ | 'go down river' |

4.2.33.4    The following sets show forms with different stress placement; the meanings are similar:

| 1 | If.C. | luhúd | 'stockade' |
|---|---|---|---|
|   | Ka.V. | lu:hud | 'wooden fence around yard' |
| 2 | If.C. | tutút | 'quarrel' |
|   | Ka.V. | tu:tut | 'rave in violent language' |

4.2.33.5    The following sets show forms with different segmental phonemes; the meanings are identical:

| 1 | If.C. | baqbáq | 'frog' |
|---|---|---|---|
|   | Ka.V. | bakbak | 'frog' |
| 2 | If.C. | bata:wel | 'carry on pole' |
|   | Ka.V. | bata:wi | 'carry on pole' [55] |
| 3 | If.C. | da:let | 'eel' |
|   | Ka.V. | dalít | 'eel' |
| 4 | If.C. | da:qig | 'bolt of door' |
|   | Ka.V. | da:kig | 'bolt of door' |

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[55] The loss of final -l in this Ka. form is unexplained.

| 5  | If.C.  | getóq   | 'slash'                                 |
|    | Ka.V.  | giték   | 'slash'                                 |
| 6  | If.B.  | gohgóh  | 'chop (camote leaves)'                  |
|    | Ka.V.  | gehgéh  | 'chop (camote leaves)'                  |
| 7  | If.C.  | gohób   | 'scorched'                              |
|    | Ka.V.  | gehéb   | 'scorched'                              |
| 8  | If.C.  | hiqhíq  | 'catch lice'                            |
|    | Ka.V.  | hikhík  | 'catch lice'                            |
| 9  | If.C.  | hodóm   | 'night'                                 |
|    | Ka.V.  | hedém   | 'night'                                 |
| 10 | If.C.  | ka:dap  | 'creep (e.g. snake)'                    |
|    | Ka.V.  | qa:dap  | 'creep (e.g. snake)'                    |
| 11 | If.C.  | ke:leŋ  | 'kind of bird'                          |
|    | Ka.V.  | ki:liŋ  | 'kind of bird'                          |
| 12 | If.C.  | leŋón   | 'snare-trap'                            |
|    | Ka.V.  | li:ŋen  | 'snare-trap'                            |
| 13 | If.C.  | li:qub  | 'surround'                              |
|    | Ka.V.  | li:kub  | 'surround'                              |
| 14 | If.C.  | lobóŋ   | 'flood'                                 |
|    | Ka.V.  | lebéŋ   | 'flood'                                 |
| 15 | If.B.  | lomlóm  | 'continuous rain'                       |
|    | Ka.V.  | lemlém  | 'continuous rain'                       |
| 16 | If.C.  | lotóp   | 'dive'                                  |
|    | Ka.V.  | letép   | 'dive'                                  |
| 17 | If.C.  | pa:duŋ  | 'similar'                               |
|    | Ka.V.  | padduŋ  | 'similar' [56]                          |
| 18 | If.C.  | punnóg  | 'sausage' [57]                          |
|    | Ka.V.  | punég   | 'sausage'                               |
| 19 | If.C.  | qiggíd  | 'left hand' [58]                        |
|    | Ka.V.  | qigíd   | 'left hand'                             |
| 20 | If.C.  | qobán   | 'blanket for carrying baby on back'     |
|    | Ka.V.  | qebán   | 'blanket for carrying baby on back'     |
| 21 | If.C.  | qupqúp  | 'human skin'                            |
|    | Ka.V.  | kupkúp  | 'human skin'                            |
| 22 | If.C.  | tamél   | 'cheek'                                 |
|    | Ka.V.  | tamíl   | 'cheek'                                 |

[56] Another instance of what was mentioned in note 49 above.

[57] The geminated *n* of this If. form is unexplained.

[58] The geminated *g* of this If. form is unexplained.

23    If.C.    ti:qid    'ascend'
      Ka.V.    ti:kid    'ascend'

24    If.B.    qu:doŋ    'straw of palay'
      Ka.V.    qu:deŋ    'straw of palay'

25    If.C.    quŋót     'node, joint'
      Ka.V.    quŋét     'node, joint'

26    If.C.    wanóh     'G-string'
      Ka.V.    wanéh     'G-string'

4.2.33.6    The following sets show forms with different segmental pho-
nemes; the meanings are near-identical:

1    If.C.    qa:wel    'kind of gift'
     Ka.V.    qa:wil    'gift'

2    If.C.    dopág     'lying on back'
     Ka.V.    depág     'lie face upwards'

3    If.C.    qe:teŋ    'pinch with jerk'
     Ka.V.    ki:tiŋ    'pinch'

4    If.C.    haggón    'border' [59]
     Ka.V.    hagqén    'flank, side'

5    If.C.    haqu:qu   'cobra'
     Ka.V.    haku:ku   'kind of snake'

6    If.C.    hopdáq    'whip'
     Ka.V.    hepdák    'strike'

7    If.C.    hu:qup    'lid of vessel'
     Ka.V.    hu:kup    'cover (basket)'

8    If.C.    leŋléŋ    'short memory'
     Ka.V.    liŋlíŋ    'forget'

9    If.C.    logáb     'conflagration'
     Ka.V.    legáb     'set on fire'

10   If.C.    luqát     'open'
     Ka.V.    lu:kat    'open box or can'

11   If.C.    luqbúb    'lying on belly'
     Ka.V.    lukbúb    'lie face downward'

12   If.C.    qohóq     'plant beans'
     Ka.V.    qehék     'sow'

13   If.B.    qokák     'begin a journey'
     Ka.V.    qekák     'go away'

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[59] The If. forms shows a geminated *g* which may be the result of assimilation.

| | | | |
|---|---|---|---|
| 14 | If.C. | qotóṇ | 'mature pig' |
| | Ka.V. | qe:teṇ | 'adult, (men, animals)' |
| 15 | If.C. | pe:net | 'wild raspberry' |
| | Ka.V. | pi:nit | 'rubus rosaefolius Sm.' |
| 16 | If.B. | puli:pul | 'act of crumbling' |
| | Ka.V. | puli:pu | 'crumple' |
| 17 | If.C. | tampék | 'pat' |
| | Ka.V. | tampík | 'slap' |
| 18 | If.C. | qugqúq | 'rap, knock' |
| | Ka.V. | kegkég | 'deal a blow with fist' |
| 19 | If.C. | wahét | 'act of throwing' |
| | Ka.V. | wahít | 'throw away' |

4.2.33.7 The following sets show forms with different segmental phonemes; the meanings are similar:

| | | | |
|---|---|---|---|
| 1 | If.C. | qakapu:yan | 'left hand side' |
| | Ka.V. | kakapu:yan | 'ominous' |
| 2 | If.C. | qanduqqe | 'long' [60] |
| | Ka.V. | qandu:key | 'tall' |
| 3 | If.C. | qapyá | 'witchcraft' |
| | Ka.V. | kapyá | 'pray to propitiate' |
| 4 | If.C. | qepéṇ | 'leaning on elbow' |
| | Ka.V. | qipíṇ | 'lean (one's head)' |
| 5 | If.C. | ga:deṇ | 'brass wire' |
| | Ka.V. | ga:diṇ | 'copper bracelet' |
| 6 | If.C. | halu:pe | 'class of harassing deities' |
| | Ka.V. | halu:pey | 'invoke evil spirits' |
| 7 | If.C. | ha:pet | 'word' |
| | Ka.V. | ha:pit | 'recount' |
| 8 | If.C. | huyyam\|an | 'oversleep' |
| | Ka.V. | huy:am | 'fallen asleep' |
| 9 | If.C. | qi:hiq | 'bold' |
| | Ka.V. | qi:hik | 'cruel' |
| 10 | If.C. | qimqím | 'reluctant chewing' |
| | Ka.V. | qimi:im | 'close mouth' [61] |

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[60] The geminated *q* of this form is unexplained.

[61] This Ka. form has an extra -i-, which is unexplained.

| 11 | If.B. | kuli:kul | 'thrust and twist' |
| | Ka.V. | kuli:ku | 'tortuous' [62] |
| 12 | If.C. | loqtot | 'at last' |
| | Ka.V. | lektát | 'all at once' [63] |
| 13 | If.C. | pa:ŋet | 'blindness in one eye' |
| | Ka.V. | paŋít | 'squint eyed' |
| 14 | If.C. | tobóŋ | 'spit for grilled meat' |
| | Ka.V. | tebéŋ | 'pierce' |
| 15 | If.B. | tu:de | 'conduit for water' |
| | Ka.V. | tu:dey | 'water spout' |
| 16 | If.C. | qu:gab | 'night' |
| | Ka.V. | ku:gab | 'last night' |
| 17 | If.C. | ya:pet | 'thin cloth' |
| | Ka.V. | ya:pit | 'thin' |

4.2.33.8   The following sets show forms with unexplained *o* for *u* in If.; the meanings are identical or similar:

| 1 | If.C. | na|luqlúq | 'eaten by woodweavil' |
| | Ka.V. | na|leklék | 'worm eaten (wood)' |
| 2 | If.C. | mun-, nun- | (present, past prefix) [64] |
| | Ka.V. | men-, nen- | (present, past prefix) |
| 3 | If.C. | putléŋ | 'half' |
| | Ka.V. | petláŋ | 'half' [65] |
| 4 | If.C. | to:ŋel | 'firewood' |
| | Ka.V. | tuŋí | 'to fuel' [66] |
| 5 | If.C. | topéŋ | 'stone wall' |
| | Ka.V. | tupíŋ | 'stone wall' |
| 6 | If.C. | quli:yat | 'roll the eyes' |
| | Ka.V. | keliát | 'not seeing easily' |

4.2.33.9   The following sets show forms which involve the unexplained loss of a glottal stop in medial position; the meanings are identical or near-identical:

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[62]  The loss of -l in this Ka. form is unexplained.

[63]  The *a* for *u* in the ultima of this form is unexplained.

[64]  Examples of this prefix are: If. mun|ha:pet 'say', nun|ha:pet 'said'; Ka. men|ha:pit 'recount', nen|ha:pit 'recounted'.

[65]  The Ka. form has an unexplained *a* in the ultima.

[66]  The Ka. form has an unexplained loss of -l.

| 1 | If.B. | hi:wat | 'dillydally' |
|---|---|---|---|
|   | Ka.V. | hiwqát | 'delay' |

| 2 | If.C. | tommáŋ | 'split' |
|---|---|---|---|
|   | Ka.V. | temqáŋ | 'split' |

| 3 | If.C. | maqqíd | 'there is not' |
|---|---|---|---|
|   | Ka.V. | maíd | 'there is not' |

4.2.34    Exclusively Shared by Il. and Ib.:

4.2.34.1    The following sets show identical forms and meanings:

| 1 | Il.V., | Ib.B. | qa:gal | 'shriek' |
|---|---|---|---|---|
| 2 | Il.V., | Ib.B. | bulí | 'lead' |
| 3 | Il.V., | Ib.B. | bubún | 'well (water)' |
| 4 | Il.V., | Ib.B. | da:yaw | 'honor' |
| 5 | Il.V., | Ib.B. | gabbú | 'wrestle' |
| 6 | Il.V., | Ib.B. | giddán | 'do something at same time (two people)' |
| 7 | Il.V., | Ib.B. | kannág | 'shore' |
| 8 | Il.V., | Ib.B. | la:bag | 'needleful of thread' |
| 9 | Il.V., | Ib.B. | mukú | 'confuse' |
| 10 | Il.V., | Ib.B. | pa:ra | 'pith' |

4.2.34.2    The following sets show forms with different stress placement; the meanings are identical:

| 1 | Il.V. | bu:lun | 'favorable wind' |
|---|---|---|---|
|   | Ib.B. | bulún | 'favorable wind' |

| 2 | Il.V. | bu:na | 'remnants' |
|---|---|---|---|
|   | Ib.B. | buná | 'remnants' |

| 3 | Il.V. | du:yug | 'coconut shell saucer' |
|---|---|---|---|
|   | Ib.B. | duyúg | 'coconut shell saucer' |

| 4 | Il.V. | latáw | 'float' |
|---|---|---|---|
|   | Ib.B. | la:taw | 'float' |

| 5 | Il.V. | lu:bay | 'earring' |
|---|---|---|---|
|   | Ib.B. | lubáy | 'earring' |

| 6 | Il.V. | ku:git | 'circumcise' |
|---|---|---|---|
|   | Ib.B. | kugít | 'circumcise' |

| 7 | Il.V. | ŋi:sit | 'black' |
|---|---|---|---|
|   | Ib.B. | ŋisít | 'black' |

4.2.34.3    The following set shows forms which are identical; the meanings are near-identical:

| Il.V. | qammú | 'know, recognize' |
|---|---|---|
| Ib.B. | qammú | 'wisdom, knowledge' |

4.2.34.4    The following sets show forms with different segmental pho-
nemes; the meanings are identical:

| 1 | Il.V. | ku:nem | 'cloudy' |
|---|-------|--------|----------|
|   | Ib.B. | kunám  | 'cloudy' |
| 2 | Il.V. | qulitég | 'uncle' |
|   | Ib.B. | qulitág | 'uncle' |

4.2.34.5    The following set shows forms with different stress placement;
the meanings are near-identical:

| Il.V. | qunég | 'enter; inside' |
|-------|-------|-----------------|
| Ib.B. | qu:nag | 'interior' |

4.2.35      Exclusively Shared by Il. and Ka.:

4.2.35.1    The following sets show identical forms and meanings:

| 1 | Il.V., | Ka.V. | qali:wid | 'old friend' |
|---|--------|-------|----------|--------------|
| 2 | Il.V., | Ka.V. | qa:pal | 'envy' |
| 3 | Il.V., | Ka.V. | qa:kak | 'goiter' |
| 4 | Il.V., | Ka.V. | qapqáp | 'cover' |
| 5 | Il.V., | Ka.V. | qa:tap | 'wild' |
| 6 | Il.V., | Ka.V. | qati:ŋaw | 'stray' |
| 7 | Il.V., | Ka.V. | baŋkíŋ | 'unmatched pair (gambling)' |
| 8 | Il.V., | Ka.V. | bayuŋu:buŋ | 'diarrhea' |
| 9 | Il.V., | Ka.V. | billít | 'species of rice' |
| 10 | Il.V., | Ka.V. | gawgáw | 'clean' |
| 11 | Il.V., | Ka.V. | gulgúl | 'wash(hands)' |
| 12 | Il.V., | Ka.V. | kaba:kab | 'dig up' |
| 13 | Il.V., | Ka.V. | kalu:lut | 'ferrule' |
| 14 | Il.V., | Ka.V. | kayabkáb | 'flap' |
| 15 | Il.V., | Ka.V. | kimát | 'lightning' |
| 16 | Il.V., | Ka.V. | la:lat | 'hide, skin' |
| 17 | Il.V., | Ka.V. | la:tak | 'wooden plate' |
| 18 | Il.V., | Ka.V. | liŋká | 'hoop of rattan' |
| 19 | Il.V., | Ka.V. | litúk | 'crack' |
| 20 | Il.V., | Ka.V. | lu:duk | 'pricked' |
| 21 | Il.V., | Ka.V. | maŋnáw | 'kind of bamboo' |
| 22 | Il.V., | Ka.V. | maya:may | 'abate' |
| 23 | Il.V., | Ka.V. | pali:leŋ | 'kind of fish' |
| 24 | Il.V., | Ka.V. | paŋúk | 'plague' |
| 25 | Il.V., | Ka.V. | patég | 'prize' |
| 26 | Il.V., | Ka.V. | pa:ti | 'believe' |
| 27 | Il.V., | Ka.V. | tabnáw | 'submerge' |
| 28 | Il.V., | Ka.V. | taŋgá | 'play pitch pennies' |
| 29 | Il.V., | Ka.V. | yawyáw | 'dilute' |

4.2.35.2   The following sets show forms which are identical; the meanings are near-identical:

| | | | |
|---|---|---|---|
| 1 | Il.V. | kadáy | 'knapsack' |
| | Ka.V. | kadáy | '*baŋew*-basket' |
| 2 | Il.V. | pamláy | 'simulate ignorance of something' |
| | Ka.V. | pamláy | 'pretense, pretext' |
| 3 | Il.V. | pi:law | 'guilt' |
| | Ka.V. | pi:law | 'reproach' |
| 4 | Il.V. | yukyúk | 'bend down at middle' |
| | Ka.V. | yukyúk | 'bend' |

4.2.35.3   The following sets show forms which are near-identical; the meanings are identical:

| | | | |
|---|---|---|---|
| 1 | Il.V. | qa:kas | 'gather' |
| | Ka.V. | qa:kah | 'gather' |
| 2 | Il.V. | qa:nus | 'endure' |
| | Ka.V. | qa:nuh | 'endure' |
| 3 | Il.V. | dayás | 'wash' |
| | Ka.V. | dayáh | 'wash' |
| 4 | Il.V. | duŋsú | 'strike against' |
| | Ka.V. | duŋhú | 'strike against' |
| 5 | Il.V. | laqés | 'tainted (fish, meat)' |
| | Ka.V. | laqéh | 'tainted (fish, meat)' |
| 6 | Il.V. | paslép | 'steel' |
| | Ka.V. | pahlép | 'steel' |
| 7 | Il.V. | pu:si | 'taken out of pod' |
| | Ka.V. | pu:hi | 'taken out of pod' |
| 8 | Il.V. | sa:gut | 'gift, donation' |
| | Ka.V. | ha:gut | 'gift, donation' |
| 9 | Il.V. | sagqút | 'cotton yarn' |
| | Ka.V. | hagqút | 'cotton yarn' |
| 10 | Il.V. | saldét | 'diligent' |
| | Ka.V. | haldét | 'diligent' |
| 11 | Il.V. | salia:si | 'kind of iron pot' |
| | Ka.V. | halia:hi | 'kind of iron pot' |
| 12 | Il.V. | sali:mat | 'lick lips, fingers etc.' |
| | Ka.V. | hali:mat | 'lick lips, fingers etc.' |
| 13 | Il.V. | sanúd | 'go backward' |
| | Ka.V. | hanúd | 'go backward' |

| 14 | Il.V. | saplíd | 'remove dust' |
| | Ka.V. | haplíd | 'remove dust' |
| 15 | Il.V. | suyát | 'pour out' |
| | Ka.V. | huyát | 'pour out' |
| 16 | Il.V. | su:bil | 'snout' |
| | Ka.V. | hu:bil | 'snout' |

4.2.35.4    The following sets show forms which are near-identical; the meanings are near-identical:

| 1 | Il.V. | baséŋ | 'wild ginger' |
| | Ka.V. | ba:heŋ | 'plant of ginger family' |
| 2 | Il.V. | lu:nas | 'worn out coin' |
| | Ka.V. | lu:nah | 'obliterated (coins)' |
| 3 | Il.V. | salikawkáw | 'walk around' |
| | Ka.V. | halikawkáw | 'form a circle' |

4.2.35.5    The following sets show forms which are identical; the meanings are similar:

| 1 | Il.V. | qaplít | 'flap' |
| | Ka.V. | qaplít | 'tap' |
| 2 | Il.V. | nay | 'here, there' |
| | Ka.V. | nay | 'this' |
| 3 | Il.V. | pula:kan | 'variety of rice' |
| | Ka.V. | pula:kan | 'variety of yellow corn' |
| 4 | Il.V. | ti:qit | 'a small bird' |
| | Ka.V. | ti:qit | 'chirp' |
| 5 | Il.V. | wadwád | 'plentiful' |
| | Ka.V. | wadwád | 'rich, opulent' |

4.2.35.6    The following sets show forms which are near-identical; the meanings are similar:

| 1 | Il.V. | qalupa:si | 'dry sheath of banana leaf' |
| | Ka.V. | qalupa:hi | 'dry banana bark' |
| 2 | Il.V. | pisúk | 'thrown, flung' |
| | Ka.V. | pihúk | 'plunge, thump' |
| 3 | Il.V. | sakláŋ | 'sue' |
| | Ka.V. | hakláŋ | 'indict' |
| 4 | Il.V. | salipsíp | 'trim (nodes of bamboo, etc.)' |
| | Ka.V. | haliphíp | 'blunt (edges of boards, etc.)' |

4.2.35.7    The following sets show forms with different stress placement; the meanings are identical:

  1   Il.V.     qa:pa      'quarrel; prohibit'
         Ka.V.    qapá       'forbid'
  2   Il.V.     baqú       'mouse'
         Ka.V.    ba:qu     'mouse'
  3   Il.V.     dika:lut   'variety of palay'
         Ka.V.    dikalút    'variety of palay'
  4   Il.V.     lupúy      'soft, tender'
         Ka.V.    lu:puy     'soft, tender'

4.2.35.8    The following set shows forms with different stress placement; the meanings are near-identical:

      Il.V.     pu:dut    'heat'

      Ka.V.    pudút    'choleric; passionate'

4.2.35.9    The following sets show forms with different segmental phonemes; the meanings are identical or near-identical:

  1   Il.V.     pandarás  'adze'
         Ka.V.    pandaláh  'adze'
  2   Il.V.     rakém     'reaper's knife'
         Ka.V.    lakém     'reaper's knife'
  3   Il.V.     raŋa:ya   'kind of square basket'
         Ka.V.    laŋa:ya   'kind of square basket'
  4   Il.V.     sagi:rad   'trail, drag'
         Ka.V.    hagi:lad   'trail, drag'
  5   Il.V.     turéd      'suffer'
         Ka.V.    tuléd      'suffer'
  6   Il.V.     turáy      'ruler'
         Ka.V.    tuláy      'higher official (government)'

4.2.36    Exclusively Shared by Ib. and Ka.:
  1   Ib.B.    da:pan    'mat'
         Ka.V.    depén     'pad (e.g. leaf in pot for cooking)'
  2   Ib.B.    ga:mit    'cloth, rag'
         Ka.V.    gamít     'kind of basket'

4.2.37    Exclusively Shared by Tg., Se., Hi., SL., Bk., Il., Ib., and If.:
      Tg.L.    qa:sud    'pound rice in succession'

Se.P.    qa:sud    'one of two people who work in succession'
Hi.Ka.   qa:sud    'one of two people who work in succession'
SL.R.    qa:sud    'help one another'
Bk.Li.   qa:sud    'help in pounding rice'
Il.V.    qasúd     'help one another in pounding rice'
Ib.B.    qatúd     'help pound rice'
If.C.    qahhúd    'accurate tempo as when two people pound rice' [67]

4.2.38     Exclusively Shared by Tg., Hi., SL., Bk., Il., Ib., If., and Ka.:

Tg.L.    baybáy    'shore'
Hi.Ka.   baybáy    'shore'
SL.R.    baybáy    'shore'
Bk.Li.   baybáy    'shore'
Il.V.    baybáy    'sea'
Ib.B.    be:bay    'sea' [68]
If.C.    baybay    'sea'
Ka.V.    baybay    'sea'

4.2.39     Exclusively Shared by Tg., Se., Hi., SL., Bk., Il., and Ka.:

Tg.L.    ba:yaq    'leave'
Se.P.    ba:yaq    'abandon'
Hi.P.    ba:yaq    'abandon'
SL.P.    ba:yaq    'abandon'
Bk.P.    ba:yaq    'abandon'
Il.P.    bayá      'abandon'
Ka.V.    ba:ya     'remnants'

4.2.40     Exclusively Shared by Tg., Se., Hi., SL., Bk., Il., and If.:

Tg.L.    lu:gaw    'rice boiled in much water'
Se.Ca.   lu:gaw    'rice boiled in much water'
Hi.Ka.   lu:gaw    'make rice porridge'
SL.R.    lu:gaw    'anything cooked in much water'
Bk.Li.   lu:gaw    'rice boiled with much water'
Il.V.    lu:gaw    'rice porridge'
If.C.    lu:gaw    'rice porridge'

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[67] The geminated *h* of this form is unexplained.

[68] Ib. -e- in the penult for -ay- is unexplained.

4.2.41    Exclusively Shared by Tg., Se., Hi., SL., Bk., and Il.:

4.2.41.1    The following sets show identical forms and meanings:

1   Tg.L., Se.Ca., Hi.Ka., SL.R., Bk.Li., Il.V.   pulá   'red'
2   Tg.L., Se.Ca., Hi.Ka., SL.R., Bk.Li., Il.V.   taga-  (prefix) [69]

4.2.41.2    The following set shows forms which are identical; the meanings are near-identical:

| | | |
|---|---|---|
| Tg.L. | na:nay | 'mother' |
| Se.Ca. | na:nay | 'mother' |
| Hi.Ka. | na:nay | 'mother' |
| SL.R. | na:nay | 'mother' |
| Bk.P. | na:nay | 'mother' |
| Il.P. | na:nay | 'affectionate term for mother' |

4.2.41.3    The following set shows forms with different stress placement; the meanings are similar:

| | | |
|---|---|---|
| Tg.L. | suqút | 'insert' |
| Se.P. | su:qut | 'penetrate' |
| Hi.P. | suqút | 'go deep into' |
| SL.P. | su:qut | 'go deep into' |
| Bk.P. | suqút | 'enter narrow place' |
| Il.P. | su:qut | 'insert' |

4.2.41.4    The following set shows forms with different segmental phonemes; the meanings are similar:

| | | |
|---|---|---|
| Tg.L. | ta:naw | 'view, sight' |
| Se.Ca. | tánqaw | 'look' |
| Hi.Ka. | tánqaw | 'look' |
| SL.R. | tánqaw | 'look' |
| Bk.Li. | taqnáw | 'look from afar' |
| Il.V. | tanqáw | 'look down' |

4.2.42    Exclusively Shared by Tg., Se., Hi., SL., Bk., and Ib.:

4.2.42.1    The following set shows identical forms and meanings:

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[69]  taga- (prefix indicating that what is conveyed by the base is the place of origin), e.g. Tg.L. taga|bataŋgas 'from Batangas', Se.Ca. taga|mani:la 'from Manila', Hi.Ka. taga|mani:la 'from Manila', SL.R. taga|ba:say 'from Basay', Bk.Li. taga|kipa:yu 'from Kipayo', Il.V. taga|mani:la 'from Manila'.

Tg.L., Se.P., Hi.P., SL.P., Bk.P., Ib.B. la:maŋ 'only'

4.2.42.2    The following sets show forms with different segmental pho-
nemes; the meanings are identical or similar:

1    Tg.L.    dulúg       'sit next to someone at table; approach'
     Se.Ca.   du:lug      'sleep side by side'
     Hi.Ka.   dulúg       'lie down side by side'
     SL.R.    du:rug      'sleep together'
     Bk.Li.   durúg       'sleep together'
     Ib.P.    durúg       'sleep together'

2    Tg.L.    sa:laq      'strain'
     Se.Ca.   sa:laq      'strain'
     Hi.Ka.   sa:laq      'strain'
     SL.R.    sa:raq      'strain'
     Bk.Li.   sa:raq      'strain'
     Ib.B.    ta:ra       'strain'

4.2.43    Exclusively Shared by Tg., Se., Hi., SL., Bk., and Ka.:

1    Tg.L.    qa:nit      'skin'
     Se.P.    qa:nit      'skin'
     Hi.P.    qa:nit      'skin'
     SL.R.    qa:nit      'skin'
     Bk.P.    qa:nit      'skin'
     Ka.V.    qa:nit      'bark; skin (of *anes*)'

2    Tg.L.    ŋitŋít      'intense darkness'
     Se.P.    ŋítŋit      'dark'
     Hi.P.    ŋítŋit      'dark'
     SL.P.    ŋítŋit      'dark'
     Bk.P.    ŋítŋit      'dark'
     Ka.V.    ŋiti:ŋit    'dark' [70]

4.2.44    Exclusively Shared by Se., Hi., SL., Bk., Il., and Ib.:

     Se.P.    balát       'invertebrate'
     Hi.P.    balát       'species of invertebrate'
     SL.P.    balát       'invertebrate'
     Bk.P.    ba:lat      'invertebrate'
     Il.V.    balát       'kind of worm'
     Ib.      ba:lat      'kind of snake' [71]

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[70] The Ka. form has an extra -i-, which is unexplained.

[71] This is a Tuguegarao Ib. form.

4.2.45    Exclusively Shared by Se., Hi., SL., Il., Ib., and Ka.:

| Se.P. | bu:lus | 'revenge' |
|-------|--------|-----------|
| Hi.P. | bu:lus | 'revenge' |
| SL.P. | bu:lus | 'revenge' |
| Il.V. | ba:les | 'revenge' [72] |
| Ib.B. | ba:lot | 'remuneration' |
| Ka.V. | bulqús | 'revenge' |

4.2.46    Exclusively Shared by Tg., Hi., SL., Bk., and Il.:

| Tg.L. | ɲuyɲúy | 'cry long and peevishly' |
|-------|--------|--------------------------|
| Hi.Ka. | ŋúyŋuy | 'sigh, groan' |
| SL.R. | ŋúyŋuy | 'sigh, groan' |
| Bk.P. | ŋuyŋúy | 'cry in loud voice' |
| Il.V. | ŋuyŋúy | 'whimper importunately' |

4.2.47    Exclusively Shared by Tg., Hi., SL., Il., and Ib.:

| 1 | Tg.L. | qalís | 'remove; go away' |
|---|-------|-------|-------------------|
|   | Hi.Ka. | qalís | 'go away' |
|   | SL.R. | qa:lis | 'transfer to another place' |
|   | Il.P. | qa:lis | 'move; remove' |
|   | Ib.B. | qalít | 'move to another place' |
| 2 | Tg.L. | kupíq | 'fold' |
|   | Hi.P. | kupíq | 'fold' |
|   | SL.P. | ku:pi | 'be creased when folded' |
|   | Il.P. | kupí | 'fold' |
|   | Ib.B. | kupí | 'double up edges' |

4.2.48    Exclusively Shared by Tg., Se., Hi., SL., Il., and If.:

| Tg.L. | ha:buŋ | 'shed against rain, sun' |
|-------|--------|--------------------------|
| Hi.P. | ha:buŋ | 'shed against rain, sun' |
| SL.R. | ha:buŋ | 'shed against rain, sun' |
| Il.V. | qa:buŋ | 'hut' |
| If.C. | qa:buŋ | 'hut' |

4.2.49    Exclusively Shared by Tg., Se., Hi., SL., and Il.:

| 1 | Tg., | Se.Sa., | Hi.Ka., | SL.R., | Il.V. | bibíŋka | 'rice cake' |
|---|------|---------|---------|--------|-------|---------|-------------|
| 2 | Tg.L. | tuytúy | | | | 'earthern round short-necked jug' | |
|   | Se.P. | túytuy | | | | 'earthern jar used as container of tuba' | |

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[72] Il. has unexplained -a- for -u- in the penult; Ib. has -a- for -u- in the penult and -o- for -u- in the ultima; the consonant cluster in the Ka. form is unexplained.

| Hi.P. | túytuy | 'earthern round short-necked jug' |
| SL.R. | túytuy | 'kind of small earthern jar' |
| Il.V. | tuytúy | 'kind of cruet for wine, oil etc.' |

4.2.50     Exclusively Shared by Se., Hi., SL., Bk., and Il.:

| 1 | Se.P. | ka:big | 'paddle to right' |
| | Hi.P. | ka:big | 'paddle to right' |
| | SL.R. | kabíg | 'paddle to right' |
| | Bk.Li. | ka:big | 'paddle to change direction' |
| | Il.P. | ka:big | 'paddle to change direction' |

| 2 | Se.P. | ki:yaw | 'kind of bird' |
| | Hi.P. | kiyáw | 'kind of bird' |
| | SL.P. | ki:yaw | 'name of bird with yellow legs' |
| | Bk.P. | kiyáw | 'name of bird with yellow legs' |
| | Il.V. | kiyáw | 'kind of oriole' |

4.2.51     Exclusively Shared by Se., Hi., SL., Bk., and Ib.:

| 1 | Se.Ca. | dalág | 'yellow' |
| | Hi.Ka. | dalág | 'yellow' |
| | SL.R. | da:rag | 'fallen leaf becomes dry, yellow' |
| | Bk.P. | da:rag | 'yellow' |
| | Ib.P. | da:rag | 'yellow' |

| 2 | Se.Ca. | sugbá | 'roast' |
| | Hi.Ka. | súgba | 'roast' |
| | SL.R. | sugbá | 'roast' |
| | Bk.Li. | sugbá | 'put into fire' |
| | Ib. | tubbá | 'roast tubers' [73] |

4.2.52     Exclusively Shared by SL., Il., Ib., If., and Ka.:

| SL.P. | dutdut | 'hair (head)' |
| Il.V. | dutdút | 'hair (body)' |
| Ib.B. | duddút | 'hair (non-human)' |
| If.C. | dutdút | 'hair (body)' |
| Ka.V. | dutdút | 'hair (pubescent)' |

4.2.53     Exclusively Shared by Se., Hi., SL., If., and Ib.:

| Se.Ca. | gulgúl | 'cut in manner of sawing' [74] |
| Hi.Ka. | gulgúl | 'cut in manner of sawing' |

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[73]  This is a Tuguegarao Ib. form.

[74]  A proto-form *gelegel is implied; Se., Hi., SL. and Ib. show syncope of *e
in the penult.

SL.R.   gulgul      'cut to pieces (e.g. meat)'
If.C.   golo:gol    'saw'
Ib.B.   gaggál      'saw'

4.2.54    Exclusively Shared by Tg., SL., Bk., and Ib.:

Tg.L.   buntís      'pregnant'
SL.P.   búntis      'pregnant'
Bk.P.   buntís      'pregnant'
Ib.P.   bussíq      'pregnant'

4.2.55    Exclusively Shared by Tg., Se., Il., and Ib.:

Tg.L.   lu:saw      'melt; watery'
Se.P.   lusáw       'watery'
Il.P.   lu:saw      'watery'
Ib.P.   lu:saw      'thinness of liquid'

4.2.56    Exclusively Shared by Tg., Hi., Il., and Ib.:

Tg.L.   siqít       'thorn'
Hi.Ka.  siqít       'thorn'
Il.V.   siqít       'thorn'
Ib.B.   tít         'thorn' [75]

4.2.57    Exclusively Shared by Se., Hi., Bk., and Il.:

Se.P.   salugsúg    'pricked with tiny pointed object'
Hi.Ka.  salugsúg    'splinter under finger nail'
Bk.Li.  salugsúg    'splinter under finger nail'
Il.P.   salugsúg    'splinter under skin'

4.2.58    Exclusively Shared by Se., Hi., SL., and Il.:
4.2.58.1  The following set shows identical forms and meanings:

Se.P., Hi.P., SL.P., Il.P. sintá 'horse rising on hind legs'

4.2.58.2  The following set shows forms which are identical; the meanings are near-identical:

Se.P.   pu:li       'succeed'
Hi.P.   pu:li       'successor'
SL.P.   pu:li       'successor'
Il.P.   pu:li       'succession in office'

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[75] This Ib. form shows contraction of vowels.

4.2.58.3   The following set shows forms with different segmental pho-
nemes; the meanings are similar:

| | | |
|---|---|---|
| Se.Ca. | láwqay | 'indecent' |
| Hi.Ka. | láwqay | 'indecent' |
| SL.R. | láwqay | 'indecent' |
| Il.V. | la:way | 'go nude' |

4.2.59   Exclusively Shared by Se., Hi., SL., and Ib.:

| | | |
|---|---|---|
| Se.P. | tukú | 'post from ground to floor' [76] |
| Hi.P. | tukú | 'post from ground to floor' |
| SL.P. | tu:ku | 'post from ground to floor' |
| Ib.P. | tukú | 'post from ground to floor' |

4.2.60   Exclusively Shared by Tg., Hi., and Il.:

| | | |
|---|---|---|
| Tg.L. | dikín | 'roundled of braided rattan' |
| Hi.Ka. | dikín | 'ring of braided straw' |
| Il.V. | dikén | 'roundlet of cloth' |

4.2.61   Exclusively Shared by Hi., Bk., and Il.:

| | | |
|---|---|---|
| Hi.P. | dagáq | 'soil' |
| Bk.P. | dagáq | 'soil' |
| Il.V. | dagá | 'soil' |

4.2.62   Exclusively Shared by SL., Bk., and Il.:

| | | |
|---|---|---|
| SL.P. | su:luŋ | 'box' |
| Bk.P. | suluŋsu:luŋ | (repeated) 'small boxes' |
| Il.P. | su:luŋ | 'box' |

4.2.63   Exclusively Shared by SL., Bk. and Ib.:

| | | |
|---|---|---|
| SL.R. | ta:lad | 'plant sugarcane' |
| Bk.Li. | ta:lad | 'plant sugarcane' |
| Ib.B. | ta:lad | 'portion of sugarcane used for transplanting' |

4.2.64   Exclusively Shared by Tg., Bk., and Il.:

4.2.64.1   The following sets show identical forms and meanings:

| | | | | |
|---|---|---|---|---|
| 1 | Tg.L., | Bk.P., | Il.P. | bila:qu | 'round shallow basket' |
| 2 | Tg.L., | Bk.P., | Il.P. | daldál | 'gossip monger' |
| 3 | Tg.L., | Bk.P., | Il.P. | si:taw | 'string beans' |

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[76] This set reminds one of *tuŋku 'tripod', but the loss of the cluster is un-
explained.

4.2.64.2    The following set shows forms which are identical; the meanings are near-identical:

|        |        |                    |
|--------|--------|--------------------|
| Tg.L.  | lubúg  | 'submerge, sink'   |
| Bk.P.  | lubúg  | 'sink'             |
| Il.P.  | lubúg  | 'submerge'         |

4.2.65    Exclusively Shared by SL., Il., and Ib.:

|        |        |                  |
|--------|--------|------------------|
| SL.P.  | labá   | 'large basket' [77] |
| Il.P.  | labbá  | 'large basket'   |
| Ib.P.  | labbá  | 'large basket'   |

4.2.66      Exclusively Shared by Se., Hi., and Il.:

| 1 | Se.Ca., Hi.P., | Il.V. | qa:bug | 'drive away' |
|---|----------------|-------|--------|--------------|

| 2 | Se.P.  | da:wis | 'cape; promontory' |
|---|--------|--------|--------------------|
|   | Hi.P.  | da:wis | 'cape; promontory' |
|   | Il.V.  | da:wis | 'land projecting from land into river' |

4.2.67      Exclusively Shared by Tg., Il., and Ib.:

|        |        |                  |
|--------|--------|------------------|
| Tg.L.  | kilúq  | 'twisted' [78]   |
| Il.V.  | killú  | 'twisted'        |
| Ib.B.  | killú  | 'twisted'        |

4.2.68      Exclusively Shared by Tg., If., and Ka.:

|        |        |                |
|--------|--------|----------------|
| Tg.L.  | siŋút  | 'sniff'        |
| If.C.  | hoŋót  | 'snort' [79]   |
| Ka.V.  | huŋŋút | 'sniff'        |

4.2.69      Exclusively Shared by Bk., Il., and Ka.:

|        |        |                |
|--------|--------|----------------|
| Bk.P.  | sakdú  | 'draw water'   |
| Il.V.  | sakdú  | 'draw water'   |
| Ka.V.  | hakdú  | 'fetch water'  |

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[77]  The geminated *b* in the Il. and Ib. forms imply a proto-form *leba; the Il. and Ib. forms show assimilation of the vowel of the penult to the vowel of the ultima.

[78]  The geminated *l* in the Il. and Ib. forms imply *keluq; the -i- for -e- in the penult of the Il. form and the -i- for -a- in the penult of the Ib. form are unexplained.

[79]  The If. form has *o* for *u* in the ultima; the Ka. form shows assimilation of the vowel in the penult to the *u* vowel of the ultima. A proto-form *heŋut is implied by these cognates.

**4.2.70    Exclusively Shared by Hi. and Il.:**

| | | | |
|---|---|---|---|
| 1 | Hi.P., | Il.P. | takbá | 'sexual intercourse (animals)' |
| 2 | Hi.P., | Il.P. | tagtág | 'distribute' |
| 3 | Hi.P. | ga:mit | 'thing on credit' |
|   | Il.P. | ga:mit | 'entrust; deposit' |

**4.2.71    Exclusively Shared by Bk. and Il.:**

| | | | |
|---|---|---|---|
| 1 | Bk.P., | Il.P. | mukmúk | 'crumbs' |
| 2 | Bk.P., | Il.P. | yubyúb | 'sounds of fire' |
| 3 | Bk.P. | la:piq | 'foreleg' |
|   | IlV. | la:pi | 'thigh' |

**4.2.72    Exclusively Shared by Tg. and Il.:**

**4.2.72.1    The following sets show identical forms and meanings:**

| | | | |
|---|---|---|---|
| 1 | Tg.L., | Il.P. | ka:mut | 'scratch' |
| 2 | Tg.L., | Il.P. | lu:say | 'destroyed' |

**4.2.72.2    The following sets show forms with different stress placement; the meanings are identical:**

| | | | |
|---|---|---|---|
| 1 | Tg.L. | qalíw | 'amusement; consolation' |
|   | Il.V. | qa:liw | 'amusement; consolation' |
| 2 | Tg.L. | ka:bag | 'gas pain' |
|   | Il.P. | kabág | 'gas pain' |

**4.2.72.3    The following set shows forms with different segmental phonemes; the meanings are identical:**

| | | |
|---|---|---|
| Tg.L. | silsíl | 'stuff' |
| Il.P. | selsél | 'stuff' |

**4.2.72.4    The following set shows forms with different segmental phonemes; the meanings are near-identical:**

| | | |
|---|---|---|
| Tg.L. | ba:suq | 'rehearsal' |
| Il.P. | basú | 'rehearsal for a kind of game' |

**4.3    LEXICAL EVIDENCE FOR SUBGROUPING**

**4.3.1**    The exclusively shared cognate vocabulary items may now be tabulated as follows:

| | | *Identicals* Id.-Near Id. | *Total* | *Non-Identicals* | *Total* |
|---|---|---|---|---|---|
| 4.2.2 | Se.Hi.SL. | (45—13) | 58 | 42 | 100 |
| 4.2.3 | Se.Hi. | (34—2) | 36 | 11 | 47 |
| 4.2.4 | Hi.SL. | (18—2) | 20 | 13 | 33 |
| 4.2.5 | Se.SL. | (18—2) | 20 | 8 | 28 |
| 4.2.6 | Tg.Se.Hi.SL.Bk. | (13—10) | 3 | 55 | 78 |
| 4.2.7 | Tg.Se.Hi.Bk. | (1—1) | 2 | 5 | 7 |
| 4.2.8 | Tg.Hi.SL.Bk. | (4—0) | 4 | 5 | 9 |
| 4.2.9 | Tg.Se.SL.Bk. | (0—0) | 0 | 1 | 1 |
| 4.2.10 | Tg.Hi.Bk. | (1—1) | 2 | 6 | 8 |
| 4.2.11 | Tg.SL.Bk. | (4—0) | 4 | 2 | 6 |
| 4.2.12 | Tg.Se.Bk. | (0—0) | 0 | 2 | 2 |
| 4.2.13 | Tg.Se.Hi.SL. | (5—0) | 5 | 16 | 21 |
| 4.2.14 | Tg.Se.Hi. | (1—0) | 1 | 5 | 6 |
| 4.2.15 | Tg.Se.SL. | (1—0) | 1 | 1 | 2 |
| 4.2.16 | Tg.Hi.SL. | (4—0) | 4 | 8 | 12 |
| 4.2.17 | Tg.Hi. | (9—1) | 10 | 5 | 15 |
| 4.2.18 | Tg.SL. | (4—0) | 4 | 1 | 5 |
| 4.2.19 | Tg.Se. | (1—0) | 1 | 0 | 1 |
| 4.2.20 | Se.Hi.SL.Bk. | (19—7) | 26 | 36 | 62 |
| 4.2.21 | Se.Hi.Bk. | (9—0) | 9 | 4 | 13 |
| 4.2.22 | Se.SL.Bk. | (3—1) | 4 | 7 | 11 |
| 4.2.23 | Hi.SL.Bk. | (4—1) | 5 | 15 | 20 |
| 4.2.24 | Hi.Bk. | (8—0) | 8 | 6 | 14 |
| 4.2.25 | SL.Bk. | (7—0) | 7 | 3 | 10 |
| 4.2.26 | Se.Bk. | (2—1) | 3 | 0 | 3 |
| 4.2.27 | Tg.Bk. | (8—1) | 9 | 8 | 17 |
| 4.2.28 | Il.Ib.If.Ka. | (0—0) | 0 | 11 | 11 |
| 4.2.29 | Il.If.Ka. | (2—7) | 9 | 10 | 19 |
| 4.2.30 | Il.Ib.Ka. | (0—0) | 0 | 10 | 10 |
| 4.2.31 | Il.Ib.If. | (0—0) | 0 | 1 | 1 |
| 4.2.32 | Ib.If.Ka. | (0—0) | 0 | 4 | 4 |
| 4.2.33 | If.Ka. | (13—18) | 31 | 81 | 112 |
| 4.2.34 | Il.Ib. | (10—0) | 10 | 11 | 21 |
| 4.2.35 | Il.Ka. | (29—23) | 52 | 20 | 72 |
| 4.2.36 | Ib.Ka. | (0—0) | 0 | 2 | 2 |
| 4.2.37 | Tg.Se.Hi.SL.Bk.Il.Ib.If. | (0—0) | 0 | 1 | 1 |
| 4.2.38 | Tg.Hi.SL.Bk.Il.Ib.If.Ka. | (0—0) | 0 | 1 | 1 |
| 4.2.39 | Tg.Se.Hi.SL.Bk.Il.Ka. | (0—0) | 0 | 1 | 1 |
| 4.2.40 | Tg.Se.Hi.SL.Bk.Il.If. | (0—0) | 0 | 1 | 1 |
| 4.2.41 | Tg.Se.Hi.SL.Bk.Il. | (2—1) | 3 | 2 | 5 |
| 4.2.42 | Tg.Se.Hi.SL.Bk.Ib. | (1—0) | 1 | 2 | 3 |

| | | Identicals<br>Id.-Near Id. | Total | Non-<br>Identicals | Total |
|---|---|---|---|---|---|
| 4.2.43 | Tg.Se.Hi.SL.Bk.Ka. | (0—0) | 0 | 2 | 2 |
| 4.2.44 | Se.Hi.SL.Bk.Il.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.45 | Se.Hi.SL.Il.Ib.Ka. | (0—0) | 0 | 1 | 1 |
| 4.2.46 | Tg.Hi.SL.Bk.Il. | (0—0) | 0 | 1 | 1 |
| 4.2.47 | Tg.Hi.SL.Il.Ib. | (0—0) | 0 | 2 | 2 |
| 4.2.48 | Tg.Se.Hi.SL.Il.If. | (0—0) | 0 | 1 | 1 |
| 4.2.49 | Tg.Se.Hi.SL.Il. | (1—0) | 1 | 1 | 2 |
| 4.2.50 | Se.Hi.SL.Bk.Il. | (0—0) | 0 | 2 | 2 |
| 4.2.51 | Se.Hi.SL.Bk.Ib. | (0—0) | 0 | 2 | 2 |
| 4.2.52 | SL.Il.Ib.If.Ka. | (0—0) | 0 | 1 | 1 |
| 4.2.53 | Se.Hi.SL.If.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.54 | Tg.SL.Bk.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.55 | Tg.Se.Il.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.56 | Tg.Hi.Il.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.57 | Se.Hi.Bk.Il. | (0—0) | 0 | 1 | 1 |
| 4.2.58 | Se.Hi.SL.Il. | (1—1) | 2 | 1 | 3 |
| 4.2.59 | Se.Hi.SL.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.60 | Tg.Hi.Il. | (0—0) | 0 | 1 | 1 |
| 4.2.61 | Hi.Bk.Il. | (0—0) | 0 | 1 | 1 |
| 4.2.62 | SL.Bk.Il. | (0—0) | 0 | 1 | 1 |
| 4.2.63 | SL.Bk.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.64 | Tg.Bk.Il. | (3—1) | 4 | 0 | 4 |
| 4.2.65 | SL.Il.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.66 | Se.Hi.Il. | (1—0) | 1 | 1 | 2 |
| 4.2.67 | Tg.Il.Ib. | (0—0) | 0 | 1 | 1 |
| 4.2.68 | Tg.If.Ka. | (0—0) | 0 | 1 | 1 |
| 4.2.69 | Bk.Il.Ka. | (0—1) | 1 | 0 | 1 |
| 4.2.70 | Hi.Il. | (2—0) | 2 | 1 | 3 |
| 4.2.71 | Bk.Il. | (2—0) | 2 | 1 | 3 |
| 4.2.72 | Tg.Il. | (2—0) | 2 | 4 | 6 |

# V. CONCLUSION

**5.1**     The various exclusively shared features which were considered as probable innovations in the sections on phonology, morphology, and lexicon indicate the following subgrouping relationships between the nine Philippine languages under study:
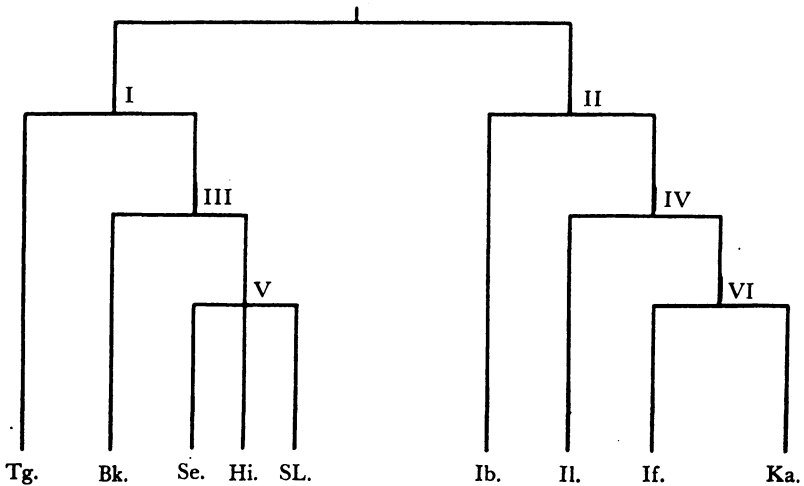


*Figure* 4

**5.2**     The evidence for the subgrouping given above is as follows:

**5.2.1**     The distinction between subgroups I and II is based on:

a) the fact that the exclusively shared features ESLF's shared exclusively by members of one subgroup with the members of the other sub-group are few, whereas the ESLF's shared by members of one subgroup within the subgroup are many;

b) the following ESLF's:

**5.2.1.1**     for subgroup I:

a) phonological        g, $R_1$, $R_2$, $R_3$, $R_4 > g$     2.3.3.4     (no. 3)

b) morphological    *qikaDewha            3.5.1    (no. 4)

                          Aspect-Mode System    3.5.1    (no. 9)

c) lexical          Tg.-Se.-Hi.-SL.-Bk. [78]    4.2.6


5.2.1.2    for subgroup II:

a) phonological     g, j > g              2.3.3.4    (no. 5)
b) morphological    *siqaken             3.5.1    (no. 5)

                          Free Possessives     3.5.1    (no. 8)

c) lexical          Il.-Ib.-If.-Ka. [11]    4.2.28


5.2.2    Subgroup III is indicated by the following ESLF's:

a) phonological     u, e > -u            2.3.3.4    (no. 2)
b) lexical          Se.-Hi.-SL.-Bk. [62]    4.2.20


5.2.3    Subgroup IV is indicated by the following ESLF's:

a) phonological     g, $R_3$, j > -g     2.3.3.4    (no. 7)

                          d, D > -d-           2.3.3.4    (no. 10)

                          metathesis of *t and *s    2.3.3.4    (no. 14)

b) morphological    *siqika              3.5.1    (no. 6)

                          *Da plural forms     3.5.1    (no. 7)

c) lexical          Il.-If.-Ka. [19]     4.2.29


5.2.4    Subgrouping V is indicated by the following ESLF's:

a) phonological     u, e > u             2.3.3.4    (no. 1)
b) morphological    *napuluq             3.5.1    (no. 2)

                          *kaDewha:qan         3.5.1    (no. 3)

c) lexical          Se.-Hi.-SL. [99]     4.2.2.


5.2.5    Subgrouping VI is indicated by the following ESLF's:

a) phonological     $R_1$, r, -j- > l    2.3.3.4    (no. 13)
b) morphological    *sinpuluq            3.5.1    (no. 1)
c) lexical          If.-Ka. [112]        4.2.33


5.3    Subgroup I may now be called "Tagalic Subgroup"; subgroup II, "Ibanag Subgroup"; subgroup III, "Bicol Subgroup"; subgroup IV, "Ilocano Subgroup"; subgroup V, "Bisayan Subgroup"; subgroup VI, "Ifugao Subgroup".

5.3.1      Of these six subgroups, the following are based on rather strong evidence: I, II, IV, V, and VI. Subgroup III is based on rather weak evidence. The alternative is to set up Bicol on a correlative position together with Tagalog and the Bisayan languages.

5.3.2      An alternate subgrouping within subgroup V is to further subgroup Cebuano with Hiligaynon, against Samar-Leyte. This would be based on 47 exclusively shared lexical items, as against Hi.-SL. [33] and Se.-SL. [28]. It seems preferable not to subgroup the Bisayan languages further.

5.3.3      Within subgrouping II, an alternate subgrouping is to put Ib. on a correlative position with Ilocano and the Ifugao subgroup. Such a subgrouping, however, would be supported only by the following ESLF's:

a) phonological         g, j > g              2.3.3.4      (no. 4)
b) lexical              Il.-Ib. [21]          4.2.34

This evidence seems inadequate as a contraindication to the ESLF's which indicate that Ilocano should be subgrouped with Ifugao and Kankanay (5.2.3).

5.4        With regard to the lexical evidence for the subgrouping of the nine Philippine languages under study, some remarks seem called for:

5.4.1      First, the figures Se.-Hi.-SL. [99] and If.-Ka. [112] are very large compared with the other figures for the other language pairings. These numbers indicate that these languages enjoy a much closer relationship to one another than the relationships between the other members of the other subgroups. Perhaps these figures also indicate that these languages are actually "dialects" of one and the same language, rather than separate languages belonging to the same subgroup.

5.4.2      Second, it is surprising that the figure Tg.-Se.-Hi.-SL.-Bk. [78] is very much larger than Il.-Ib.-If.-Ka.[11]. This big difference may be due to two factors: a) the lexicons of the languages which belong to the Ibanag subgroup are smaller than those which belong to the Tagalic subgroup (see 4.1.3.1); b) the members of the Ibanag subgroup may have had a more remote period of common history than the period of common history of the members of the Tagalic subgroup.

5.4.2.1 It should be pointed out, however, that the relatively small size of the lexicons of Ifugao and Kankanay did not seem to make a difference in indicating the relative closeness of the relationship between these two languages (see 5.2.5).

5.4.3 Third, it is not surprising to find that the number of sets with identical forms and meanings are numerous for the following language pairings: Se.-Hi.-SL. [57], Se.-Hi. [36], Se.-SL. [20], and If.-Ka. [31]. The reason is that: a) the Bisayan languages have identical phonological structures as well as the Ifugao languages; b) the relationship between the Bisayan languages and between the Ifugao languages is perhaps that of dialects of the same language (see 5.4.1).

5.4.3.1 However, it is surprising to find that the number of sets with identical forms and meanings is high for the following language pairings: Tg.-Se.-Hi.-SL.-Bk. [23], Se.-Hi.-SL.-Bk. [26], and Il.-Ka. [52]. These numbers may indicate that there is a large number of loanwords between these languages. The Il.-Ka. figure (namely [52]) represents 29 sets with identical forms and meanings, and 23 sets with near-identical forms and meanings. This may be due to: a) unlike phonological structure between these languages; b) a large number of loanwords between these two languages.

5.4.4 Fourth, if Ilocano, Ifugao and Kankanay belong to the same subgroup, it is surprising to find Il.-If. [0], but Il.-Ka. [72]. This is a serious problem and remains to be investigated further.

5.5 As may be seen in the evidence given above, there are probable exclusively shared innovations which indicate a subgrouping different from the one here given. However, the more numerous concentrations of these probable innovations seem to imply the subgrouping relationships given above.

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