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Bruno Latour in the Semiotic Turn

An Inquiry into the Networks of Meaning

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ISSN 2212-6368 ISSN 2212-6376 (electronic)
SpringerBriefs in Sociology
ISBN 978-3-031-57180-0 ISBN 978-3-031-57178-7 (eBook)
https://doi.org/10.1007/978-3-031-57178-7

This book is a translation of the original Italian edition "Inchiesta sulle reti di senso: Bruno Latour nella svolta semiotica" by Paolo Peverini, published by Meltemi Press srl in 2023.

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Acknowledgements

This book is the fruit of 5 years of research, the assumptions, perspectives and progress of which I have often had the opportunity to discuss with numerous colleagues. First of all, I want to thank Gianfranco Marrone for encouraging me to deepen the relationship, as complex as it is fruitful, between Bruno Latour's long-standing research on the paradoxes of modernity and semiotics. Isabella Pezzini generously accepted the proposal to publish the Italian version of this work in Meltemi's Biblioteca/Semiotica series, promoting a constant dialogue on the potential but also on the difficulties that mark the dialectic between the Latourian project and contemporary semiotic research. Antonio Perri and Riccardo Finocchi have shared with me, on several occasions, the interest in analysing the emerging scenario of "a new society of smart objects", feeding questions and ideas on the prospects of a reflection on the meaning at stake in increasingly complex and extended associations between humans and non-humans.

The opportunities for comparison with Dario Mangano and Ilaria Ventura Bordenca have been useful and stimulating to deepen perspectives of reflection, areas of analysis and research potential. Thanks to Megan Foster for the revision of this translation and to LUISS University for supporting the publication of this book.

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Chapter 1 Introduction



1

Classifying knowledge always inevitably implies the opportunity to exercise power. In an era where academia is increasingly anchored to a distinction between human and social sciences, to a rigid separation between disciplines presumed to safeguard their relevance, it is no small matter to recognize that there are still scholars whose work systematically eludes a fixed placement, sometimes ending up challenging a series of conventions that are anything but given or harmless. This is certainly the case for a great intellectual like Bruno Latour, forced to grapple with the reactions provoked by his body of research—so decidedly mutable and situated at the intersection of traditionally distinct disciplinary fields such as sociology, philosophy, anthropology, semiotics—to the point of resorting to the autobiographical form to describe the trajectory of an intellectual adventure made of encounters, deviations, recoveries, and circular paths.

When readers fail to understand why I have continually changed fields, and when they do not see the overall logic of my research—which leads them to look for my books in different aisles of bookstores (if they find them, that is, if they look for them!)—their comments amuse me, for I know of no other author who has so stubbornly pursued the same research project for twenty-five years, day after day, while filling up the same files in response to the same sets of questions (Latour, 2013: 2)

The rhetoric of scientific discourse, the environmental crisis, ecological thinking, the paradoxes of a modernity that incessantly produces hybrids to which it stubbornly refuses to recognize roles and rights, the need to overcome the anthropocentric prejudice that separates subjects and objects in a contemporaneity in which artifacts take up an ever-increasing space in our lives, making decisions for us and about us (just think of the advent of artificial intelligence) inevitably outline an intellectual path as original as it is challenging, multifaceted, certainly, but far from lacking a consistent logic of research. At the foundation of an "unusual form of philosophical anthropology", developed to investigate the aporias of a modernity that still stubbornly separate nature and culture, there is in fact a constant perspective of investigation, marked by the inevitably heated dialogue between human and social sciences, by the ability to tackle complex phenomena by rigorously and

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lucidly selecting and using notions and perspectives that common sense would consider irreconcilable, providing an analytical perspective that has often proved to be well ahead of its time. Consider the unprecedented choice of analysing, over 40 years ago (1977), together with the well-known semiologist Paolo Fabbri, the relationship between scientific discourse and power, employing the theory of literature in an innovative way showing how a laboratory experiment and its academic report are an agonistic terrain, the space of a confrontation between multiple actors.

Or the resolution in the choice to combine phenomenological ethnomethodology (Garfinkel) and structural semiotics (Greimas) to meticulously describe the tangle of scientists, instruments, institutions, funding, companies, politics at work in the laboratories on the forefront of scientific innovation. How then to deal "with a timeless intellectual, in the double sense of the term, both of another time and no time at all: scholar, sociologist, semiologist, philosopher, but above all inflexible analyst of our current socio-cultural condition, of the connections as deadly as they are cunning between science and politics in our so-called modernity" (my translation; Marrone, 2022)? Anyone who wants to engage in the near future in a philological project on his work will have to deal with a mountain of volumes, articles, contributions, interviews on multiple but inevitably intertwined themes.¹

This book, therefore, cannot and does not claim to be a philological work on the scholar who has contributed to defining and popularizing—in fields from sociology of science to management studies, from marketing to political science—the famous actor-network theory. This work rather arises from the need to highlight the relevance of an unbroken link with the semiotic perspective on social phenomena, trying to identify, connect and relaunch the reasons for a dialogue as heated as it is fruitful and yet still today, after many years, apparently little recognized, primarily in the field of social sciences. A kind of "removal" that appears even more curious and let's say, suspicious, if we consider the various occasions on which Latour has explicitly recognized the importance of semiotics in the development of his research path. How is it possible, despite a personal history that sees a young Latour attending Greimas' semiotics seminar in Paris together with a scientist with an equally original profile like Françoise Bastide, that the fruitful relationship with semiotics has so far only sporadically been recognized in the numerous and multidisciplinary contributions that take shape from his work, primarily within the perimeter of sociological studies?

How can we not recognize the fruitful bond of mutual esteem with Paolo Fabbri, co-author of the seminal article on the rhetoric of scientific discourse, cited in the opening? A contribution that today, during a pandemic, appears even premonitory, if we consider the logics of conflicts and negotiations on which the intertwining of science, economics, politics, information system has become manifest? The hypothesis from which this book starts is that the resistance to recognize and value the reasons and opportunities of this bond is the result of a double, presumed "outdatedness". On the one hand, that of a discipline, structuralist-oriented

¹ See the website of Bruno Latour, a real archive of all his work: http://www.bruno-latour.fr/.

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semiotics, whose destiny, rather singular, has been to see the key concepts of its theoretical framework "overflow", "circulate", often successfully, in the social sciences "without citing its genealogy, without recognizing the paternity of those who put them into circulation" (my trans.; Fabbri, 2021a: 34). On the other hand, that of a decidedly original scholar, inclined to explore social phenomena with a multiperspective approach and to extend the scope of some key notions of the study of signification beyond the consolidated forms of narrative.

Despite Latour himself having repeatedly highlighted the role of semiotics in the development of the actor-network theory and his personal investigation into the paradoxes of modernity,² recognizing the decisive role played by notions such as that of *actant*, *actor* and *enunciation*, finding support in the interest shown by Paolo Fabbri (2023, 2021b) in the study of the inextricable relationships between humans and artefacts, the contribution of semiotics is still scarcely recognized in the social sciences. A proof of this attitude, as deeply rooted as it is ambiguous, is the tendency to consider at most the study of signification as a "toolbox" for actor-network theory, ignoring or pretending not to recognize the link between a non-anthropomorphic theory of social action and structuralist-oriented semiotics.³

The situation appears somewhat different in the field of semiotic studies, where, if on the one hand in recent years, parallel to the expansion of the field of analysis of social phenomena, there have been multiplied signs of a renewed interest in Latour's work,⁴ on the other hand there remains a rather widespread resistance to recognize the legitimacy of the use, in his studies, of terms such as *actant*, *enunciation*, *hybrid*, a scepticism that manifests the fear of reducing the theoretical relevance of key notions of the discipline. Thus, though the original critique of

²See this passage (Latour 2012: 291) in which Latour unequivocally emphasises the strategic role played by structural semiotics in defining his research path: "I still recall my admiration when Fabbri [...] picked up a text that had emerged from the lab machinery—a text full of diagrams and chemical formulas concerning the discovery of a neuropeptide, the soon to be well-known ThyrotropinReleasing Factor (TRF)—and calmly set out to produce a Greimasian analysis of it, as if he were dealing with a fairy tale (Latour & Fabbri, 1977). In Paolo's capable hands, the varied figuration of the actors was no longer to be confused with the underlying detection of the actants. I suddenly understood that the nonhuman characters had their own adventures that we could track, so long as we abandoned the illusion that they were ontologically different from the human characters. The only thing that counted was their agency, their power to act, and the diverse figurations they were given. A world opened up then that I have not finished exploring and that lent itself admirably, I have to say, to the principles of a comparative anthropology".

³An exception is the work of Gerard de Vries (2016) who, however, while recognizing the importance of semiotic theory in the development of Latour's work, does not mention the influence exerted by Paolo Fabbri and Françoise Bastide in the development of the scientific discourse analysis project.

⁴See the valuable audiovisual document of the Séminaire Sémiotique held at the Université Paris IV - La Sorbonne on 7 May 2014 with the dialogue between Paolo Fabbri and Bruno Latour. Particularly worthy of attention is Fabbri's perspective which, recalling the example of diplomacy, defines semiotics as a "discipline of translation", considering Latour, certainly not in a negative but on the contrary in a positive sense, as a "translator/traitor" of semiotics. The video is accessible on Paolo Fabbri's website at the following link: https://www.paolofabbri.it/video/bruno-latour-paolofabbri/.

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contemporaneity advanced by Latour has aroused increasing interest in the field of semiotics it has not failed to generate critical reactions. These often focus on a recourse to the theory of signification considered by some to be extemporaneous, or on the simplified use of central notions in the theoretical framework of the discipline, with the risk of impoverishing its complexity.⁵ In short, one might say Latour was not a sufficiently experienced semiologist to be considered a privileged interlocutor.

In the construction of this intricate scenario, one must recognize some not entirely foreign criticisms advanced over time and on several occasions by Bruno Latour himself against semiotics. These amount to a series of critiques that sometimes fail to account for a significant evolution of the discipline, both in terms of theory and methods for investigating meaning, retaining the image of a research field still anchored to an exclusively linguistic perspective on signification, stubbornly focused on the study of signs and the analysis of narrativity in its most consolidated forms, such as the literary text. Like the openly critical position according to which sociosemiotics would be a pleonasm, since the study of meaning can only be social, a perspective that fails to recognize a significant turn within the studies on signification. Or again, the criticism that semiotics is excessively textualist because it is centred on the model of the language considered unsuitable to account for the narrative dimension inherent in the functioning of the real world.

Misunderstanding, mutual distancing? It doesn't matter, as semioticians what concerns us is certainly not to venture into the reconstruction of individual motivations that can determine the choice to legitimately assume critical positions towards the perspective from which one decides to analyse social phenomena. Rather, we prefer to explore the interpretative path of a misalignment of trajectories in the exploration of meaning, a deviation that in some points reveals itself to be less marked than it appears at first sight, betting on a differentiation that does not so much affect the epistemological plane, but rather the methodological side. In short, between those who read Latour philosophically as a theorist of science, of relationalism, of 'flat ontology', of the Parliament of Things, and those who in the semiotic field still refuse to grasp the innovative, undoubtedly provocative, scope of his positions on the meaning at stake in the real world, we point to the presence of a further space for reflection, that of a never dormant dialectic with the study of signification, a dialogue that is anything but episodic, weak or marginal. In other words, if it is undeniable that semiotics has played a crucial role in shaping Latour' work, we aim to demonstrate the presence and the productivity of a reverse movement, concerning the relevance of Latour's work for contemporary semiotics. A body of work which is extremely valuable for advancing semiotic reflection on the way meaning is articulated and manifested in a contemporaneity increasingly marked by a multiplicity of relations between human and non-human actors, confirming itself as an opportunity for comparison and inspiration on a multiplicity of planes: epistemological,

⁵See in this regard Landowski's remarks on Latour's use of the metalanguage of semiotics in ***Demuru et al. (2023).

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theoretical, methodological-empirical. It is therefore in the open space between these two symmetrical perspectives that this book is situated, in the conviction that semiotics has not only played an important role in the famous Latourian inquiry into the networks of meaning at stake in contemporaneity, but can still sustain it, recollecting today the legacy of a timeless intellectual, that is, taking up the challenge of rethinking his own tools of investigation into meaning and opening up to a constructive confrontation, without which a real turning-point⁶ of the discipline seriously risks losing effectiveness.

With this goal, the volume opens with a first chapter dedicated to the beginnings of the dialogue with semiotics, a central phase in the start of Bruno Latour's scientific adventure, a period marked by the encounter with Greimas' semiotics, resulting in the highly innovative project of analysing the logics of manipulation and power underlying scientific discourse. Re-reading today the positions of Latour, Fabbri, and Bastide on the role played by languages (verbal certainly, but also visual, think of diagrams, tables, images of technical instruments) in the construction of argumentative and ultimately pragmatic effectiveness of frontier sciences, still causes astonishment. Not only for the originality of the scientific enterprise which, it is worth emphasizing, would not have been possible at all, except through an intense dialogue between different disciplines, but above all, given the evolution of knowledge and methodologies of analysis, for its timeliness. Just think of the time we all spent confronting the scientific discourse that, with the pandemic, definitively came out into the open, spilled well beyond the spaces that common sense assigns to professionals and specialists. What to say indeed about the unstoppable proliferation of technical jargon, scientific images, disputes centred on the competences deemed essential to account for the causes of a dramatic event, in short, about a politics of science and, at the same time, a science—virology—that has forcefully entered the political arena? Following the reflection on the morphology of scientific narrative, Latour's attitude to test semiotic theory against seemingly unconventional "objects", such as the scientific image, whose status raises anything but trivial questions, emerges from the beginning.

The second chapter aims to demonstrate how semiotics is deeply involved in the subsequent developments of Latour's research, starting from the common adherence to a relational and differential principle at the foundation of signification (meaning can only be given in relation) and the adoption of a non-anthropomorphic perspective on action. This position, indebted to the theory of narrativity, clearly shows how narrative roles can be distributed and circulate among a multitude of actors, human and non-human. Contrary to the position that minimizes the role of semiotics in the development of actor-network theory, in addition to the notion of actant, the centrality of the concept of "narrative program" is highlighted, used as a starting point to develop a theory of "action programs" according to which the meaning of social phenomena takes shape in the assembly between multiple actors,

⁶For a systematic reflection on the perspectives and challenges of the so-called semiotic turn see Fabbri (2023).

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whether they are human or non-human, endowed with materiality, like technical objects—even the most common ones like an automatic door—or abstract. The chapter also clearly reveals a point of friction between the radically networked perspective of actor-network theory, which conceives the social as an association of multifaceted entities that cannot be hierarchized in principle, and the perspective of Greimas' semiotics on signification, focused rather on a multiplicity of levels interconnected according to a logical criterion of relevance.

The third chapter focuses on the conceptual category that more than any other has been the subject of philosophical investigation by Latour, giving rise to a stimulating comparison for semiotic studies: enunciation. The questions from which Latour's reflection takes shape, as usual, come from the preliminary choice not to circumscribe the field of analysis, but instead to move from scientific practice to its account, from the fieldwork of scientists to its representations, in search of the trajectories of meaning. So: what do the diagrams and tables of a scientific article refer to? Isn't it inevitable to rely on an external referent as the only guarantee of their verifiability? And if this external referent exists, how is it possible to account for the seemingly insurmountable distance between the two ontological domains of language and nature? The innovative thesis is that there is no constitutive and insurmountable gap between things and signs, rather the link between nature and its representations is the result of a complex logic of mediation, where the conditions of possibility to be able to talk about nature must be sought in a series of interconnected translation operations, in a process of "circulation" of meaning that proceeds by small shifts, involving multiple entities. Following a team of scientists in the field thus shapes an original perspective on enunciation as mediation. Humans, instruments, examined material samples, and visualization devices are entities involved in a reversible process between that which is observed and its representation, whose salient feature is the ability to trace the entire chain of transformations, to keep track of all the steps taken to try to demonstrate a phenomenon. Gradually, the idea of enunciation as a process of delegation-mediation takes hold and consolidates, finding its most original expression in a small essay destined to arouse great interest in semiotic studies: Petite philosophie de l'énonciation (1999). In this work, Latour explicitly proposes to extend the reflection on the modes of production of meaning beyond the boundaries defined by Benveniste's linguistic theory and structuralist semiotic theory, carefully avoiding both the language system and the social context to instead explore a much wider territory, that of existence and the various ways in which it forms and manifests itself, in a journey that would have materialized with the publication of a famous work, Inquiry into Modes of Existence. An Anthropology of the Moderns (2013).

In the last chapter, finally, the perspective is reversed to make Latour the object of reflection by contemporary semiotics, with the aim of demonstrating the outcomes and fruitful research perspectives that have emerged and can still emerge from the examination of his work. Here, three major areas of research clearly emerge.

The first concerns the debate around an extended theory of enunciation, developed in parallel to the expansion of the phenomena of signification explored by contemporary semiotic research.

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A second direction starts from the overcoming of the nature/culture dichotomy and revolves around the rethinking of the relationship between semiotics and cultural anthropology, recognizing the need to investigate contemporary phenomena in light of notions such as *multinaturalism* and *internaturality*.

The third area finally takes shape from the urgency to deal with a "new society of objects", in which increasingly extensive and complex assemblages of humans and non-humans give shape to ever more pervasive devices, as clearly emerges from the growing diffusion of the Internet of Things and artificial intelligence in every-day life.

These research strands, which, taken individually, define a decidedly extensive field of analysis, also lend themselves to being explored in the set of their correlations, foreseeing very promising developments for a semiotics interested in putting the primacy of empiricism back at the centre of the study of social phenomena. As emerges, for example, if one dares to rethink common technological artifacts as presences that are as non-human as apparently "natural". Practicing, in short, a symmetric anthropology as solicited by Latour himself, an anthropological practice of everyday life capable of overcoming the anthropocentric prejudice still dominant in Western society.

A few years ago, for example, an interesting study commissioned by the non-profit association BookTrust, revealed that in the United Kingdom an increasing number of parents have taken up the habit of entrusting smart devices, increasingly widespread in the spaces of everyday life, with the reading of bedtime stories to their children. A behaviour that, significantly, was prefigured by the ad campaign launching Amazon Echo, a smart speaker, whose artificial intelligence helped a father entertain his preteen daughter, in the absence of the mother, by reading her a story, before turning off the lights responding to a simple voice command.

More recently, Rohit Prasad—Amazon's vice-president and the scientist in charge of developing the artificial intelligence that enables the operation of a large family of smart objects—during an important event dedicated to presenting the new skills of Alexa, showed how the voice assistant, using just one minute of recorded audio as input, is now able to faithfully reproduce the voice of a human being, simulating his/her presence. To illustrate the applications of this new skill acquired by the popular device, the scientist stated that in the near future Alexa "will be able to read a story to a child with the same voice of a grandmother who has passed away". The numerous reactions of disgust and alarm triggered by these episodes signal how the growing cohabitation of humans and non-humans is a process as dizzying in its expansion and intensity as it is still to be explored, a social phenomenon that challenges a series of beliefs rooted in modern thought that clearly separate facts from discourses, nature from culture, subjects from artifacts.

The reference to the global brand that has redesigned the scenarios of commerce perhaps invites us to recognize that there is nothing more serious than consumerism, as is indeed suggested by the naturalness with which we have long been accustomed to transfer a personal pronoun to a smartphone, watch or personal computer. How many of us, in conscience, would feel in full possession of our ability to act, of our 8 1 Introduction

autonomy if suddenly deprived of prosthetic devices like the sophisticated technological artifacts, heirs of the mobile phone that not only entertain us but promise today to potentially save our lives? Incidentally, as we write this introduction, the latest update of Apple's famous iPhone, now features the ability to detect a traffic accident by identifying the extreme sound levels caused by a collision, aiding in the rescue of the victims.

The proliferation of artificial intelligence thus forces us to look at ourselves in the mirror, prompting us to reflect on the meaning of the word "anthropomorphic", whose etymology, as Bruno Latour reminds us, refers to two different and at the same time interrelated meanings: that which has a human form and that which gives (new) form to human beings. Our increasingly numerous non-human life companions are then anthropomorphic according to three meanings: they were conceived by us, they replace our actions by delegation, returning in the form of services what we give them in the form of skills (personal data, ability to perform actions autonomously), and finally, they contribute to give new shape to our ordinary life, defining a set of rules and routines that end up modifying our behaviors.

Multinationals, products, brands, protection of personal data, algorithms, artificial intelligence, humans, simulacra ... the reader will have noticed how, following Latour, the list of elements involved starting from a simple reflection on the meaning of a common technological artifact inexorably lengthens, forcing us to deal with the cohabitation of multiple human and non-human entities, material and immaterial, just think of copyright or the regulation on user profiling. From this perspective, seeking the meaning of a social phenomenon requires dealing with a network of different agents, an assemblage of heterogeneous elements as pervasive as it is apparently obvious, ordinary, in which the function of use and symbolic value are closely linked, to the point of seemingly resolving without interruption into each other. And what about the exercise of power that inevitably takes shape in the sequence of delegations on which the functioning of a concatenation of heterogeneous actors is based? The last part of the volume attempts to answer some of these questions and to outline the maneuvering space of a sociosemiotics of collectives, in the belief that the trajectory to be followed is long and anything but linear but at the same time prefigures precious opportunities for a turn in the study of signification whose outcomes have yet to fully manifest themselves.

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Chapter 2 Narrative Semiotics and the Study of Scientific Practices



2.1 The Beginnings of a Dialogue. The Rhetorical Analysis of the Scientific Text

In this first chapter, we retrace some of the essential steps and junctures at the basis of an original research perspective, the aim of which was to lay the foundations of a meticulous investigation into the logics that determine the effectiveness of scientific discourse. In particular, as we will see, one of the fundamental assumptions of Latour's proposal, relevant both in terms of theoretical reflection and methodological implications, is to claim the opportunity to adopt a multidisciplinary approach, combining semiotics and ethnomethodology.

The starting point of what will evolve over time into a full-fledged anthropological approach to scientific discourse is a text published by Latour and Paolo Fabbri in 1977 titled La rhétorique de la science: Pouvoir et devoir dans un article de science exacte which effectively constitutes the first article dedicated to the semiotics of scientific texts. The goal of the research project outlined in this seminal essay is to demonstrate that the textual forms of the exact sciences are not reduced, as commonly believed, to the cold and impersonal description of an experimental practice. On the contrary, they manifest the presence of a complex rhetoric at the service of a true pragmatic intent: to induce the recipients of the scientific community to recognize as true only the utterances expressed by the authors, while discrediting the adversaries active in the same disciplinary field. From this perspective, the scientific text is reconsidered as a device of power, a battleground involving various players, a space animated by conflictual moves that are anything but obvious and elementary. The commonly accepted perspective regarding the strength of the scientific text is thus overturned and is now attributed not to its (presumed) neutrality, but rather to the effectiveness of its construction.

In order to demonstrate how the reader's perception of the objectivity of scientific discourse is based on a series of precise moves in terms of signification, the two authors aim to conduct a multidisciplinary analysis at the intersection of sociology

of science and semiotics, selecting as a reference text an essay on neuroendocrinology considered "cutting-edge¹" and published in 1962 in the Comptes rendus de l'Académie des sciences of Paris.² Upon careful examination, the richness of the scientific article emerges from its surroundings, precisely in the threshold space of the text that Genette (1987) defines as *paratext* or more precisely *peritext*, which in the perspective of sociology of science is already considered a place crossed by a strategic action that extends over two levels: that relating to the *author* (choice of scientific discipline, title, timing of publication and obviously of the journal) and that relating to the *institutions* involved in various ways (authorization protocols, sources of funding, choice of the laboratory where to conduct the experiment).

The scientific text thus lends itself to being considered under a new light, that is as the object of a strategic positioning both manifest (precisely in the paratextual messages located inside it) and implicit, relative to the conflictual scenario that regulates the relationships between the subjects engaged in the same frontier scientific field. It is from this premise that the detailed study of the article begins, breaking it down and analysing it in its constituent elements and in all their concatenations, significantly employing the same conceptual apparatus used and consolidated in the study of literary texts.

Consistent with a structuralist approach to text analysis, the deconstruction of the article is indeed based on a guided procedure in which a first fundamental distinction is made between its *pragmatic* dimension (related to the authors, their motivations, the recipients to whom the text is addressed), and its *textual* one. The properly textual plane is in turn articulated into two levels: the *enunciation* and the *utterance*. The system of enunciation concerns the linguistic mechanisms through which the authors decide whether or not to clearly signal their presence in the article, opting for the use of the first person or the third person. The plane of the utterance is instead reconstructed taking into account the textual elements that do not explicitly refer to the subjects of scientific discourse.

A first relevant piece of evidence that the decomposition of the text allows to emerge concerns the fact that this example of a scientific article is anything but impersonal. In what appears for all intents and purposes as a *report-narrative* of a laboratory experiment two textual mechanisms play a decisive role: the *modalizations* and the *anaphora*. The first consist of all the utterances capable of modifying prepositions ("postulate"; "have already said"; "the conditions have not been collected"; "without prematurely concluding") of which the article is widely disseminated. The anaphora consist in the numerous references of the text to other

¹Note how the choice to focus the analysis on the mechanisms of signification at play in a frontier scientific article is all the more significant as it is commonly believed that the reliability of the utterances present in this type of scientific literature is based exclusively on the ability to account for the experimental conditions that make its production possible.

²Endocrinology—Presence in an extract of hypothalamic tissues of a substance stimulating the secretion of the pituitary hormone thyrotropic (TSII). First purification by gel filtration Sephadex. Note (*) by MM. Roger Guillemin, Enchi Yamazaki, Marian Jurisz and Edvart Sakiz, presented by Mr. Robert Courrier.

parts of itself or to other texts that preceded its elaboration. And it is precisely this last element that seems to play a decisive role in the construction of the argumentative effectiveness of the article. The examined text, indeed, it is not only studded with a significant number of references, but the presence of a very precise system of connections between some sections of the article is also significant, a real *chain of links*.

The numerous quotations in the text that define the perimeter of scientific discourse, that is, its context of reference, are anaphora. But anaphora do not only concern the verbal dimension of the article. What emerges is a complex structure of references where the quotations refer to different textual types (tables and diagrams) in which the data obtained during the laboratory experiment are reported using instruments that are responsible for attesting the validity of the researchers' assertions, serving as documentary evidence. This apparatus of documents, which is commonly taken for granted, considered "natural" in the description of the procedures and results obtained by researchers engaged in frontier sciences, is defined by Latour and Fabbri as *symbolic subtext*³ and plays a strategic role in the functioning of the article because it is on this that the demonstration is anchored, that the scientific fact takes shape.

Finally, another type of anaphora concerns the title and abstract which do not merely evoke the text but instead synthesize all the information.

The identification and analysis of the intricate structure of connections set up in the article thus allows us to clear the field of reflection from a misunderstanding. The interest that guides this novel approach to the study of scientific texts is not at all confined to the need to understand what makes the genre of scientific discourse peculiar in terms of language style. The main stake rather concerns a reflection on the logics that regulate the production and circulation of knowledge (and power). In particular, the discovery of a logic that regulates the multiplication of internal references to the text, without which this discursive genre would fall, forces us to rethink the classic problem of the *referent*, of the object of discourse, what it refers to.

In other literary practices, there is either a referent which is not textual or else there is no referent at all—as in fiction intended as such. In the article presented here, there is indeed a referent, but it consists of an accumulation of texts: the context upon which the article acts, the infratext upon which it is based, part B, upon which part A is based. It is as if the paper's solidity—some might say its objectivity—stems from the correspondences established by interleaving each of these different layers of texts. Beneath the scientific text one finds not nature, but the literature of instruments (Latour & Fabbri, 2000: 121).

As is evident, this is a decidedly relevant implication on the theoretical level. The scientific text reveals itself as a the textual object that is not at all linear, rather it appears as a heavily layered construct, scattered with argumentative devices,

³In this regard, see the notion of symbol in scientific metasemiotics that Greimas and Courtés (1982: 325) define as "[...] a conventional type of drawing (using geometrical figures, letters, etc.) which is used to name univocally a class of entities, a type of relation and/or of operation. Symbolic notation is to be considered as a visual mechanism for representing constituent units of a metalanguage".

interwoven with internal and external references, to such an extent that instead of a presumed direct link with nature (understood as the final referent) an intricate network of other texts emerges: in other words, a complex rhetoric at the service of a persuasive type logic.

Moreover, the information transmitted by the researchers involved in the endocrinology experiment appears rather scant; a glaring proof of this is the massive use of technical terms, which, being widely shared by specialized readers, do not increase their knowledge in any way.

Consequently, the strength of this type of scientific article lies not so much in transmitting information, but rather in the ability to convince, in its *agency*, understood as action exercised towards a multitude of other subjects, internal and external to the world of laboratories: colleagues, institutions, sources of funding, public opinion.

The text thus reveals itself as a *complex semiotic device*, whose analysis overcomes a naive vision of the relationship between texts and referents, between science and nature.

Every text seeks to convince, but the scientific text achieves this effect by developing layers of texts consistent with one another which serve as mutual referents. Here, for example, bioassays, the stages of purification, the rules of the procedure followed, the statistical analysis—all are in agreement. This agreement is a break from the disagreements that preceded it. Where before there were claims, now there exists an object (Latour & Fabbri, 2000: 122–123).

The presence of a nesting of texts that within the scientific article follows a precise order thus enables us to rethink the relationship between the scientific explanation and physiological phenomena in an innovative way. To speak of the rhetoric of science does not mean to invoke a metaphor to refer to the style of scientific discourse, to the surface of the text (its linguistic manifestation), but rather to rethink its overall functioning in terms of persuasive effectiveness.

The referent of scientific discourse is no longer given *a priori* but is understood as the outcome of a process, as the ability of the text to *reify its own meaning*, generating it progressively, to construct and gradually enhance the *truth* of the discourse. Here we clearly find one of the fundamental assumptions of generative semiotic theory, which consists in emphasizing the impossibility of resorting to an external referent, consequently postulating the autonomy and the immanent character of every language.

The investigation into the truth of the scientific utterance thus comes to be rethought, in the terms of the theoretical project of Algirdas Julien Greimas, as *veridiction*.⁴

[...] due to the fact that it is no longer considered as the representation of a truth exterior to it, discourse is no longer satisfied with the simple inscription of the marks of veridiction. "Truth", in order to be spoken and assumed, must move toward the domains of the enunciator and the enunciatee. The enunciator is no longer presumed to produce true discourses,

⁴Latour will repeatedly use the term *veridiction* in the course of his work, testifying to a never extinguished link with semiotic theory.

but discourse producing a "truth" meaning effect. From this point of view, the production of truth corresponds to the exercise of a particular cognitive doing, of a causing-to-seem-true that can be called, without any pejorative nuance, persuasive doing (Greimas & Courtés, 1982: 368)

The transition from a traditional conception of reference to a dynamic, processual vision, focused on the analysis of the procedures through which the so-called *referentialization*⁵ of discourse takes shape, plays a central role in the development of Latour's thought which in the following years, as we will see, while recognizing the great importance of the Greimas' perspective, will be characterized by the introduction of some shifts dense with implications (theoretical and methodological) for the observation of the signification at play in social phenomena.

An aspect that in any case emerges as central, from this first study, consists in noting how the rhetoric of the scientific text is functional to a polemical logic, a real "agonistics" in which *the article acts* exercising a persuasive force within the clash between a multitude of actors engaged through a series of disputes to assert the authoritativeness of their own work.

This conflict has specific rules, it unfolds according to codified moves that in the text take the form of precise linguistic traces: the modalizations. The utterance of the exact sciences, beyond stylistic issues, can take two different forms: the simple one and the modalized one. The first case, typical of successful scientific demonstrations, is that of affirmations that circulate in scientific discourse without any restriction ("A is B"). In the second case, instead, the assertion of a subject is modified by the intervention of an antagonist who through a new declaration questions its reliability. A typical move of polemical action thus consists in reversing an assertion as happens in the following passages: "One of us has expressed reservations about the conclusions of Shibuzawa", "There were not present all the conditions necessary to confirm that the active fraction of Schreiber et al. acts only ...".

In light of these considerations, Latour and Fabbri propose, therefore, to radically rethink the functioning of scientific ideology, polemicizing with the perspective, common in philosophy, of considering the latter as a sort of theatrical staging in which the backstage is hidden to show the public a theoretical dissertation devoid of plot and characters. On the contrary, the operation at stake in scientific discourse never consists in hiding the mechanisms of its production but in highlighting them, in exhibiting them to the point that the representation can be rethought as the history of the conditions of its realization. In this sense

It is even possible to define the frontiers of a science as the place where opponents are constantly forcing assertions (énoncés) back into the experimental conditions under which they were produced. Any "cold" science, in contrast, is presented as a sequence of affirmations—at least until a new front is established, remobilising assertions (*mobiliser de nouveau les énoncés*) and revealing their true origin (Latour & Fabbri, 2000: 124).

The stakes of the rhetoric of science are therefore very large and strongly desired by the subjects involved in research. It is indeed about the *authority* (to be built and

⁵ See in this regard the entry "reference" in Greimas and Courtés (1982).

claimed in the text), from which descends the *credit* of the profession of scientist and ultimately the *power* to generate and circumscribe (temporarily by definition) a new field of study, precisely a frontier.

The gain obtained from the use of a novel multidisciplinary approach to the scientific text thus materializes in two different types of transformation.

The first is a movement of *extension* and consists in expanding to an article of exact science the conceptual framework developed for the analysis of literary texts.⁶

The second transformation is defined as *inversion* and consists in reversing the perspective rooted in common sense regarding the relationship that exists between nature and scientific research. In fact, while scientific production is commonly considered a speculative activity directed towards nature, in this new perspective it is rethought as a set of actions primarily directed towards a field of research—that of frontier scientific literature (intertextuality). The effectiveness of scientific demonstration is thus revealed in the presence of a military-type logic in which "[...] nature provides the ammunition whereby offensive strikes are made invincible" (Latour & Fabbri, 2000: 130).

2.2 For a Morphology of Scientific Narrative

If from a chronological point of view the semiotics of the scientific text is inaugurated by the publication of this article, the ambitious research project aimed at understanding the logics that ensure the rhetorical effectiveness of the discourse of exact sciences takes off and finds inspiration in the work of Françoise Bastide, precisely in a thematic seminar held in 1977–1978 linked to the seminar of "General Semantics" directed by Algirdas Julien Greimas and focused on the analysis of a text by Claude Bernard.⁷

Bastide, an original figure of a researcher capable of combining her training as a physiologist with the methodological rigor of textual analysis developed in the field of structuralist-oriented semiotics, has played a central role in understanding the so-called *operative character* of scientific texts, that is, the mechanisms of formation of their pragmatic effectiveness. The premise from which her work starts is that the discourse of experimental sciences, in the typical codified form of the scientific report of a laboratory experiment, is an "object" of exemplary analysis for the semiotics of the text because its meaning would reside in the presence of an articulated structure composed of a series of distinct levels placed in sequence.

Bastide's proposal thus consists in rethinking the scientific text dedicated to the laboratory experiment no longer as a descriptive utterance but rather as a particular form of *narrative text*, that is, as a semiotic construct whose elements are arranged

⁶It is appropriate to clarify that it is in any case an application not adaptable to other genres of scientific discourse whose internal functioning logics can vary significantly.

⁷ Sur le *Mécanisme* de la *Formation du Sucre dans le Foie* published in the Comptes Rendus of the Academy of Sciences.

in relation to each other according to a path that goes from the simplest to the most complex, from the most abstract to the most concrete. In this research perspective, it is important to clarify that the adjective "narrative" is not used in a metaphorical sense but rather in a technical sense to designate the *morphology of the scientific text*, as Bastide herself specifies, motivating the choice to examine Bernard's article.

[...] Bernard, when dealing with phenomena of the natural world, proceeds by constructing increasingly complex narratives in successive steps, gradually inserting actors, times and locations around the main program of sugar formation in the liver. Moreover, he generates at each step the different possible narratives to account for a state or an action. The discourse of experimental sciences therefore seems particularly favorable to the study of conversion procedures between levels of meaning relevance (my trans.; Bastide, 1979: 10).

One of the most relevant points in Bastide's work consists in demonstrating how the persuasive capacity of the scientific article is based, as highlighted earlier, on the presence of a real *stratification* (*feuilletage*) of text levels, an ordered overlap of expressive planes concatenated among themselves according to a precise sequence. At the first level of stratification, easily identifiable, and which consists of title, subtitle, abstract and notes, a plurality of other components are added that manifest the presence of distinct semiotic systems that transcend the dimension of verbal language. These are the indispensable equipment of every scientific explanation: equations, tables, images, photographs. The stratification of these different planes can reach levels of intensity such that in the history of science, as Latour (2009) himself reminds us, it becomes the indicator of the scientific word, even to the point of being considered synonymous with science.

This plurality of heterogeneous elements is all the more significant the more it strategically allows the subject of the scientific discourse to disseminate within the text a series of traces that refer to the practice of the experiment in the laboratory, strengthening in the eyes of the recipient the effect of reality. Under the magnifying glass of semiotics, the meticulous analysis of the text allows to bring out a further element that characterizes the functioning of the scientific discourse and that consists in the delegation by the figure of the scientist to a large number of non-human actors (the technical instruments) that play a decisive role in the argumentative effectiveness of the text, manifesting a series of skills and visualization strategies that are entirely peculiar. Since the essential function exercised by the equipment involved in the scientific experiment is that of making visible what is invisible to the human eye, it is possible therefore to rethink the scientific article as a real visualization device. What makes the non-human actors involved in the procedure of the experiment (and in its report) relevant for semiotics is the observation that, beyond common sense that tends to consider their functioning neutral, they contribute to exert towards the enunciatee (the scientific community) a persuasive action, acting as mediation elements in the chain of transformations that allow the transition from "nature" to the demonstration of the "scientific fact". As Bastide specifies:

The enunciator does not hide at all, as in fantastic stories, but projects into the utterance-text a "paper" enunciator who stages himself as a witness of a phenomenon, of an event, and tells it to an enunciatee who was not present, to convince him of the "reality" of what he has

observed. The process of persuasion goes through the transparency of the operations of the change of substance of the expression, when what is "seen" is transformed into discourse. It is for this reason that we find simultaneously choices made at the level of experimental devices that allow to "see" [...] and a cancellation of the enunciator in front of the "facts" that he has collected, and that show by themselves what is worth seeing (my trans.; 1985a).

Following this perspective, the scientific result, that is the *performance* of science, thus presupposes a doing (the experiment), which in turn implies the possession of a *competence* (knowing-how-to-do) that tactically the human subject of the scientific practice delegates in part to a potentially wide series of heterogeneous non-human actors.

The process, in its minimal articulation, is depicted in the following way:

$$E \rightarrow O \rightarrow S \rightarrow Op \rightarrow P \rightarrow R$$

At the extremes of the scheme, we find nature (E) and the recipient (R), that is, the researcher/scientific community. (O) indicates the invisible structure of the natural phenomenon under investigation, which through the intervention of an operator subject (S Op) is transformed into a product (P) whose structure is visible.

Following this perspective, the "scientific fact" comes to be rethought as the product (P) of a *process of mediation* that involves potentially very extensive and complex chains of agents (human and non-human). The idea of a direct correspondence, without mediation, between signs and things is thus definitively overcome, the scientific text is never transparent (but can certainly seem such, and this is mainly its persuasive vocation). Nature can only be grasped, therefore, through a sequence of operations of *translation*. The reference thus gives way to a referencing strategy.

Despite everything, traces of this process remain and the originality of Bastide's work is further revealed in the choice to "interrogate" the functioning of the visualization device, focusing attention on the contribution that technical objects make in visualizing the "scientific fact", in particular on what is commonly considered as the direct testimony of a real phenomenon, like a simple imprint without mediations: the scientific image. Bastide's position once again aims to overturn common sense and consists in supporting the thesis that the visual apparatus widely used in the texts of the exact sciences can be considered in all respects as an *iconography*.

Clearly, photography is one of the types of images used most frequently in scientific texts and it is therefore primarily on this that the effectiveness of semiotic analysis must be measured. First of all, it is necessary to note that "a 'scientific' photograph, publishable in an article, is the complete opposite of a family father's photo showing the child, the cat, the landscape, and maybe even the bicycle" (my trans.; Bastide, 1985b). The first peculiar characteristic of scientific photography consists in reducing as much as possible the information to be conveyed, in *channeling the meaning* of the photographed object in order not to generate confusion in its recipient. In this type of snapshot, the so-called polysemy, the coexistence of a multitude of meanings that characterizes the aesthetic forms of the photographic

image, is thus lost. The sense of scientific photography lies rather primarily in its *functionality*, in making visible what is necessary to reinforce the argument of the text, taking the place of the human actor in the research process.

Referring to the scheme illustrated earlier, it can be observed how scientific photography allows for the reduction of intermediate stages between the object of nature "O" (intensional) and the object of the article "P" (extensional), particularly by eliminating as many stages as possible where the human actor explicitly reveals himself/herself. On a theoretical level, however, this does not in any way mean considering this type of images as belonging to the category of indexical signs, in the sense given by Peirce; that is, the meaning of the photograph does not at all resolve into a direct relationship with the referent, in the presumed ability to testify without mediation the presence of the phenomenon investigated in the experiment. Rather, what appears particularly relevant is the presence of a complex symbolic apparatus whose presence derives from the modes of production of the image itself. In the space of a laboratory, highlighting an "object" through the photographic tool necessarily implies acting on the plane of reality, particularly through two processes: selection and contrast.

The first procedure consists in framing the photographed object, in selecting only what is considered relevant, erasing from the image what Bastide calls the "background noise".

The contrast, on the other hand, acts within the framing and is a procedure of highlighting the photographed object with the aim of detaching it from the background, of highlighting only the elements considered relevant to make visible what the human eye is not able to perceive.

The actions of selection and contrast are relevant because they contribute to orient the reader's interpretation of the scientific image, activating mechanisms that semiotics defines as semi-symbolic and which consist in producing signification by associating differences on the plane of the signifier with differences on the plane of the signified. Thus, the classic mode that consists in opposing "light" vs "dark" (category of the signifier) can be used to bring out the object from the background, highlighting, for example, the composition of a muscle tissue. The dimensions at play in the construction⁸ of the photographic image are in any case numerous and range from the use of colour, to transparency, from the position of the elements in the framed space (high/low, central/peripheral to the cases that recall explicitly the coded model of the geographical map) to their orientation, up to the work of highlighting the state of the surface, its "texture" (e.g. smooth/granular).

The idea of scientific photography as a "natural" element is thus definitively put into crisis, not only thanks to the analysis of the internal mechanisms that regulate its functioning, but also by observing the relationship it has with the verbal dimension of the text. The photographic image, understood as an element of a unitary visualization device (the scientific article), in fact always participates in a double

⁸It is important to reiterate that "constructed" is not here understood as synonymous with "fictional" but rather as "stratified", endowed with a semiotic type of articulation.

movement that goes *from illustrations to text and vice versa*, acting as a guarantee of assertions and also ensuring the linearity and homogeneity of the scientific document. The scientific image works like the article, with which it mutually reinforces (through referentialization) and with it participates in the same persuasive logic acting as "[...] a tactical maneuver, a no-way-out ambush in which, if someone tries a reading of the results different from that carried out by the authors, the change of direction is blocked by a specific argument" (my trans.; Bastide, 1985b).

This tactical manoeuvre is ensured in the text by the presence of a rich iconographic apparatus of which photographs, however relevant, are only one of the components. Traces of the role played by non-human actors in the visualization device also emerge in the use of graphs and tables, in whose functioning a series of conventions comes into play, the more relevant the more their presence is disguised by a rhetoric of persuasion aimed at celebrating the scientific illustrations as arguments that do not allow the possibility of reply.⁹

It is important at this point to clarify two theoretical issues that arise in the pioneering study of Bastide and that, as will be seen later, will take on relevance in the work of Latour and more generally in the field of so-called Science and Technology Studies.

The *materiality* and the specific *practices of use* of the non-human agents involved in the construction of scientific facts and their narration inevitably impose a constraint on the possible representations of the results. For example, Bastide recalls, among optical devices, the electron microscope, thanks to a trick called "shading", can be used by researchers to produce the effect of height, or to make it "as if" the object were detached from the background.

The presence of photographs, graphs or tables in a scientific text is therefore also a condition of the choice to use specific equipment during the experiment. In other words, what is relevant for the analysis of the rhetorical devices of persuasion at play in science is not only the dimension of discourse (the text), but also that of the *material conditions* that ensure its production, the tangible characteristics of technical objects and the practices of their use. A second issue, connected to this passage, concerns the dynamic, procedural conception of scientific "facts" and their discourse. If on the one hand scientific texts, like literary ones, can be considered in all respects as constructed texts, whose effectiveness takes the form of a complex rhetoric, on the other hand the former respond to a peculiar logic. The traces of scientific doing that stratify in the articles of experimental sciences, giving rise to even very long concatenations, always assume a tactical relevance in the sense that they are exhibited by the subjects of the discourse as *evidence* capable of guaranteeing the

⁹As Bastide specifies, in the graph a greater number of semi-symbolic dimensions can be summoned compared to photography. In particular, this type of illustration allows for the representation of the temporal dimension by translating it into a spatial dimension and exploiting the conventions that in the Western world regulate reading from left to right. The trace of scientific practice as static image (typical of photography) thus gives way to a representation of the phenomenon that generates in the observer the impression that it is unfolding before his eyes, with important repercussions on the overall authenticity effect of the text.

reliability of the results achieved. In other words, the traces act in the text as *memory devices* of the phases that make up an experiment and as such must be able to be retraced, *a posteriori*, by the scientific community to evaluate its solidity, its strength.

If photography is so widely used in the sciences (and is at the same time subject to meticulous controls and frequent disputes) it is also because it fulfils a precious function of *archiving*, guaranteeing a record to which access must be allowed at any time. ¹⁰ The traces are then *evidence* that allow us to connect the text to what is distant in space and time (the natural phenomenon intended as the object of research) marking a difference with the forms of literary narrative.

Venturing into the analysis of scientific discourse thus forces us to go beyond the limits of the text understood in a literal and traditional sense to investigate the *network of relationships* that involves multiple spaces, actors and times (laboratories and scientists, specialized journals, scientific dissemination, etc.). The criticism of a naive vision of reference therefore brings with it the rethinking of a central dichotomy in classical semiotic theory and in the social sciences: that between the text and the context.

2.3 Does the Scientific Image Not Exist?

In the years following the publication of Bastide's pioneering research, the study of the signification at work in scientific texts continued to emerge clearly in the work of Latour, ¹¹ who in 1987 published *Science in action*.

This is a work, destined to arouse considerable interest, which sets out to explore science in the stages of its very construction. In particular, Latour's analysis focuses on the conflictual dynamics at work in the laboratories, the role of scientific literature in legitimizing discoveries and their creators, and the far from linear ways in which inventions progressively become accepted and assimilated, contributing to redefining even the shared idea of nature. By reconstructing the vicissitudes underlying the invention of the diesel engine or the mass diffusion of the Eastman Kodak instant camera, Latour shows the central role that controversies play in the

¹⁰ Among the reasons that make Bastide's work particularly valuable, it is necessary to consider the fact that her research also contains an advanced reflection on photography, which is all the more interesting as it goes beyond the question of referential/indexical nature, focusing on the pragmatic effects of its use, as clearly emerges from this passage: "Photography reduces reality to the two-dimensionality of paper. It is a 'flattened' reality, easy to arrange and possibly to recover, easily communicable, and well suited for comparison. It is therefore a form of almost ideal memorization: its capacity is much superior to 'bits' and allows a specialist to examine the 'facts' with a single glance rather than through a complex decoding activity" (my trans.; Bastide, 1985b).

¹¹ See in this regard the article entitled: Writing Science. Fact and fiction (Latour & Bastide, 1986) in which the two scholars apply an experimental method consisting of manipulating a source scientific text in order to understand the role played by language in constructing the meaning effects of scientific discourse.

emergence of scientific facts, their dissemination and their pragmatic repercussions, highlighting how the stabilization of disputes in science cannot be traced back, as common sense would suggest, to the evidence imposed by nature (the last word is up to the phenomena themselves) but to a network of multifaceted actants, human and non-human, material and immaterial, to a "long heterogeneous list of resources and allies that scientists were gathering to make dissent impossible" (Latour, 1985: 103).

In Latour's view, therefore, *science is action* and the sequence of transformations on which its effectiveness is based must necessarily respond to a principle of *reversibility*. If a first movement consists in projecting the events of a laboratory experiment into a new space (the scientific text), whose narrative form responds to a tactical need (to convince) by resorting to rhetoric, on the other hand, the strength of the text, and its argumentative force require that it be able to withstand a second mirror movement, allowing the sequence of inscriptions (evidence) on which the demonstration is based to be retraced. Otherwise, the argument is a fallacy. In this sense, the perspective advanced by Latour is anything but relativist, rather it can be defined as a form of "realist constructivism", insofar as he does not intend to deny the existence of reality, or argue that facts do not exist, but rather to convince us of the fact that "out-there-ness' is a *consequence* of scientific work, rather than its cause" (Latour & Woolgar, 1986: 182).

The rethinking of the reference as a dynamic type of concatenation focused on transformation operations that link the text to the conditions of its production and circulation carries with it two significant consequences from a theoretical and methodological point of view. The first, as we have seen, consists in the abandonment of an anthropomorphic vision of agency, the second in overcoming the distance that separates the text from the conditions of its production and circulation. While regarding the first point, the affinity with semiotic epistemology appears solid because it is centred on the notion of the *actant*, the second would be more problematic. In this regard, we anticipate here some considerations that will be expanded upon in the following chapters.

As is well known, in the sociological sense, the notion of context refers to the scenario that circumscribes the space within which the actions carried out by human subjects unfold. Conversely, in the perspective advanced by Latour, if a being (human or non-human) is (intentionally or unintentionally) involved in the concatenation of transformations that make possible the emergence of a social phenomenon, it must be considered in all respects as an actor and not as part of the context. In this sense, there are no elements involved in a course of actions that cannot be considered as actors; the discriminating dimension rather concerns their ability to exert an influence in the unfolding of a phenomenon. The only elements that must be ignored in the reconstruction of the forces at play and their concatenations are therefore those that prove to be non-influential. In this sense, the context only concerns the elements that are marginal, external to the unfolding of a phenomenon, to the point that *the context is reduced to everything that is irrelevant*.

Now, returning to the comparison with semiotics, the critical issue would arise precisely from the analysis of the concatenations that in the emergence of a

scientific phenomenon involve human and non-human actors. Traditionally, in fact, semiotics conceives the text as a narrative construct built from a basic enunciative operation, called débrayage (disengagement), which allows the subject of the communicative act to project "outside himself/herself" the three fundamental categories of any discursive activity: space, time, and subject. Consequently, every utterance, even the one that apparently seems more impersonal and "objective", implies an enunciation and manifests its traces, internal elements to the text that must be distinguished from the concrete figures involved in the actual realization of the communicative process. In this sense, it is therefore necessary to underline the distance between the empirical subjects that are outside the text, that is the sender and the receiver, and their textual simulacra, defined as enunciator and enunciatee. The débrayage is defined as enunciational if it consists in the projection within the utterance of the simulacra of the subject of the enunciation (first-person discourses, dialogues); it is instead defined as *enunciative* if it consists in installing in the text subjects different from those of its enunciation (objectified discourse, in the third person).

Commonly, in the development of a text, the operation of débrayage is accompanied by an inverse movement, of return, defined as *embrayage* (*engagement*). As seen previously, these two discursive regimes often materialize in a text in the form of progressive encapsulations, giving rise to effects of reality, since each previous level constitutes a referential plane with respect to the next. However, one of the assumptions of Greimas' semiotic theory is that the space separating the text from its author and its reader can never truly be bridged. Total embrayage in other words is impossible to conceive, as this would imply the (impossible) erasure of every trace of discourse. ¹²

It is precisely from this point that Latour's criticism begins, specifically from the observation that unlike what happens in a literary text, the force of scientific texts (their rigor), presupposing the possibility of retracing the chain of traces (inscriptions) left by the transformations carried out during an experiment to verify its validity (evidence), requires that the actors of the narrative withstand the pressure of a form of *return* which is particularly binding and that cannot be ignored. Returning to the work of Bastide, and on the still open questions that it prefigures for a semiotics of scientific texts, Latour (2009) highlights, therefore, how the question of the *internal referent* would represent a potentially problematic turn for the study of signification, due to the centrality assumed by the literary text within the theoretical and methodological framework of the discipline.

This need for return is due to the fact that the finger of colleagues who read an article points to a picture within a text and demands in a certain way that the person responsible for this picture shows himself. This aspect establishes the extremely original character of this situation, which we generally do not find in many literary fields. The fundamental point, therefore, that makes the question of the usefulness of semiotic tools a bit more uncertain, relates in some way to access to what is distant. The need to produce information by accessing phenomena that are inaccessible, because they are too distant, too small or too old, requires

¹² See the entry "embrayage" in Greimas and Courtés (1982).

that the characters that populate scientific texts be subjected to a pressure, a need for return, of re-embrayage that characterizes the chain of construction of scientific conviction and does not fall into categories easily framed in a semiotic model (my trans.; Latour, 2009: 255-256).

The comparison with the chain of translations on which science in action is based thus leads the scholar to affirm that the *scientific image does not exist*. With this polemical stance, Latour intends to reiterate the difficulty of analysing a scientific image in itself, that is, detached from the complex network of translations of which it is a necessary component. If, as we have seen, the study of the effectiveness of the scientific text allows to abandon the idea of a direct anchoring between the words of science and things (the "nature") bringing out the complex work of translation and stratification of the visualization device set up to account for the object of research, what becomes important are the *traces* produced by the equipment used to measure its operation, the *inscriptions* with which they are projected from the space/ time of the experiment in the laboratory into the space of the text (article).

The meaning of these inscriptions must then be sought beyond their similarity (iconicity) with the represented object or their physical proximity to the object (indexicality). Rather it consists in the ability to produce and exhibit *evidence* capable of strengthening the assertions of the text, of contributing to create a conviction (the "scientific fact"), through the representation of a series of transformations that regulate the transition from an unknown phenomenon to a known one, or from an unstable to a stable one.

From this point of view, the scientific image, understood as a broad category within which different types of illustration (photography, graph etc.) fall, only makes sense in function of the referential concatenation of which it is part, of the relationship that is established with the other components of the scientific process, whether they are human (the scientists) and non-human (technical instruments). Observing scientists at work and describing the disputes at the foundation of scientific discoveries thus leads Latour to assert that the scientific photograph, isolated from the argumentative structure of which it is part, is not able to exercise a higher deictic function¹³ compared to the other forms of inscription that compose the visualization device in its entirety.

Thus, the image is never an endpoint, but only one of the deictic elements within the text, whether we are talking about the image as such or whether it has as its only purpose of simplifying some perceptual judgments. With the scientific image we are dealing with an object that is completely outside the problem of images and that allows to introduce a difference between the characters and the resources of semiotics. We could therefore study the characters of the story, but also the phenomenon, quite different, of the involvement of these characters in the referential chain, where the latter—as we have now understood—does not mean "external reference", but continuation of the referential chain of the text within the laboratory or within the scientific community (my trans.; Latour, 2009: 254–255).

¹³The term "deictic" is used in linguistics with reference to the elements that serve to situate an utterance in space and time, to specify who the subjects of the communicative act are: speaker and listener.

A single scientific image can therefore be considered significant only in function of the transformations it participates in during the argumentation process, otherwise it is deprived of its referential force due to the selection procedure with which it is obtained, essentially equivalent to a freeze frame.

Examining scientific phenomena as dynamic practices centered on *traduction* or *translation* mechanisms thus allows us to highlight a distinct attribute that sets them apart from traditional narratives. In scientific practice, there is a phenomenon as peculiar as it is relevant that Latour calls *immutable mobiles*, and that can be summarized as follows: something, which is not of the order of content but of expression, is preserved through transformations. This expression, deliberately contradictory, is introduced to try to account for a phenomenon as complex and problematic as maintaining something constant through a series of modifications of the plane of expression.

To describe this phenomenon, which we will explore in detail in the next chapter, we take the example of a technical object like the *pedocomparator*, a tool for comparing soil samples, used by scientists who study soil composition (Latour, 1999). This technical object consists of a box divided into compartments marked by an identification code into which the soil samples taken by scientists within the selected area are inserted. The function of the shelf is to trace a map of the geological composition of the investigated region, allowing scientists to subsequently perform a sequence of analyses (sending the samples to laboratories thousands of kilometers away) that finally translate into a set of images, tables, and graphs. This wooden frame containing a series of little cubes allows information about the analysed soil to circulate, making it possible to move the soil samples, but at the same time ensuring their preservation. The pedocomparator thus reveals itself as a very particular scientific object, a "concept-object" or a "fact-construct" capable of reconciling reality (the organic matter of the soil) with its codification, the plane of matter with that of the form used for the purpose of understanding its composition, the articulation.

The transition from reality to its scientific description is not therefore conceived as a leap but as a sequence of *small intermediate and reversible steps* capable of producing a series of transformations that, taken individually, appear to be of little relevance but in the set they form, they manage to bring about a change on the ontological plane, *from matter to representation*.

The functioning of the referential chain therefore leads to a rethinking of the role played by the notion of text, here considered only as one of the events that make up a transformation movement that consists in the *circulation—translation of objects* of scientific discourse. A significant role is rather assigned to the plane of experience, to the practices that make possible the construction and control of the investigated phenomenon.

The limit of a semiotics of scientific phenomena would then consist, according to Latour, in a theory of the sign based on the signifier/signified pair developed from the study of narrative texts.

This device is not useful for the study of scientific activity, in which the fundamental problem is not at all that of the signifier and the meaning, but that of a very strange relationship with the text, so far inexplicably foreign to the philosophy of sciences, namely the maintenance of a constant through the modifications of the plane of expression (my trans.; 2009: 261).

According to this perspective, Latour asserts, Bastide's work would be even more significant because it would testify to the apparently paradoxical coexistence of two competencies. The semiotic one, put into practice by meticulously analysing the scientific text in all the levels that guarantee its functioning, and the scientific one, strengthened by the experience accumulated in the field, in the years spent in the laboratory.

Latour's challenge and invitation to address Bastide's pioneering work on the status of the scientific image prompt contemporary semiotic research to respond, ¹⁴ as evidenced, among others, by the work of Dondero and Fontanille (2014), aimed at exploring the semiotic dimension inherent in the functioning of scientific images linked to a variety of disciplines. In their research, the two semioticians openly recognize the relevance of Latour's work on the scientific practices at play in laboratories, agreeing that "a photograph in itself, taken in isolation, cannot be used from a scientific standpoint" (Dondero & Fontanille, 2014: 131) and reiterating, at the same time, that the scientific character of the image "derives from the connections established, from a mediation assigning semiotic content purely to relations between objects" (ibid). However, one issue remains open, that of the invitation to overcome the distinction between text and context, to test the strength of the theoretical framework of semiotics in the space that unfolds outside the boundaries of the consolidated formats of textuality.

The next chapters are dedicated to the tension and constant confrontation between these two impulses.

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¹⁴ It is worth mentioning the conference organized in 2007 at the International Center for Semiotics and Linguistics of the University of Urbino entitled "The image in scientific discourse: statutes and visualization devices", coordinated by Jacques Fontanille, Anne Beyaert-Geslin and Maria Giulia Dondero, with the participation of Latour himself, who intervened on that occasion precisely on the theme of the semiotics of scientific texts starting from the work of Françoise Bastide.

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Chapter 3 Semiotics for Actor-Network Theory



3.1 Much More than a "Toolbox"

Despite the relationship between the investigation on meaning advanced by Latour and the research perspective on signification developed within the framework of structural semiotics being far from episodic, weak or marginal, the overall contribution of the latter has been scarcely recognized within the social sciences. As Fabbri himself (my trans.; 2021: 34) clarifies, this is proof of the reasonable effectiveness of semiotics and at the same time, its presumed "outdatedness":

A sort of outdatedness of semiotics, notably the diffusion of Greimas' theoretical proposal is also due to its success, to the fact that many of his concepts have overflowed, that they are around, are widely used [...] without their genealogy being cited, without recognizing the paternity of those who put them into circulation.

The situation is different within semiotic studies, where in recent years there have been multiple signs of renewed interest for Latour's work and the perspectives arising from it in relation to the investigation of the different ways of existence and the phenomena of signification at play in society (Padoan, 2023; Peverini, 2021, 2023a, b; Mangano, 2021; Ventura Bordenca, 2021; Mattozzi, 2021; Finocchi et al., 2020; Paolucci, 2010, 2020; Sedda, 2021; Burgio 2021; Lorusso, 2020; Manchia, 2020; Marrone, 2011, 2019; Fontanille & Couégnas, 2018; Fontanille, 2014; D'Armenio, 2019; Dondero, 2017; Tassinari, 2017). The attention paid in contemporary semiotic research to Latour's work is expressed on two dimensions that are interrelated. The first concerns the need to overcome the prejudice that reduces the contribution of semiotics to the social sciences to that of a "useful toolbox" for actor-network theory. The second concerns the need to recognise how, over time, Bruno Latour's original work of theoretical expansion around concepts such as actant and enunciation has proven fruitful in advancing semiotic reflection on the way meaning

¹On the role played by semiotics in relation to ANT, see the considerations advanced by Beetz (2013).

is articulated and manifested in a contemporaneity increasingly marked by a multiplicity of relations between human and non-human actors, proving to be a "fruitful source of epistemological, theoretical, methodological and empirical inspiration" (my trans.; Marrone, 2010: 72).

In order to highlight the reasons for an uninterrupted dialogue, although often denied or marginalized within the field of social sciences, in this chapter the main semiotic concepts underlying Latour's work are considered, with the aim of highlighting some of the main affinities and discontinuities that emerge on the theoretical and methodological level, with particular reference to the actor-network theory.

Starting from *Laboratory Life*, a text published in 1979 together with sociologist Steven Woolgar, and continuing with the publication of *Les Microbes: guerre et paix, suivi de irréductions* (1984), *Science in Action* (1987) and *Nous n'avons jamais été modernes* (1991), Latour strengthens the conviction that it is necessary to overcome the asymmetry that assigns a priority role to the social explanation of phenomena, underestimating the role assumed by non-human agents. His proposal therefore consists in introducing a principle of *general symmetry* according to which the investigation of natural objects and that of the social must proceed simultaneously.

Neither nature nor society can thus be considered as the foundation or the guarantee of the stabilization of scientific knowledge. Rather, "purely" natural facts and "purely" social facts would be the effect of a subsequent process of dissimulation, called *purification*, capable of hiding the complex intertwining of relationships that makes possible the birth of an object (whether theoretical, technical or natural), distinguishing only afterwards what belongs to the order of the natural and what refers to the dimension of the social.

The principle of symmetry is not only generalized but also *radicalized* and it is here that the actor-network theory takes shape,² starting from the conviction that all actors, who in the set of links they establish among themselves contribute to the constitution of a scientific phenomenon (agency), must be considered on the same level regardless of whether or not they are human.

What characterizes this approach is therefore not the attempt to explain scientific facts and technical innovations in light of social dynamics. The goal rather consists in reconstructing, through procedures of observation and meticulous description, the way in which concepts, natural objects, and technical objects emerge, take shape, and stabilize over time, now understood as *network-actors*, that is, as *collective actors* composed of a multitude of heterogeneous components whose functioning is based on a network-like structure.

To account for the construction of the phenomena investigated, it becomes essential to reconstruct the *circulation* of all the elements endowed with agency—the actants—that enter into relation among them, giving rise to a series of *transformations*, to a *network of translations* that makes the manifestation of an actor possible.

²ANT was born in Paris between 1978 and 1982 from the work of sociologists like Michel Callon, Bruno Latour, and John Law. However, as Law himself (2008) states, the approach itself consists of a network that extends both in time and in space, making the various stories about its origin necessarily somewhat arbitrary.

A paradigmatic example of this constructivist approach is represented by the work dedicated by John Law (1984) to the birth and evolution of the Portuguese commercial empire in the 1500s. The premise from which this study starts is that there are two perspectives for analysing such phenomenon. On one hand, the consolidated historical approach, which provides an explanation of the object of investigation in the form of a conventional narrative focused on recurring key actors: spices, trade, wealth, military power, and Christianity, relegating the technological factor, although considered essential, to a marginal role. On the other hand, the perspective typical of maritime and naval history which, conversely, examines the innovations in shipbuilding and navigation, paying less interest to the political and economic dynamics at play in Portuguese imperialism.

Law's proposal consists in combining these two types of historical narrative starting from the consideration that the effectiveness of the Portuguese commercial empire is attributed to the *assembly* of multiple actors: technical (sails, astrolabes, firearms etc.), natural (winds, currents, constellations, spices etc.), commercial (shops, commercial agreements etc.), circulating within a system of network-like translations. And it would have been precisely the network generated by the transformations of the individual elements that determined the particular form of each actant involved in its operation, ensuring its hold for 150 years and securing for Lisbon a hegemonic role within an asymmetric commercial structure that made the city a mandatory stopover for a vast array of tributaries.

This example is useful for grasping the originality of ANT on a theoretical-epistemological level and for overcoming some misunderstandings that are often associated with it. As Mattozzi (2006) points out, this research perspective is indeed subject to two frequent misunderstandings, the first of which consists in reducing it to the theory of social constructivism, the second in considering the terms actornetwork as dichotomous and therefore interchangeable with other variants such as individual/system or agency /structure:

ANT cannot be ascribed to social constructivism, since it does not consider society as something that is given a priori. It is a constructivism, but not social [...]. *Actor-network* is a compound word that accounts for the fact that an actor is always the result of a network of relationships that constitute it. (my trans.; Mattozzi, 2006: 45)

The hyphen that separates the word *actor* from *network* thus responds to the need to indicate that the two terms do not express separate concepts but rather refer to two different aspects of the same field of observation and analysis. Speaking of an "actor" means focusing the research work on how networks are constituted by the action of the nodes that compose them; conversely, the use of the term "network" is useful to describe the ways in which individual actors are defined by the ties that are established with the other elements involved in the functioning of a phenomenon. From this perspective, the distinction mainly responds to a methodological need but does not introduce any ontological distinction between the two terms.

Moreover, the relevance assigned to the methodological dimension is a central aspect in the reflection of the scholars who have mainly contributed to the birth and development of ANT and who significantly agree in recognizing that, despite its

use, the term "theory" is very misleading,³ as provocatively claimed by Latour himself (1999b: 1; 19–20)

[...] there are four things that do not work with actor-network theory; the word actor. the word network, the word theory and the hyphen! Four nails in the coffin [...] The third nail in the coffin is the word theory [...] Far from being a theory of the social or even worse an explanation of what makes society exert pressure on actors, it always was, and this from its very inception (Callon & Latour, 1981), a very crude method to learn from the actors without imposing on them an a priori definition of their world-building capacities.

ANT should therefore be considered, rather than as a social theory, as a methodology, or more precisely as a meta-methodology (Venturini, 2008) that uses a multitude of different research approaches (interviews, text analysis, archival work, surveys, experiments, participant observation) to try to describe the work of association and dissociation that permeates collective life.

In this scenario, the innovative scope of ANT is also due to the presence of a dialectic with semiotics, a comparison made of affinities and distinctions but always played against the backdrop of a common *anti-dualist epistemological horizon* which consists in recognizing the primacy of the relationship with respect to the elements involved in the unfolding of a phenomenon.

The following paragraphs are dedicated to exploring the areas of contiguity and divergence between two ways of reflecting on the social that, while distinguishing themselves by the different importance assigned to methodological elaboration compared to empirical verification and to the descriptive effort towards the phenomena investigated, share a series of basic principles.

In particular, an attempt will be made to highlight how the metaphor of semiotics as a toolbox is very reductive and does not sufficiently account for the fundamental role played by the theory of signification in the elaboration of ANT as very well argued by Høstaker (2005) and Beetz (2013). In other words, an attempt will be made to clarify how the significant impact generated by ANT also testifies to the effectiveness of semiotics understood as a "methodology for social sciences" (my trans.; Fabbri, 2023). Following this perspective, an attempt will be made to show how the originality of Latour's work can be traced back, at least in part, to an unprecedented work of *bricolage*⁴ carried out starting from Greimas' theoretical framework, with the aim of extending the relational epistemology to non-linguistic phenomena.

One aspect that indeed emerges as particularly worthy of interest is that ANT's recourse to semiotics, while materializing in the use of a relatively small number of

³ See in this regard the considerations advanced by John Law (2008) who defines ANT not as a theory but as a composite family of analysis methods attributable to a "material" version of semiotic theory ("material semiotics").

⁴As acutely noted by Beetz (2013, p. 28), Latour's use of Greimas' semiotics seems to conform to the considerations advanced by Jameson on the role played by the practice of bricolage in the advancement of the discipline: We "should also feel free to bricolate all this, that is, in plainer language, simply to steal the pieces that interest or fascinate us, and to carry off our fragmentary booty to our intellectual caves". On this point, see also the considerations of Manghi (my trans.; 2019, p. 9) on the "methodological patchwork made of exegesis, ethnomethodology and semiotics" that has marked Latour's work from the beginning.

terms, produces the effect of advancing reflection on the scope of the selected conceptual categories, expanding their scope on a theoretical level.

3.2 A Non-anthropomorphic Theory of Agency

The relevance of the bricolage metaphor clearly emerges in the fine-tuning of a semiotic vocabulary (Akrich & Latour, 1992) used to account for the concatenations of humans and non-humans, in which the recourse to some foundational concepts of Greimas' semiotics is accompanied by a redefinition of them, as in the case of the definition of the key category of actant.

Whatever acts or shifts action, action itself being defined by a list of performances through trials; from these performances are deduced a set of competences with which the actant is endowed; the fusion point of a metal is a trial through which the strength of an alloy is defined; the bankruptcy of a company is a trial through which the faithfulness of an ally may be defined; an actor is an actant endowed with a character (usually anthropomorphic) (Akrich & Latour, 1992: 259).

This definition allows us to understand how this "theory" of action is based on a basic assumption that consists in rejecting intentionality as a useful criterion for identifying and distinguishing the heterogeneous entities involved in the unfolding of a phenomenon, in favour of the centrality assigned to their ability to act (agency). What qualifies an entity as an actant is therefore not the will to do but the ability to perform an action capable of making a difference, and in this sense the term can be used without distinction with reference to human beings, technological artifacts, natural elements, institutions, legal norms, concepts, etc.

In this perspective, the notion of actant thus assumes a decisive role, because it can account for the way in which, in the structuring of a social phenomenon, agency is redistributed among a multiplicity of interconnected elements, manifesting itself in the form of a chain. What distinguishes an actor from an actant is therefore not its anthropomorphic dimension but rather the ability to consolidate the presence of a plurality of multiform entities, to concretize an assemblage (Croce, 2020).

The relevance assigned to the notions of actor and actant in Latourian thought is also proven by the different definitions of the terms elaborated over time and that testify to an action of "creative remodeling" carried out starting from Greimas' semiotic theory (Beetz, 2013).

As Beetz points out (2013: 9) if in some works like *Where are the Missing Masses* (1992) and *Politiques de la nature* (1999a) the definition of actor is very similar to the one just presented, in others the distinction between actor and actant is decidedly blurred, as in the case of *Science in action* (1987), or completely absent as in the 1984 essay *Les microbes*; in *Reassembling the social* (2005) what qualifies an actor is the ability to make a difference, while the actant is defined as an actor who is still without a concrete configuration. A different perspective of reflection is finally found in *Pandora's Hope* (1999c) in which the term actant is used only occasionally to refer to non-humans and what becomes relevant is the reflection on the

way in which an actor progressively emerges as a result of the ability to overcome a series of trials.

In any case, beyond a certain flexibility in the use of the categories of actor and actant, the link with semiotics is very evident, especially with regard to the overcoming of an anthropomorphic vision of agency and, as anticipated, the common adherence to a relational and differential principle at the basis of signification. Regarding the first point, in the definition by Greimas and Courtés (1982: 5), the actant is indeed conceived as "that which accomplishes or undergoes an act, independently of all other determinations", the term is introduced in fact to overcome another one considered excessively ambiguous: that of *character*. The category of actant is thus used to designate everything that participates in the functioning of a narrative and that can assume a concrete manifestation (actor) through a multiplicity of forms: human being, animal, object but also concept.

As for the second point, the perspective advanced by Latour and Akrich according to which in the functioning of a phenomenon actors and actants do not exist and never act in isolation but always in combination with each other, while being consistent with the approach of structuralist semiotics, is characterized at the same time by a certain theoretical simplification. In the ANT project, the extensive use of the notion of actant is functional to the project of describing the way in which, outside the linguistic dimension, a phenomenon of collective interest is based on a chain of transformations that involve a multiplicity of heterogeneous elements endowed with the capacity for action. According to this perspective, as emerged from the first works dedicated to the rhetoric of the scientific text, the strength of the theoretical proposal is measured primarily on the ability to *trace* the actants involved in the process of redistributing agency.

In the semiotic approach, the term actant is instead part of a complex and broader theoretical elaboration (the *narrative grammar*) whose objective is to reconstruct the formal logics of the functioning of narrativity. In particular, the word actant designates an abstract category and refers to a conception of narrativity understood as syntax, in which what is relevant is not the identification of the actants (as happens in ANT) but primarily the *position* they occupy within the transformations in which they are involved, and the (actantial) roles they exercise within a text, as clarified by Greimas and Courtés (1982: 6):

As the narrative discourse progresses, the actant may assume a certain number of actantial roles, defined both by the position of the actant in the logical sequence of the narration (its syntactic definition) and by its modal investment (its morphological definition). Thus the hero will be the hero only in certain parts of the narrative—s/he was not the hero before and s/he may well not be the hero afterwards.

In other words, the relevance of the notion of actant in the perspective of semiotic theory consists in the fact that it is a *syntactic unit* whose functioning responds to a *generative* type of signification logic. That is to say, a model in which the components that intervene in the production of an object endowed with meaning articulate with each other according to a path that goes from an elementary level to a more complex one, from an abstract plane to a concrete one, consistently with the

conception of language levels (Benveniste) and of semiotics considered as a hierarchy (Hjelmslev). Furthermore, the narrative grammar (of which the actants are one of the key components) is a *general model of narrativity*, developed to account for the functioning of all forms of narrative text, regardless of the natural language in which they manifest. In this sense, the actantial organization is applicable to any form of narration and semiotic analysis is characterized on the methodological level precisely by the option of segmenting and analysing the text in terms of its *structure*, using therefore as a fundamental criterion the respect for the levels on which the articulation of the narrative is based. Particularly significant in this regard is the botanical metaphor used by Greimas and Courtés (1982: 258) to account for the procedures of *reduction* that necessarily characterize semiotic analysis: "here the semiotician can be compared to the botanist, whom no one would criticize for bracketing out in his work the aesthetic or economic aspects of the flowers which he studies".

Here emerges a significant difference between Greimas' theory, often superficially accused of reductionism,⁵ and the approach of ANT, which resolutely refuses to reduce the chain of transformations that occur between a multitude of actants to a series of general operating principles organized according to a hierarchical logic. This is what Madeleine Akrich programmatically states in an essay titled *Sémiotique et sociologie des techniques: jusq'où pousser le parallèle?* (my trans.; 1992):

Compared to a simple network model, semiotics poses an additional hypothesis by establishing a priori a characterization and a hierarchy of different elements put in relation: it is clear that it is not possible to accept these assumptions that go against our methodological hypothesis of departure, according to which the only way to reconstruct the network of relationships woven by a technical object consists in following the actors in their work of concatenations and not to impose any category, nor any link, that is not made effective by one of the actors in situation.

Certainly, this difference refers, as anticipated in the first chapter, to the constitutive project of STS and ANT to account for the signification at play in phenomena, such as technical objects, deeply distinct from traditional textual objects such as narratives, from which, as we know, the semiotics of narrativity has developed its own models of analysis. However, it is important to highlight how this distancing reveals a discord that is situated on the methodological level rather than the epistemological one, as is quite evident from the previous quote by Madelein Akrich herself and in a statement made by Latour in *Reassembling the social*.

In particular, the refusal to resort to the general model of structuralist-inspired narrativity does not at all imply the abandonment of the anti-essentialist principle,

⁵In this regard, see the difference between the entries "reduction" and "reductionism" in Greimas and Courtés (1982).

⁶"it would be fairly accurate to describe ANT as being half Garfinkel and half Greimas: it has simply combined two of the most interesting intellectual movements on both sides of the Atlantic and has found ways to tap the inner reflexivity of both actor's accounts and of texts" (Latour, 2005, pp. 54–55).

central in semiotics, rather it responds to the attempt to reconcile the theory of signification with the American ethnomethodology characterized by a phenomenological perspective, in an attempt to account for the processes of modernization. As we will see extensively later, the move advanced by Latour in the famous essay *We Have Never Been Modern* indeed involves extending the analysis of the construction of scientific facts to the phenomena of modernity, with the aim of demonstrating that our everyday life is populated by *hybrid actors*, networks composed of human and non-human agents that only naturalistic or sociological reductionism persists in separating and considering as belonging to irreconcilable poles, resorting to dichotomies such as natural/artificial, subject/object.

[...] when we find ourselves invaded by frozen embryos, expert systems, digital machines, sensor equipped robots, hybrid corn, data banks, psychotropic drugs, whales outfitted with radar sounding devices, gene synthesizers, audience analyzers, and so on, when our daily newspapers display all these monsters on page after page, and when none of these chimera can be properly on the object side or on the subject side, or even in between, something has to be done (1993b: 49–50).

From this perspective, the scenario of everyday life is permeated by the incessant production of *nature-cultures* that Latour calls *collectives*, a term introduced to assert that these are phenomena that do not coincide either with the conception of society elaborated by sociology ("humans among themselves") nor with the epistemologists' idea of nature ("things in themselves").

What ANT claims is the opportunity to carve out a space for observation and description of the phenomena of modernity that remains at the same distance between realism and constructivism and that therefore allows us to observe the procedures through which nature and society constitute each other. If the reality in which we live is the product of a process of construction and temporary stabilization that is realized through immanent relations between a multitude of agents (human and non-human) giving life to networks composed of hybrids, the challenge consists in reconstructing the interweaving of relations between the entities involved by describing the modes of *association* and of *translation*.

The dialectic with semiotic theory here proves to be as heated and stimulating as ever. On the one hand, in fact, the theory of signification is recognized as having the ability to offer an "excellent tool chest for following the mediations of language" (1993b: 64) to reconstruct the network of translations that makes possible the proliferation of hybrid agents, enabling an escape "from the parallel traps of naturalization and sociologization" (ibid). On the other hand, Latour asserts that the innovative scope of first the linguistic turn, then the semiotic one, would have been halted due to the choice to excessively expand the space assigned to the autonomization of discourse, in relation to the pole of nature and that of the subject/society, ending up

⁷It is therefore from this perspective that the recourse to the principle of *irreducibility* (Latour, 1984, p. 158) should be read, according to which "Nothing is, by itself, either reducible or irreducible to anything else". See also the essay "Irreductions" (1984).

progressively marginalizing both the question of the referent and that of the link with the speaker and the social context. In short:

[...] the great weakness of these philosophies, however, is to render more difficult the connections between an autonomized discourse and what they had provisionally shelved: the referent—on Nature's side—and the speaker—on the side of society/subject. Once again, science studies played their disturbing role. When they applied semiotics to scientific discourse, and not only to literatures of fiction, the autonomization of discourse appeared as an artifice (Bastide, in press). As for rhetoric, it changed its meaning entirely when it had truth and proof to absorb instead of conviction and seduction (Latour, 1987). When we are dealing with science and technology it is hard to imagine for long that we are a text that is writing itself, a discourse that is speaking all by itself, a play of signifiers without signifieds (ibid).

This position, although openly critical, should not be read in any case as a sort of "condemnation", also because it intercepts a debate that has strongly marked semiotics since the end of the eighties, the positive outcome of which, as we will see, was to "rethink the real as the other side of the textual" (my trans.; Landowski, 1989), reinterpreting textuality, through the elaboration of sociosemiotic theory, "not as an objective entity given to imitate the literary work, but as a battery of formal models, structural grid, plot through which meaning is put in conditions to signify" (my trans.; Marrone, 2010: 72).

As can be seen from these passages, the metaphor of the toolbox does not do justice to the dialectic between semiotics and ANT which, particularly with Latour, is never reduced to the use by the latter of a number (certainly reduced) of categories but consists in an operation of deepening and expanding the theoretical value of the concepts used. What is particularly important to ANT is to practice semiotics understood as the study of how meaning is built "in its original, nontextual and nonlinguistic interpretation [...]", more precisely as "the study of order building or path building and may be applied to settings, machines, bodies, and programming languages as well as texts" (Akrich & Latour, 1992: 259).

Returning to the question of actants and actors, their use allows Latour to equip the process of observing social phenomena with a metalanguage that inevitably relies on the theory of narrativity (of which these two concepts are an essential component). Just as the theory of narrativity elaborated by structuralist semiotics implies at its foundation a theory of agency, according to which narrative roles are defined by the positions occupied by the characters in a chain of transformations, the solution adopted by ANT in the study of the way scientists progressively construct their research objects consists in describing the *forms* or the *types of actions* the actants are involved in, regardless of the level of manifestation (anthropomorphic or not) with which they manifest themselves. The link between the two approaches is further evident in the moment when the common recourse to a theory of agency centred on the polemical-contractual relations between the actants emerges.

Starting from Propp's (1928) studies on the morphology of the folktale, Greimas' semiotics (Greimas & Courtés, 1982) indeed conceives narrativity as a path organized in a *canonical schema* composed of four phases in which the narrative roles exercised by actants respond to a model based on a general logic that assigns a decisive role to conflict and alliances (Figs. 3.1 and 3.2).

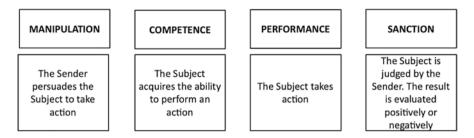


Fig. 3.1 Canonical narrative schema

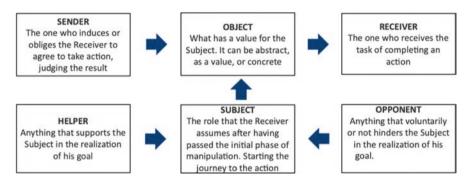


Fig. 3.2 Actantial model

Put simply, in the canonical narrative schema the *manipulation* phase is defined as the one in which a Sender convinces a Receiver to act in a certain way or to desist from a behaviour, adopting persuasive strategies such as promise, threat, seduction or provocation. In the second phase, the competence, the Subject (the hero of the narrative), is called upon to acquire a series of skills necessary to complete the task, to join with the object of value. The abilities that the Subject must develop not only concern the pragmatic dimension of doing but also the pathemic sphere, that is the emotions at stake, and the cognitive one, that is the knowledge gained during the journey. To carry out the *narrative program* the Subject must come into possession of some modalities. In semiotic theory, modalities are identified in function of four essential modal verbs: wanting (vouloir), having-to do or to be (devoir), being-able to do or to be (pouvoir) and knowing (savoir) which refer to the basic orientations that regulate the relationship between the subjects and between the subject and the world. The "having-to" concerns the sphere of social coercions, the "wanting" refers to the realm of desires that move the subject, the "knowing" refers to the knowledge necessary to undertake an action, finally the "being-able to" is relative to the concrete possibility to carry out an action.

The subsequent phase of the *performance* consists in the attempt by the Subject to carry out the program that defines his/her role within the narrative. Finally, in the concluding phase of the *sanction*, the path taken by the Subject is judged by the Sender, an evaluation of the path taken that can be positive or negative.

As is evident, from the structuralist perspective the narrative is thus conceived as a *narrative syntax*, as a sequence of states and transformations in which the status of the involved elements is defined by the set of trials in which they are implicated.

And it is precisely the role assumed by the *trials* in the functioning of a narrative that assumes a relevant role in the reflection of Latour, who in an innovative way proposes to extend the range of a central category in semiotics by changing its field of application, moving from the literary field to that of experimental sciences.

3.3 Anti-reductionism and Relational Ontology

The premise from which Latour begins is that if by actant we mean everything that has the ability to act by causing a change and if actions are defined as a "list of performances in trials", in the absence of trials it is not possible to identify actors.

Now, this is exactly what happens in a laboratory where the protocol that scientists are required to follow consists in subjecting an "object" to a series of trials for the purpose of understanding its operation. According to this perspective, it is the so-called "trials of strength" at play in scientific practice that determine the endurance of a technical or scientific object, defining its status, determining whether or not to qualify it as a full-fledged actor, thus substantially defining its ontological status. This is the principle of *irreduction* according to which "it is because nothing is, by itself, reducible or irreducible to anything else that there are only trails (of strength, of weakness). What is neither reducible nor irreducible has to be tested, counted, and measured. There is no other way" (Latour, 1988: 158).

In this constructivist vision of the scientific fact, the entity that has yet to be subjected to a series of trials (in the form of experiments) initially does not possess an identity, is therefore not an actor, in the sense that, as Høstaker (2005: 10) reminds us, it can only be described as "the name of action" (Latour, 1993a: 136, 1999c: 119), as a "list for a series of trials" (Latour, 1987: 89).

The entity acquires an identity, becoming a stabilized and identifiable scientific object, only when the performances manifested during the set of tests to which it is subjected are recognized by scientists as the prerequiste of a competence that retrospectively explains its functioning. This also implies that the identity of a scientific object, its legitimacy, can be downsized or vanish altogether when it fails to confirm its own performance in a series of tests following its identification.

The emblematic example proposed by Latour (1987) is that of the discovery, in the early twentieth century, of "N rays" by the French physicist Prosper-René Blondlot. This led to numerous scientific publications in authoritative journals, and practical applications even in the field of medicine, until the moment when the American scientist Robert W. Wood, who had failed to replicate Blondlot's experiment, decided to visit his laboratory. After an initial phase in which the existence of "N rays" seemed empirically unassailable, Wood, who in the meantime had asked to access the technical equipment used for the discovery, decided to surreptitiously remove the crucial element of the experiment: an aluminium prism essential for

measuring the performance of the rays. Surprisingly, he observed that this did not imply any variation in the results obtained (traces imprinted on metal plates). The inscriptions were therefore not caused by "N rays" but by something else. Latour's conclusion is that after the failure of this test, no one saw the "N rays" imprinted on the photographic plates anymore, only smudges.

The application of notions derived from a general theory of narrativity to the logic of science in action is relevant not only because it allows the semiotic dimension of scientific practices to emerge, but also to grasp a peculiarity, namely the inversion of the logical relationship that exists between the phases of competence and performance. In fact, while in the analysis of a narrative competence precedes performance, grouping all the intermediate (qualifying) stages that a subject goes through in order to realise its main narrative programme, scientific practice is characterised by the opposite movement. The observation of performance always precedes the reconstruction of competence, and, as intuited from the first works dedicated to the rhetoric of scientific discourse, the argumentative effectiveness of the texts in charge of attesting the reliability of the results obtained in the laboratory is played precisely on the ability to convincingly recount, *a posteriori*, the concatenation of states and transformations through which a scientific object progressively assumes a form, retracing the history of the experiment, trying to represent it in a way that hinders potential disputes from opponents.

Furthermore, from the perspective of ANT, the relevance assigned to trials of strength far exceeds the scope of technical or scientific objects. This concept in fact represents a fundamental principle through which to describe everyday life, the modes of existence of collective actors, concepts, theories, political institutions: "there are only trials of strength, of weakness. Or more simply, there are only trials. This is my point of departure: a verb, "to try" (Latour, 1988: 158). If the reality of an actant is sanctioned by the ability to resist a series of tests, a decisive aspect consists in its ability to enter into a relationship with other actants, giving rise to associations and alliances. It is in this passage that the idea of meaning as a trajectory takes shape.

No "actant" is ever so weak that it cannot enlist another. Then the two join together and become one for a third actant, which they can therefore move more easily. An eddy is formed, and it grows by becoming many others" (Latour, 1988: 159).

The centrality of the relational principle re-emerges here, once again making explicit the link between ANT and the theory of signification on the epistemological level. Just as the capacity of a language to express meaning depends on the system of relations established between its elements, so material entities too acquire meaning solely as a function of the links established with other entities.

At the same time, however, it is important to reiterate that in this perspective what is lost is the primacy of the notion of system and with it the assumption of a hierarchy of elements that presupposes rigid rules of concatenation.

[...] the notion of system is of no use to us, for a system is the end product of tinkering and not its point of departure (2.1.4). For a system to exist, entities must be clearly defined, whereas in practice this is never the case; functions must be clear, whereas most actors are

uncertain whether they want to command or obey; the exchange of equivalents between entities or subsystems must be agreed, whereas everywhere there are disputes about the rate and direction of exchange. Systems do not exist, but systematizing is common enough; everywhere there are forces that oblige others to play the way they have always played (Latour, 1988: 198).

In the perspective advanced by Latour, the association between actants always responds to a polemical logic aimed at ensuring the strongest the ability to persist over time and extend in space, in this sense the outcome of an assemblage of distinct units cannot be predicted with certainty. There is therefore an inverse relationship between the extension of networks and the coherence of actors, since the fate of a trajectory of meaning is always played between two opposing forces: on one hand risking "dissidence" or "dissolution", that is, jeopardizing one's own uniformity to try to extend far, on the other hand strengthening one's own coherence, resisting the other forces in play but at the same time reducing the possibilities of expanding, thus jeopardizing one's own hold over time.

The solution from a methodological point of view consists in trying to trace the movements that regulate the relations between the actants involved in a social phenomenon, in search, as Croce (my trans.; 2020: 26–27) states, of "unique" explanations, that is—as the reductionist principle commands—such that they cannot be abstracted from the single event and applied to others".

3.4 From Narrative Programs to Action Programs

For ANT, the ability of an actor to manifest a goal or, in the absence of intentionality, to nevertheless operate a transformation in relation to a pre-existing situation prefigures the existence of a program of action. This term designates the set of trials and polemical comparisons that an actor⁸ faces to carry out his/her own program, measuring himself/herself against the resistance expressed by antagonists (anti-actors).

Significantly, the elaboration of this category also explicitly refers to the theoretical framework of semiotics, particularly to the notion of narrative program (NP) that Greimas and Courtés (1982: 245) define as "an elementary syntagm of the surface narrative syntax, composed of an utterance of doing governing an utterance of state [...] as a change of state effected by any subject (S1) affecting any subject (S2)".

This notion plays a key role in the functioning of the overall architecture of a narrative and can take on different configurations. In particular, a base NP (the goal that an actor aims for) is distinguished from an instrumental NP (e.g. the intermediate actions necessary to equip the subject of the narrative with the *being able to do* necessary to fulfill his/her role). The latter can be realized either by the subject himself or by another subject delegated by the first, giving rise to an annex NP.

⁸Obviously the term actor does not designate an anthropomorphic entity, yet the language used implies the recourse to inevitably anthropomorphised terms.

In the lexicon developed by Latour, rather than usage NPs and annexed NPs we find *deviations* and *delegations* which nonetheless refer to a similar concept of agency. Also in this perspective, the ability of actors to contribute to generating a transformation often turns out to be anything but linear, being marked by a sequence of changes of direction necessary to complete intermediate programs and by the transfer of programs between the various components involved.

A distinctive feature introduced by ANT compared to semiotic theory instead concerns the central role assigned to the associations that are established between different actors and, in particular, to the formation of hybrid actors located outside of traditional forms of textuality. In some cases, the combination between distinct actors may be limited to a function of an instrumental type, but in others it can radically modify an initial action program, contributing to the formation of a new actor who, as seen earlier, is not trivially reducible to the juxtaposition of two pre-existing elements.

The paradigmatic case proposed by Latour is that of an ordinary citizen in possession of a weapon, a "gunman" whose capacity for action is not explainable in terms of the simple juxtaposition of a human actor and of a technologically advanced object, but rather in terms of the formation of a new type of hybrid actor, the result of a symmetrical translation process (*citizen-gun*, *gun-citizen*) that modifies the status of both heterogeneous entities upstream of the association:

A good citizen becomes a criminal, a bad guy becomes a worse guy; a silent gun becomes a fired gun, a new gun becomes a used gun, a sporting gun becomes a weapon. The twin mistake of the materialists and the sociologists is to start with essences, those of subjects *or* those of objects. That starting point renders impossible our measurement of the mediating role of techniques. Neither subject nor object (nor their goals) is fixed (Latour, 1994: 33).

In this sense, unlike the theory of narrativity in which programs are clearly attributable to specific actors who occupy a precise position in the articulation of the narrative (syntax), for ANT action programs cannot be attributed to a single actor or narrative role but necessarily refer to an actor-network, an association between different agents variously connected to each other, a collective that from an ontological point of view represents more than the sum of its individual components.

In this network conception of agency, a decisive role is also assigned to the ability of an actor, for example an object, to act as a *mediator*, contributing to the formation of hybrids. To explain this process, Latour (1991b) uses the description of the functioning of a singular object: the Berlin key. The story is that of a condominium doorman whose main program could be summarized in the form of an utterance like: "please kindly always lock the door at night and leave it open during the day". To convince the tenants and carry out his program, the "hero" of the story can resort to a usage program, for example by pointing out to everyone the annoyance of having to constantly check if the door is locked, or alternatively resort to signs (attached program). Unfortunately, the success of this goal (seemingly elementary) is hindered by a large number of anti-programs that refer to a multitude of actors: thieves, doctors, postmen. To overcome the difficulty of overcoming these tests, a devised solution consists in forming an unprecedented association between the doorman, a new key of seemingly "surrealist" shape, and a special type of lock (Figs. 3.3 and 3.4).

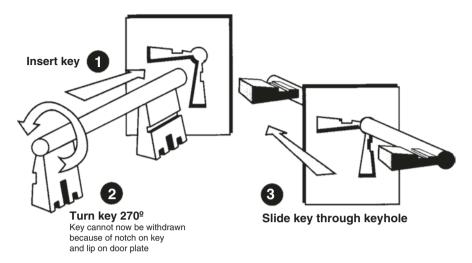


Fig. 3.3 Key operation—street side

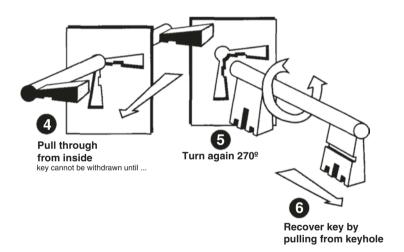


Fig. 3.4 Key operation—courtyard side

The Berlin key is an ingenious double model with two symmetrical ends, once inserted into the lock it cannot be removed as usual, this action is in fact forbidden, prescribed by a lock equipped with a special mechanism. Apparently, the only possibility for the subject to recover the key is therefore to pass it through the other side of the door. Even this action, however, is not enough, if the tenant gives up recovering it, he indeed loses his own competence and with it the ability to enter or exit the building. It is at this point that the subject is forced to perform the only resolving action which consists in turning the key one more time, closing the door behind him/her to finally regain possession of his/her precious "sesame". During the day this elaborate mechanism that replaces the role of the doorman is disabled and the

human subject again assumes the canonical function of controlling the flows in and out of the condominium.

The success of the initiative is due to the fact that the new key manifests the presence of a *script* that allows the action program to materialize ensuring that disobedient tenants close the door at night after entering the building. The story of this singular tool is useful to Latour to highlight two aspects that make the functioning of objects peculiar compared to the logic that ensures the functioning of textuality.

The first consists in the fact that an action program originally characterized by a verbal form transfers itself into a material object, assuming a materiality, thus translating into the key.

The second concerns the fact that in this translation operation mediated by the object, the agency of the key does not simply consist in expressing the same verbal content in a new form. If it were so, it would simply function as an intermediary, limiting itself to

[...] carry, transport, shift, incarnate, express, reify, objectify, reflect, the meaning of the phrase: 'Lock the door behind you during the night, and never during the day', or, more politically: 'Let us settle the class struggle between owners and tenants, rich people and thieves, right-wing Berliners and left-wing Berliners (Latour, 1991b: 18).

Rather, the association of key and lock implies a transformation on the level of agency, in other words it is configured as a real *mediator*, 9 a social actor who concretely realizes the preconditions that guarantee the successful outcome of the action program. The functioning of the device, in fact, is always to be understood in a relational, network perspective. The key exists (and possibly resists over time to the trials of strength to which it is subjected) only in function of the programs and anti-programs of all the other actors (human and non-human) involved. Only the association of individual actors ensures the realization of the action program, at the same time defining the meaning of the object. The failure of one of the actors involved not only implies the failure of the entire project but also the loss of the object's ability to signify. This is what could happen if someone managed to tamper with the door or the doorman forgot to disable the lock during daylight hours.

This clarification is important because it highlights that for ANT a technical object cannot be studied beyond what can be done with a human subject. Rather, the researcher always deals with a *device*, that is, with a concatenation of heterogeneous actants in which competences and performances are distributed.

In this perspective, explicitly in line with the anti-essentialist tradition, the actors, whether objects, concepts or processes, are therefore understood only as nodes of a network, acquire a semiotic dimension, and manifest a meaning, exclusively as a

⁹Latour clarifies the difference between the notions of intermediary and mediator in *Reassembling the social*. The first term is used to define what is able to transport meaning or force without transformations being involved, while the presence of a mediator implies a transformation of what it helps to transport, to circulate. In this perspective, an object (the typical case of technical objects) acquires and manifests agency to the extent that it assumes the function of mediator within the process in which it participates.

result of the relations that are established between them and that guarantee the realization of a common action program.¹⁰

Hybrid, as in the case of the gunman, is therefore one of the terms most frequently associated with Latour's work which, by virtue of its connection with the notion of actant, has not failed to arouse interest in contemporary semiotic research, 11 particularly regarding the strength of this concept in relation to the overall theoretical framework developed to account for the logics of production and circulation of meaning. Thus, if on the one hand the example of the gun has been invoked to recognize the originality of Latour's reinterpretation of the role that artifacts play in establishing and regulating a whole set of intersubjective relationships (objects not only do, but make do), on the other hand it has prompted a further exploration of the peculiarities that mark the semiotic perspective in the study of the modes of associations between humans and non-humans. The word hybrid, in fact, does not belong to the metalanguage of semiotics, which rather traces the analysis of associations between multiform elements to the distinction between actants and actors, that is, as previously clarified, to the difference between a deep level of the production of meaning, marked by the presence of abstract narrative roles, and a more superficial level, in which these instances take on a distinctive configuration, become visible, assuming a human, non-human or multiform shape. Thus, where the distinction between actant and actor in Latour can sometimes appear blurred, for semiotics a hybrid must be traced back to the principle of narrativity, as evidenced by another paradigmatic case of coexistence between humans and non-humans, that of the man-cellphone, where the tool is not reduced to a technological prosthesis that allows the exercise of some communicative practoces previosly impossible, but a real actor playing social roles only partially inscribed in its initial design (my trans.; Marrone, 2002: 29). In other words, the association between humans and nonhumans—in this case far from temporary if we think about the pervasiveness of smartphones in the daily life of every one of us—takes shape and consolidates over time because it necessarily refers to a deeper level of meaning, fulfils thematic and narrative roles, and gives shape to a new agent within a specific narrative situation. Just think that, if on the one hand, we consumers inscribe in the technological object a whole series of values, for example delegating to the device the function of guarding photos and messages invested with a sentimental value, on the other hand it is the artifact that acts towards us as a subject, constitutes the context of its own use, invests itself (for us and together with us) with a meaning. Perhaps, preparing by delegation a gallery of images that reminds us of special moments, bringing to our

¹⁰Law and Mol (1995, p. 277) explicitly use the expression "semiotic effect" to define the status of actors in ANT.

¹¹ In this regard, see the monographic issue edited by Isabella Pezzini and Paolo Peverini (2023) of ElC (37), journal of the Italian Association for Semiotic Studies, entitled The Society of Hybrids, which explores the relevance of the notion of hybrid against the background of the relationship between semiotic theory and the work of Bruno Latour. In particular, see the contributions by: Paolo Peverini (2023b), Gianfranco Marrone (2023), Alvise Mattozzi (2023), Dario Mangano (2023), Ilaria Ventura Bordenca (2023), Tatsuma Padoan (2023).

attention an object of value that solicits a cognitive and emotional reaction, inviting us to action, to share it with others, to celebrate it.

Thus, as we will see in the final part of the book, the moment we acquire a smart object today, we contribute to the construction of a new actor with an action program that brings with it a new intersubjective situation in which the humans involved will be led to experience a series of entirely peculiar relationships. This contribution is made through translation, that is, through a series of shifts and delegations involving multiple entities. Thus, if on one hand semiotics reaffirms, despite Latour's criticisms, the full relevance of narrativity as a principle around which to account for the meaning acquired by associations between humans and non-humans (the resulting actors are liable to act as senders, subjects, helpers ... but also to assume a number of thematic roles, for example a smart watch promises to be our best personal trainer), on the other hand the relevance of his reflection on hybrids is anything but irreconcilable with the overcoming of the distinction between text and context employed by sociosemiotics itself. As Marrone (my trans.; 2002: 30–31) clarifies: "the textual nature of the object, its expressive and semantic configurations are not inscribed in the object taken in itself, as ontological properties that it possesses, so to speak, from birth, by nature or by design intent". Rather, as we have seen and as will further develop in the following pages, the meaning of an artifact resides in the set of intersubjective and inter-objective relations that take shape from it and around it, assuming value for us. In short, Latour's criticism of a semiotics considered excessively anchored to the canonical forms of narrativity does not take into account a very relevant turn in the discipline that has long since rethought the notion of text, understood now not as an object whose boundaries are conventionally defined, for example a novel, but rather as a model of analysis of social phenomena, in which closure is not ontologically given but constitutes one of the criteria for textuality to occur.¹² Once again, therefore, what emerges from the comparison of these two interpretive tracks is not so much an unbridgeable gap that affects the epistemological plane, but rather a methodological misalignment in the trajectories to follow to explore meaning in action. A gap that is certainly worth exploring, as we will try to do in the subsequent chapters.

3.5 From Nature/Culture to the Collective

The role played by the notion of hybrid in overcoming the distinction between subject and object is central in the work of Latour, who in *We Have Never Been Modern*, as mentioned earlier, aims to demonstrate the existence of a glaring paradox: that of a modernity that insists on separating nature and culture, denying the existence of

¹² On this important development in the field of semiotic research see Introduction to the Semiotics of the Text by Gianfranco Marrone (2021).

increasingly numerous associations of multiform entities that itself incessantly produces.

The theoretical reflection on the crisis of modernity arises from the hypothesis that the expression "modern" refers to two types of processes that need to be clearly separated in order to function, although in reality they are strongly linked to each other.

The first type of practice manifests itself as a work of *translation* or of *mediation* that enables the association of new entities that take shape from the hybridization of nature and culture.

The second action, specular to the first, is defined, as mentioned, *purification*, and consists in concealing the assemblage process necessary to shape a hybrid. This work of cancellation produces as a result the formation of two distinct and apparently ontologically irreconcilable areas, one inhabited by humans and the other by non-humans.

Upon a thorough analysis, the two practices reveal themselves to be deeply connected to each other. The incessant proliferation of associations between hybrids (humans and non-humans) indeed provides the material for the action of purification which in turn, insisting on reducing the multiplicity of the elements involved within clearly distinct categories, allows the practice of translation to continue. Latour clarifies

The first set corresponds to what I have called networks; the second to what I shall call the modern critical stance. The first, for example, would link in one continuous chain the chemistry of the upper atmosphere, scientific and industrial strategies, the preoccupations of heads of state, the anxieties of ecologists; the second would establish a partition between a natural world that has always been there, a society with predictable and stable interests and stakes, and a discourse that is independent of both reference and society (Latour, 1993b: 11).

The essence and the crisis of modernity are therefore traced back to the presence of an apparently insurmountable separation between two dimensions: that of science and that of politics, to a forced dissociation in which the representation of nature, which manifests itself characteristically in the practice of the laboratory, appears destined to be inexorably separated from the political representation guaranteed by the social contract. The paradox of modernity is expressed, consequently, also in the "crisis of critical stance", in the difficulty of offering a perspective of exhaustive analysis of contemporaneity, in other words in an impasse that manifests itself once again in the unbridgeable distance between three different interpretative approaches to the world: *nature*, *politics*, *language*.

The first (*naturalization*), typical of the so-called exact sciences, aims to account for the so-called naturalized facts, in this way excluding the social dimension of phenomena and the role played by the languages used to provide a representation; with the second (*socialization*) the perspective instead shifts to the critical study of the social dimension of power, relegating to the margins, or completely erasing, science, technique and the dimension of content; the third repertoire of the critique of modernity, finally (*deconstruction*), explicitly concerns the investigation into the meaning that, by highlighting the dimension of language, representation, text, and

discourse, would end up ignoring the nature of phenomena and the social context in which they manifest and circulate.

Each of these critical approaches, while undeniably expressing its own strength, appears irreconcilable with the others. It is from this observation that the project to explore the associations between facts, power and discourse moves, trying to re-tie a "Gordian knot" around the notion of network, understood (recall the example of a technical object like the Berlin key), in terms of a translation process. To describe the peculiarity of networks, Latour significantly resorts to some metaphors of space, clarifying how they allow to cross the "borders of the great fiefdoms of criticism: they are neither objective nor social, nor are they effects of discourse, even though they are real, and collective, and discursive" (Latour, 1993b: 6). And again: (Latour, 1993b: 6–7).

[...] The tiny networks we have unfolded are torn apart like the Kurds by the Iranians, the Iraqis and the Turks; once night has fallen, they slip across borders to get married, and they dream of a common homeland that would be carved out of the three countries which have divided them up.

Following the networks, undertaking a meticulous and systematic description allows to grasp their entirely peculiar characteristics that make them "simultaneously real, like nature, narrated, like discourse, and collective, like society" (ibid). Reconstructing the logics of mediation and delegation that regulate the association between multiple actors thus produces the outcome of revealing the fallacy of a great double division, which opposes nature and culture on one hand, and the so-called moderns and the premoderns on the other.

Now, Latour recalls, recovering the fundamental work of Lévi-Strauss (1952), what characterizes the premoderns is precisely the ability to develop a monistic conception of their own nature-cultures, avoiding acting, unlike the moderns, by dissociation.

The native is a logical hoarder: he knots threads together without rest, indefatigably folding all the aspects of the real, whether physical, social, or mental, upon themselves. We traffic in our ideas: he hoards them as his treasure. Wild thought puts into practice a philosophy of finitude (Lévi-Strauss, 2021: 303).

For the premoderns, the presence of a mixture between natural and social order makes it impossible to modify the former without a change in the latter. Since "every monster becomes visible and thinkable and explicitly poses serious problems for the social order, the cosmos, or divine laws" (Latour, 1993b: 42), this results in an attitude of utmost caution. Completely different is the case of the moderns, defined as "victims of their own success", unable to account for the increasingly evident short circuit generated by the hybrid actors taking shape from the encounter of multitudes of humans with a nature no longer distant and dominable—as in the case of the ozone hole or the greenhouse effect.

Where are we to put these hybrids? Are they human? Human because they are our work. Are they natural? Natural because they are not our doing. Are they local or global? Both. As for the human masses that have been made to multiply as a result of the virtues and vices of medicine and economics, they are no easier to situate. In what world are these multitudes to

be housed? Are we in the realm of biology, sociology, natural history, ethics, sociobiology? This is our own doing, yet the laws of demography and economics are infinitely beyond us. Is the demographic time bomb local or global? Both. Thus, the two constitutional guarantees of the moderns—the universal laws of things, and the inalienable rights of subjects—can no longer be recognized either on the side of Nature or on the side of the Social. The destiny of the starving multitudes and the fate of our poor planet are connected by the same Gordian knot that no Alexander will ever again manage to sever (Latour, 1993b: 50).

Admitting that we have never been modern means then to operate a counterrevolution, accepting the challenge of overturning an apparently indisputable perspective. The poles of the object and the subject/society will no longer be understood as the irreplaceable assumptions to anchor the explanations of contemporaneity, but rather as a meaning effect (stabilization). In other words, the result of a ceaseless practice of purification that masks the networks of mediation and translation in which different actors operate and which will become the real field to explore, the terrain in which to venture. Since the entities (intermediaries and mediators) involved in the construction of the collective can assume different modes of existence 13 in the trajectory of the associations in which they are involved, to account for the mixtures that shape the hybrids it becomes essential to connect the separate perspectives of interpretation of modernity. Among these, a decisive role is once again assigned to the pole of discourse, therefore to semiotics, but on condition of considering it no longer separately, as a world unto itself, but rather as "a population of actants that mix with things as well as with societies, uphold the former and the latter alike, and hold on to them both" (Latour, 1993b: 90).

The recourse to semiotics is manifested again with clarity and, once again, is accompanied by a critique that does not concern the legitimacy of the discipline on the epistemological plane, but rather the perimeter of its radius of action and the ways of its application. In particular, as highlighted previously, Latour's objection focuses on a conception of textuality considered reductive because excessively centred on the model of natural language, which would prevent recognizing the narrative dimension inherent in the functioning of the real world, in other words to understand things as narratives and at the same time texts as tools of social ties. However, note again that Latour advances these critical considerations in the early Nineties, that is, in a phase in which the discursive turn of semiotics, aimed at extending the notion of text from object to model of analysis and examining social phenomena understood as multifaceted discourses, had not yet consolidated. In any case, in the project of critical analysis of modernity, the decisive role assigned to ethnology is reiterated, considered an essential perspective to trace the incessant work of translation carried out by the actants. Latour envisions the contribution made by an anthropology "returning from the Tropics", capable of applying to the modern world the principle of generalized symmetry that allows the researcher to take a position in the intermediate space that unfolds between the poles of nature and culture, a strategic point to observe the practices through which multiple actors take shape, endowed with human and non-human properties. In this perspective, for

¹³Latour's reference to the presence of "variable-geometry entities" is significant.

example, a Marc Augé would not consider only "[...] some graffiti on the walls of subway corridors", but "the sociotechnological network of the metro itself: its engineers as well as its drivers, its directors and its clients, the employer State, the whole shebang—simply doing at home what he had always done elsewhere" (Latour, 1993b: 100–101).

The recourse to anthropology here assumes a strategic value as it highlights how the separation between a universal nature (mononaturalism) and a multiplicity of cultures (multiculturalism) is overcome by the observation of the functioning of networks composed of hybrids. By observing the mediation practices of the "moderns", one can detect how the assemblages of human and non-human actors are the result of *natures-cultures* that are precisely called *collectives*. This term is introduced to reiterate that the outcome of the association between distinct entities does not coincide with the sociological notion of society that focuses on the ties between humans, nor with that of nature elaborated in the context of epistemology and that concerns things in themselves. In the perspective of symmetric anthropology, both the moderns and the non-moderns cannot refrain from summoning and redistributing elements of the natural world and entities of the social. In continuity with what was highlighted in the work on science in action, what changes is the number of components involved, the properties that are assigned to them, the associations considered acceptable, and the extension of the networks they become part of.

At the beginning of the weighing-in process, a nuclear power plant, or a hole in the ozone layer, or a map of the human genome, or a rubber-tyred metro train, or a satellite network, or a cluster of galaxies, weighs no more than a wood fire, or the sky that may fall on our heads, or a genealogy, or a cart, or spirits visible in the heavens, or a cosmogony (Latour, 1993b: 108).

The differences, in other words, concern the degree of mobilization of the elements involved, the size of the collectives that in "modernity" are characterized by a proliferation of non-humans and the increasingly close relationship they maintain with humans. From this perspective, what distinguishes the moderns is therefore the invention of particularly extensive networks, the considerable breadth of associations between distinct entities, recruited in places very distant from each other, but always endowed with the ability to produce a transformation in the translation process in which they are involved, acting as actants. ¹⁴ The profound rethinking of the notion of agency on which Latour's thought is based thus translates into the proposal of a new model of democracy conceived to respond to the need to offer representation to the collectives that shape contemporaneity, a new constitution tasked with "replacing the mad proliferation of hybrids with their regulated and jointly

¹⁴ See in particular the work of Latour with Shirley Strum (1987) on the comparison with the complex sociality of primates, essential to confirm that the peculiarity of the moderns does not consist at all in the construction of the social but rather in the ability to delegate action to a multitude of entities, to deviate their trajectory, to translate a whole series of operational schemes within progressively more complicated technological tools. In the network of assemblages on which the life of the moderns is based, objects thus reveal themselves as an indispensable component, manifesting a meaning long underestimated by the social sciences.

decided production". Essentially a democracy extended to the *missing masses* of sociological thought: the artifacts.

Recognizing the existence and proliferation of a multitude of non-human agents is therefore an essential step to explore "the enigma of their association", to attempt to account for the way in which the very idea of nature inevitably implies a political value. Latour does not fail to reiterate this ¹⁵ in *Politics of Nature*, a famous work aimed at claiming once again the urgency of recognizing the existence of the concatenations of humans and non-humans, with the aim of guaranteeing a *representation* understood in the proper sense of political sciences, that is, as a space for deliberation capable of sanctioning their reunification in view of the desired participation in a future common world.

As soon as we add to dinosaurs their paleontologists, to particles their accelerators, to ecosystems their monitoring instruments, to energy systems their standards and the hypothesis on the basis of which calculations are made, to the ozone holes their meteorologists and their chemists, we have already ceased entirely to speak of nature; instead, we are speaking of what is produced, constructed, decided, defined, in a learned City whose ecology is almost as complex as that of the world it is coming to know (Latour, 2004: 35).

The collective is therefore conceived as the new political model tasked with accounting for the cohabitation of human and non-human members, as an organization tasked with verifying the possibility of composing a world capable of associating multiform agents. Significantly, once again, this term is distinguished from that of society, considered inadequate because it is based on the stubborn distinction between the world of objects and the world of subjects, a separation that would hinder the description and understanding of the dynamic procedures of association between composite actants.

In this perspective, therefore, the collective does not designate an already constituted reality, it should not therefore be understood in the singular, rather it is a procedure to test the multiple associations between candidates for action.

The double operation that consists, on the one hand, in the recourse to a theory of relational and non-anthropomorphic action and, on the other, in its extension from the realm of the narrative to that of the social sphere, thus highlights how non-humans can be considered in all respects as social actors. Provided that we abandon the strict laws of causality on which the prejudice that reduces non-humans to simple objects is based and recognize, at least initially, the status of an uncertain, provocative entity.

Actors are defined above all as obstacles, scandals, as what suspends mastery, as what gets in the way of domination, as what interrupts the closure and the composition of the collective. To put it crudely, human and nonhuman actors appear first of all as trouble- makers. The notion of recalcitrance offers the most appropriate approach to defining their action (Latour, 2004: 81).

¹⁵ See in Politics of Nature the entries "actant, actor" in the glossary and the use of a minimal definition of action developed within the framework of Greimas' semiotics.

What guarantees the formation and maintenance of a hybrid actor is therefore the *transfer of agency* between different elements, the set of *delegations* and *mediations* that allows a relationship to be established between heterogeneous entities endowed with different modes of existence. In Latour's thought, as we will see in the next chapter, this process is defined as *enunciation*.

3.6 The Social as Association. From Utterance to Propositions. The Principle of Articulation

Further proof of Latour's aptitude for employing and extending notions elaborated to account for the functioning of languages is the term *proposition*, a keyword used to account for the peculiar modalities that characterize the associations between multiform entities within a collective. In *Politics of nature* the ways that allow to start a "civic work of collection", that is, a set of practices capable of potentially ensuring the reunification of multiple actors, are examined.

The choice of this term is justified by the need not to resort to the notion of utterance, considered insidious because it is thought, once again, to be reducible to the separation between language and world, to the irreconcilable detachment between the domain of discourse and that of facts which, as seen in the previous sections, constitutes an illusion rooted in modernity. Behind this choice there is thus, once again, a critique of the mononaturalism-multiculturalism dichotomy, of the idea of an abyssal detachment between a single world and a multiplicity of languages, united by a bridge as thin, as ineffective, that of *reference*.

In the perspective of the political ecology explored by Latour the focus shifts rather on the need to reunify distinct entities characterized by the capacity to produce a transformation, giving shape to a network-type agency that escapes a rigid articulation, constituting itself rather as distributed both in space and in time. The term proposition is therefore no longer understood in the canonical terms of the philosophy of language, that is, as the designation of a being of the world or of a linguistic form, but rather in terms of a *proposal* that allows an unprecedented association of humans and non-humans to be taken into consideration in the process of forming a collective.

In this sense, the proposition, deprived of its anthropomorphic connotation, represents the way in which the instances of a civil cohabitation characterized by "variable degrees of reality" (2004: 83) manifest themselves, as in the case of "a river, a troop of elephants, a climate, El Niño, a mayor, a town, a park", which express the presence of needs which are different but strongly linked to each other (ibid).

According to this perspective, which clearly extends well beyond the dimension of natural language, the proposition allows both human and non-human actors to manifest their presence, to bring out new modes of association, unpredictable concatenations of hybrids composed of an implementable repertoire of different elements, potentially open to new entries, capable of enriching and at the same time

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complicating the overall articulation of the whole. The proposition is therefore considered as the opposite of an utterance, here understood in terms of an assertive affirmation, as it consists in the proposal of a mode of existence that allows an entity to manifest its own contribution within a phenomenon of wide scope, the outcome of which is not foreseeable *a priori*.

If an actor is therefore defined as anything that modifies another within a trial, expressing its own agency in the capacity to associate with other entities, its proposition coincides with the elementary actions it is able to exercise in the set of concatenations in which it is involved. While utterances are judged on the basis of their reliability, that is, the truth or falsehood they express, the criterion for accounting for propositions is the soundness of their concatenation, which is defined as *articulation*.

Once again, the reference to linguistics is clear, however Latour reiterates how the choice of this term is also dictated by its current use in other fields such as anatomy and law, covering a wide range of connotations that are also valuable in accounting for the "insistent reality of material things" in determining social phenomena.

We shall say of a collective that it is more or less articulated, in every sense of the word: that it "speaks" more, that it is subtler and more astute, that it includes more articles, discrete units, or concerned parties, that it mixes them together with greater degrees of freedom, that it deploys longer lists of actions (Latour, 2004: 86).

Since it is no longer possible to recognize the distinction between a nature and several cultures, the good articulation of a collective passes through the ability to recruit a collection of potential actors whose integration must in any case be put to the test, in the set of propositions that they are able to manifest and that testify, only *a posteriori*, their competence. Overcoming the seemingly insurmountable opposition between the two poles of subject and object, the term social thus gives way to that of *association*. The utterance understood as a component of human language that seeks to verify its own adequacy to the world of objects through an operation of reference, is therefore reimagined as what is produced by the collective interrupted in its exploration of the common world. This change of perspective thus shifts the focus onto the circulation of agency, that is, onto the ability to effect a transformation by passing through different modes of existence, in other words, on the *enunciation*.

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Chapter 4 Enunciation



4.1 Starting from Débrayage/Embrayage

The concept of enunciation plays a decisive role in the development of Latour's theoretical reflection and, as anticipated in the first chapter, it already appears in the first fundamental article dedicated to the rhetoric of the scientific text. This notion, although less widespread within the ANT compared to those of actant and actor, actually turns out to be the object of constant discussion and a theoretical investigation that are particularly significant for a reflection on the logic of the production and circulation of meaning. As highlighted in the previous chapters, even in the case of enunciation, Latour's move is indeed divided into two phases. On the one hand, his action consists in resorting to a pre-existing and very detailed theoretical and methodological framework, that of structuralist semiotics, extending its application. On the other hand, this expansion on the side of application is progressively accompanied by a proposal for terminological revision that affects both the methodological dimension and the more properly theoretical one of the investigation into the ways in which meaning is articulated and manifested.

The presence of a constant dialogue with semiotic theory focused on the category of enunciation, is particularly evident in an essay from 1988 titled "A Relativist Account of Einstein's Relativity". The premise from which the work begins is that, as the first studies on the tactical and persuasive use of language in scientific texts have shown, scientific discourses lend themselves to being analysed, at least in part, in the same terms with which the functioning of literary discourse is investigated. In this perspective, the objectivity of the scientific fact is indeed rethought as *objectification*, that is, as a meaning effect generated by the ability to stratify the text in levels, to construct internal reference chains. Consistent with the perspective advanced by Greimas, according to which the functioning of the scientific text is based on the ability to produce an objectifying camouflage through the cancellation of the traces that refer to the instance responsible for its construction, Latour does not hesitate to resort to the categories of *débrayagelembrayage*, recognized as one

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of the basic tools for the analysis of texts, conceiving Einstein's text in terms of a true and proper narrative.

The recourse to the semiotic perspective on enunciation is clearly manifested in this work, particularly in the passage which states that "if there were no shifting, there would be no way of ever escaping from the narrow confines of hic et nunc, and no way of ever defining who the enunciator is. There would be utter silence" (1988: 9). And again: "This is the basis of what has been called the 'semiotic turn': nothing can be said of the enunciator of a narration if not in a narration where the enunciator becomes a shifted-out character" (1988: 27). This basic assumption thus allows us to examine the work of the scientist in terms defined by the analysis of narrative programs.

Latour's aim, however, is not merely to apply the semiotic methodology and concepts to the specific case of a scientific narrative, what interests him is rather to highlight how in the text the operations of débrayage and embrayage are used in order to focus the reader's interest, to catalyse his/her attention. In particular, he observes how in Einstein's text the functioning itself of the scientific description consists in subjecting the actants to a series of *displacements*, to a sequence of changes in position between different reference planes that proves functional to involve the reader in a targeted way. Thus, at one point in the text, the débrayage of an element can be used to shift the recipient's attention to what happens to an actant in a defined space and time, while the reverse operation (embrayage) that enables the return to a previous position, the one where the subject responsible for the description is located, contributes decisively to produce the referentialization of the text, the meaning effect of "reality".

The conclusion that Latour reaches is that in his text, Einstein does not so much describe the laws of nature, as rather what makes possible the functioning of any type of description, that is the procedures of shifting, mediating and delegating actants.

4.2 From Signs to Things, from Things to Signs

The use of the theory of enunciation as a decisive tool for the critical analysis of modernity characterizes the start of a reflection that therefore, not by chance, is focused on the logics of functioning of scientific texts. In this first phase the consolidated categories of débrayage and embrayage are used by Latour in substantial coherence with the semiotic perspective on narrativity.

A significant shift is instead realized in the moment in which there is an expansion on the side of the phenomena investigated, with the growing attention paid to objects, and the material manifestation that the construction of scientific facts assumes. Latour's reflection thus focuses on the so-called *problem of reference in science*, that is to say on the issue relating to the relationship that is established between the forms of scientific discourse and the object of research, between the words of science and the phenomena to which they refer. In particular, the stated

objective now consists in questioning the assumption on which the theory of scientific realism is based, that is the idea that there is a fundamental discontinuity between language and reality, an irreconcilable separation between the words of science and the (supposed) truth of the world.

The terms of the question are proposed in a clear and provocative way in *Pandora's Hope* in which Latour questions the peculiarities that distinguish the procedures of referentialization at play in the experience of daily life from those constitutive of scientific discourse.

If I say that "the cat is on the mat," I may seem to be designating a cat whose actual presence on said mat would validate my statement. In actual practice, however, one never travels directly from objects to words, from the referent to the sign, but always through a risky intermediary pathway. What is no longer visible with cats and mats, because they are too familiar, becomes visible again as soon as I take a more unusual and complicated statement. If I say "the forest of Boa Vista advances on the savanna" how can I point to that whose presence would accord a truth-value to my sentence? How can one engage those sorts of objects into discourse; to use an old word, how can one "educe" them into discourse? (Latour, 1999: 40).

A first possible answer to these questions could consist in highlighting once again what emerged from the earliest studies dedicated to the rhetoric of the scientific text, that is the capacity of the latter to resort to a multitude of textual forms (diagrams, graphs, equations, maps etc.), to mobilize an internal referent, in short, to exhibit its own truthfulness to convince the recipient. However, as seen previously, this solution seems inevitably destined to clash with the practices of validation of scientific utterances that require proving the reliability of what is represented in the rich and complex iconographic apparatus commonly used to describe the phases of research. What do diagrams and tables in a scientific article actually refer to? Isn't it necessary to reintroduce an external referent as the only guarantee of their verifiability? And if this external referent exists, how is it possible to bridge the seemingly unbridgeable distance between the two ontological domains of language and nature?

It is around these questions that Latour's proposal takes shape, intent on demonstrating that it is not necessary to resort to an external referent to account for the functioning of scientific discourse. The thesis he intends to prove is that there is no constitutive gap between things and signs, rather the link between nature and its representations is formed by the effect of a complex logic of mediation in which referentialization does not consist in a simple referral "from signs to things" but in a process of *circulation* that takes shape within a chain of translation operations. The expression introduced to indicate this processual vision of enunciation is *circulating reference*.

The methodological premise from which Latour's proposal begins is that the best way to understand how scientists relate to the natural world is to follow what they do best, and which is widely encoded in protocols recognized as a guarantee of the validity of research, that is to describe the details of the *scientific practice*, thus joining a team of field specialists. The expedition in question is composed of experts in pedology, a discipline that studies soil formation. The choice of the scientific field

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is far from marginal, since at this stage Latour is interested, as an anthropologist of science, in shifting attention from the preconstituted space of the laboratory, emblematic space of a stabilized science, whose operation inevitably relies on an "indefinite sedimentation of other disciplines, instruments, languages, and practices" (1999: 30), to the field expedition of a scientific discipline still in its debut, subject to hesitations and therefore fragile, "forced to create itself from scratch in a direct confrontation with the world" (ibid).

The account of the expedition, aimed at understanding the scope of the transition process underway in an area of Brazil between the spaces occupied respectively by the forest and the savannah, thus takes the form of a detailed scientific narrative, a diary designed to document and reconstruct, with the help of numerous photographs, the sequence of the various phases that make up the work on the territory and which here is useful to quickly retrace.

In the start-up part of the research project, the scientists, after having chosen the area to examine, affix numbered labels on the trees, preparing the natural space of the forest to transform into a real open-air laboratory. In particular, a portion of land is circumscribed, divided into squares, to demarcate the space of the experiment. Subsequently, in order to obtain soil samples, holes are dug in the ground and the relative distances are measured with the aid of a wire instrument, the topofil.

The next step consists in taking a series of leaf and soil samples within each square. The selected organic material is then subject to further treatment, it is inserted inside a square wooden structure composed of a series of compartments, which we have mentioned earlier: the pedocomparator. The placement of the soil samples in the case is not random but, thanks to the use of the numbered labels and the topofil, faithfully reproduces the square structure of the entire forest area chosen to conduct the experiment. In this way the technical object makes visible something previously imperceptible, representing the composition of a natural element (the soil) through the mediation of the artificial delimitation of a portion of territory.

At this point the instrument and the content that inside takes a structured form, thanks to the comparison of the various samples, are ready to be transformed into a diagram and this, in turn, to be stated in textual form in the scientific article.

The observation of the functioning of an apparently "mute" instrument, such as the pedocomparator, actually reveals a wealth of implications for a reflection aimed at demonstrating how science can be "at the same time realist and constructivist, immediate and intermediary, reliable and fragile, near and far" (1999: 30).

This device, with its handle, wooden frame, and padding, at first glance seems nothing more than a tool designed to ensure the orderly conduct of a research protocol. However, the regularity of its squares, the abstract organisation of its structure, the arrangement of space in rows and columns endow this object with a capacity for signification: to give an order and a meaning to the material it contains, in other words, they allow it, at the same time, to act as a 'sign'. Or rather, Latour specifies, it is through the "cunning invention of this hybrid" device that the world of things can translate into a sign, assuming a form that allows it to express a meaning. In other words, the artifact reveals itself to be invested with a semiotic pertinence and relevance.

This transition from a state of the world to its representation through the action exerted by an artificial instrument proves crucial to extend the reflection on enunciation. It is here, in fact, that Latour proposes to consider, alongside the traditional modes of débrayage and embrayage that in a narrative allow a given actant to leave the initial coordinates (I, here, now) by projecting himself forward or to return to the starting point, a new type of operation: the *material shifting*.

This expression is introduced to describe the specific ways in which *technical enunciation* operates, that is, the repositioning, in a series of progressive reference frames, of the human and non-human elements that make up, in their concatenation, a device. Observing researchers in action in the field and taking part in the experiment, Latour notes how in every phase of scientific practice a transformation of the involved elements takes place, precisely a transition from the dimension of the concrete materiality to that of its abstract representation. The ground object of the study, in its concreteness, becomes something else, once housed by the scholars in the cardboard cubes. "[...] the earth becomes a sign, takes on a geometrical form, becomes the carrier of a numbered code, and will soon be defined by a color" (1999: 49).

This *type of transition* from thing to sign is called *shifting up*, and plays a decisive role in the sequence of transformations that define experimental practice. In every phase, any element involved in the description of the study

belongs to matter by its origin and to form by its destination; it is abstracted from a too-concrete domain before it becomes, at the next stage, too concrete again. We never detect the rupture between things and signs, and we never face the imposition of arbitrary and discrete signs on shapeless and continuous matter. We see only an unbroken series of well-nested elements, each of which plays the role of sign for the previous one and of thing for the succeeding one (1999: 56).

Thus, if on the one hand the operation of *shifting up* operates a detachment from the materiality of things, or more precisely from their substance of expression, on the other hand it enables significant gain on the level of knowledge of phenomena which consists in compatibility, standardization, textualization, and measurability through calculations.

Returning to the role played by the pedocomparator, which at this point can be understood in all respects as a non-human actor endowed with agency, it can be noted how its status changes in function of translation operations that in the course of the experiment put it in relation with what precedes it (the ground) and with what follows it (the various forms of representation, such as a two-dimensional diagram). If in the first passage the technical object gives a shape to the organic matter, in the second it itself goes through a process of abstraction and its functioning is conveyed by a new vector which consists of a new type of *inscription*, in this case a new elementary form of mathematical thought.

This process of moving from the concreteness of matter to the abstraction of its formal representation consists in a real *trajectory* that can also be travelled in the opposite direction, allowing evidence of the transformations performed during the experiment to be recovered and thus ensuring the value of scientific research. The reverse movement from signs to things is symmetrically called *shifting down* and in

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the case of the research carried out by the scientists it manifests in the process of returning to the substance of the expression of heterogeneous materials, such as the paper used to draft the project reports, the wooden box, the pieces of wire of the topophile, the tools used to dig the soil and extract the samples or leaves.

A relevant consideration on the theoretical level is that the concatenation of elements can potentially be extended indefinitely on both sides of the process. This means that, regardless of the ability to trace back the chain of transformations involved in the construction of a device, one never returns to a final external referent. In this sense, reference is no longer understood as the property of a linguistic act of referring to a plane of reality, but rather as the characteristic of an observed phenomenon to remain constant through the chain of transformations that take shape from its study. In this processual vision of the relationship that is established between nature and its representations, defined with an effective metaphor as a "long cascade" (1999: 58), the possibility for an element to endure over time, to be transported further and faster, increases in relation to its capacity to overcome a sequence of trials, to undergo transformations at each stage. The scientific procedure followed by the team working in the Boa Vista forest thus enabled them not only to transform a natural element (soil samples) into something transportable (pedocomparator, graphs etc.), but to keep track of the entire process, maintaining constant some information about the object of analysis (the composition of the soil). The wooden box and the documents that originate from it are not only material inscriptions in which the content conveyed by the elements that precede them is translated, but they act as "immutable mobiles" making possible, in their concatenation, the circulation of the reference, that is to say the enunciation of nature.

The idea of reference is thus radically rethought in terms of a chain of translations that involves a series of referents internal to scientific practice. This does not mean at all to argue that everything is language and that without a system of representation it is not possible to perceive the real world, but rather that the ability to produce meaning around nature cannot disregard a process of delegation and mediation between multifaceted elements.

How can we qualify this relation of representation, of delegation, when it is not mimetic yet is so regulated, so exact, so packed with reality, and, in the end, so realistic? Philosophers fool themselves when they look for a correspondence between words and things as the ultimate standard of truth. There is truth and there is reality, but there is neither correspondence nor *adequatio*. To attest to and guarantee what we say, there is a much more reliable movement—indirect, cross wise, and crablike—through successive layers of transformations [...] At each step, most of the elements are lost but also renewed, thus leaping across the straits that separate matter and form, without aid other than, occasionally, a resemblance that is more tenuous than the rails that help climbers over the most acrobatic passes (1999: 64).

The attack on realist epistemology is now more explicit than ever. There is no longer a need for an external referent because there is no great void to fill between text and context. If the reference is what remains constant through a series of controlled transformations, the level of reliability of the discourse on nature can only manifest itself in the *quality of the chain of translations* that characterizes the practices of scientific description.

4.3 A Little Philosophy of Enunciation

The centrality of the notion of enunciation becomes even more evident in an article published in 1999,¹ titled *Petite philosophie de l'énonciation*, in which Latour explicitly proposes to extend his reflection on the modes of meaning production beyond the boundaries defined by Benveniste's linguistic theory and structuralist semiotics, while recognizing the validity of some basic assumptions.

Once again, the starting point is Greimas' theory that clearly distinguishes the enunciation as it is installed, inscribed in the discourse in the form of a series of marks that help the competent speaker make sense of the utterance and which constitute the object of semiotic analysis, from the enunciation considered as a concrete act of discourse production, as a situation preceding its realization. This perspective therefore does allow us to disregard enunciation as an act of discourse, refusing to include in the analysis the social, economic, material, psychological or pragmatic factors that circumscribe the utterance.

While recognizing the importance of detaching the study of signification from its context which "like the ether of physicists, is a superfluous hypothesis" (my trans.; 2017: 10), Latour however explicitly distances himself from a restrictive notion of enunciation, that is, from an approach to the analysis of the phenomenon circumscribed solely to forms of textual manifestation of meaning. What interests him, in particular, is to try to go beyond the semiotic perspective that conceives of enunciation as the first sending, as the passage from a syncretism in the presence of 'I-therenow' to the text, following rather the trajectories of other forms of transmission, modes of passage that regulate regimes of enunciation that are not necessarily of a linguistic kind and that may also turn out to be very different from those with which the analysis of narrative texts has been measured from the beginning.

The project of a philosophy of enunciation takes shape exactly here, from the consideration that there is room for manoeuvre to extend the reflection from the field of analysis traditionally relevant for the theory of signification, that is, the narrative, to a much wider plane of relevance, that of *existence* and the various ways in which it forms and manifests itself.

The first move then consists in starting again from the etymology of the word enunciation (*ex-nuncius*) which refers to the action of sending a messenger, a *nuncio*. In this sense, enunciation is therefore understood as a process, a movement. The figure used to clarify this approach is that of the *passage in ball games*, here evoked to highlight the presence of a binding property of the concept which consists in the primacy assigned to the *transfer*, to the *transformation*, to the *substitution*. This example is used to clarify the ontological postulate on which the rethinking of enunciation is based, which consists in assuming that what we start from is a *continued and risky existence* and not an essence (I-here-now), a *presence* and not a permanence. This position implies the refusal to accept as a starting point any being that

¹ Originally published in P. Basso, L. Corrain (eds) (1999), Eloquio del senso. Dialoghi semiotici per Paolo Fabbri. The essay was then published with a new translation and with a note by Jacques Fontanille by Aracne publishing house in 2017. We will therefore refer to the new version.

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has not emerged from the relationship itself. This approach therefore does not operate at the level of the utterance, it does not aim to find in the text (level n) the traces of an author logically presupposed (level n-1). Rather, the enunciation is conceived as a way to go beyond the established figures of the *enunciator* and the *enunciatee*, to break their consistency, their apparent solidity, both with reference to anthropomorphic individual actors (the subject) and collective actors (the institutions).

In these terms, it is evident how the transition that occurs in Greimas' semiotics between an instance of external enunciation—responsible for the foundational act of constructing the utterance—and the installation within it of spatial, temporal, and actorial coordinates is considered too broad and discontinuous.² The postulate of a syncretism of I-here-now as the starting stage of enunciation is thus abandoned, in its place comes the idea of the "continuity of a force exerted" that manifests within a series of relationships that extend beyond those circumscribed to the presence of human beings, to language mediation, to communication.

The second move made by Latour thus consists in starting from an elementary definition of relation, elaborated since the origins of philosophical thought:

[...] as a certain mixture of same and other: A is B [...] is the passage, the transformation, the substitution, the translation, the delegation, the signification, the sending, the embrayage, the representation of A through B. All these terms are equivalent, that is, they designate in their own way the movement of passage that maintains presence (my trans.; 2017: 11).

The first regime of enunciation thus consists of a non-anthropomorphic type of relationship in which not only is the message absent, but the asymmetry between the roles of enunciator and enunciatee, which is instead a necessary condition for the constitution of communication, is completely lacking. This minimal form of débrayage, seemingly so bizarre and "alien", is actually the most common, it is in fact the *Reproduction* among living beings.

The distinctive characteristic of this form of enunciation consists in the ability of an enunciator (the living being) to transfer itself into a simile or near simile to realize a passage without message from body to body, the outcome of which is duration. Where then to find the marks of this passage-transfer so far from the familiar forms of the utterance, in which dialogue is completely absent and the elements involved are as numerous as they are continuous? Latour's answer is in lineages (lignées) or more precisely in genealogies, traces of a discontinuous process that is always at risk of discontinuity (generation, death, and birth).

The mode of existence of reproduction is also extended to another category, that of the *Inert*, which Latour, recovering Whitehead's concept of *inheritance*, considers as the category of "living beings who choose to maintain their presence without going through the risky intermediary of another body" (2017: 67). Here, the passage-transfer does not occur through another body, but in the form of a *continuous line of force* that ensures its duration.

In the second regime of enunciation, even more peculiar than reproduction, the passage-transfer no longer occurs between similar entities but consists of a series of

² In this regard, see in the considerations advanced by Maria Giulia Dondero (2017: 4).

substitutions that involve heterogeneous, dissimilar, unrecognizable elements. The exemplary manifestation of this atypical regime, in which there is neither enunciator nor enunciatee and it is not even possible to clearly distinguish between a plane of the utterance and one of the enunciation, is the *unconscious*.

The analyst in listening, hears the unmentionable speaking in a more tangled way than the Pythia on her tripod. The marks of this very particular regime are found in the unpredictable ramifications that replace one form with another, witticisms, various Lacanianisms or, more seriously, terrifying metamorphoses (2017: 69).

The traces that this modality generates are the *free associations*.

The third type of passage, still very distant from the forms of enunciation at work in a narrative, is defined as *Belief* or *Omission* and what seems to paradoxically distinguish it, is being indifferent to the enunciation itself. What defines belief is indeed primarily the emphasis on the utterance and not the recourse to the conditions of its realization. Two common utterances like "I firmly believe", "I really walked" are useful to Latour to define a regime that is marked by the absence of passage-transfer, in which no one says anything to anyone and the effectiveness of the utterance, its "truth" does not depend on the subjects involved in its circulation nor, even less, on the spatial and temporal conditions in which the belief manifests. In this atypical mode of enunciation, the utterance circulates without it being possible to identify its origins, without it being attributed to an original source, or traced back to some subjectivity. In other words, the strength of this mode of existence lies in appearing completely "natural", in the ability to seem autonomous from the context in which it reveals itself. The outcome of a belief is indeed to perpetuate itself over time, to remain unchanged, and in this sense this regime of the "denied" enunciation does not generate real traces but essences that do not presuppose any temporality.

In the functioning of the regimes which follow in this philosophical reflection on the modes of existence, a significant shift is realized as the distinction between the plane of enunciation and the plane of the utterance is reintroduced, as well as the figures of the enunciator and the enunciatee. In particular, there are six different modes of enunciation that are grouped into two large categories: the regimes that focus on the *quasi-object* (Technique, Narrative, Science) and those focused on the *quasi-subjects* (Religion, Politics, Law). The term *quasi-object* or *token* refers to the work of Michel Serres (1987) and is used by Latour to designate the operation through which an enunciator is able to project himself temporarily into a dissimilar body, for example an object, transferring to it a capacity for action that remains even after he has withdrawn and that is exercised towards the enunciatee with whom the thing comes into contact. This kind of transfer is typical, for example, of the enunciative regime of *Technique*.⁴

³ It is important to highlight here that Latour, by naturalness, means the capacity of a belief to seem such, to generate the meaning effect of a *naturalization*, in the sense given to this term by Roland Barthes

⁴See also: Portrait de Gaston Lagaffe en philosophe des techniques (Latour, 1993) in which the analysis of a comic strip reveals how the regime of technique is inseparable from the operations of

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To describe this kind of passage-transfer, the case of a very common technical object such as a woven basket is proposed, which, although not resembling in any way the weaver who made it, prolongs her presence in another form, in another place and at another time, by transferring the action to another subject, the apple picker, for example. The description of this kind of technical passage highlights a decisive difference between this regime of enunciation and the previous ones. The necessary conditions for the figures of the enunciator and the enunciatee to manifest, for an asymmetry between these two positions to be created in the enunciation, emerge precisely at the moment when non-humans enter into play in the mediation process, participating in the chaining of relations, as seen, for example, in the case of the Berlin key.

The outcome of this passage mediated by non-human actors consists thus in bending the relationship between the lineages of humans. Unlike what happens in reproduction, duration is not in this case ensured by duplication or permanence but by a translation- transformation: indeed, nothing can force the apple picker to become a basket weaver.

The role assumed by the token thus becomes decisive, it is only thanks to its presence and its materiality that it is possible to trace back to the enunciator; in this sense, it therefore acts literally as a place holder, that is, as a presence that represents by delegation an absentee: the human actor. The term identified to account for the traces produced by this type of débrayage is braids (tresses) or combinations and designates the transition from an interaction between similar bodies to one between dissimilar bodies that allows "fragile human bodies" (ivi, p. 71) to extend their duration and range of action thanks to a series of composite links with nonhuman actors. With the regime of Fiction, enunciation finally makes its entrance into the natural language and the logic of narrativity. Here Latour explicitly recognizes how the relevant legacy of the semiotics of narrativity consists in the possibility of rethinking the relationship between author and reader by shifting attention towards the dimension of textuality, to the figures of the enunciator and the enunciatee, understood as roles inscribed in the space of the narrative starting from the débrayage as defined by Greimas. The trail left by the sending operation is defined as populations of figures, where the term figure is chosen precisely because of the breadth of its meaning, being sufficiently vague to be applied both to actors characterized by the presence of a human form and to those who lack it. Continuing the philosophical exploration on enunciation, the regime of Science is outlined where the reflections which emerge from the work of Bastide (1985a, b) are taken up and further systematized. In particular, the peculiarity of the way in which science is enunciated is reiterated, which consists in a transfer/mediation procedure distinct from the canonical operations of débrayage/embrayage because it does not operate so much through sending as rather through alignment:

If this transfer-passage were followed, an enunciator would be found, then one would travel in the wake of the delegates, then one would return on a convoy of figurines kept stable

mediation-translation that regulate the assemblage between humans and non-humans (objects, animals).

through the crudest transformations, then one would end up on the starting sender and then pass into the hands of the enunciatee (my trans.; 2017:19).

The marks of the enunciative regime of science owe their recognizability to the fact that the alignment procedure is articulated on three different levels integrated with each other which consist in: the alignment of the different planes of the utterance with each other; the alignment of the utterance, as a whole, to the last plane n-1; and finally the alignment of the enunciate to the enunciator. Here are found, as traces of scientific enunciation, the *immutable and combinable* (because they are formed by links between humans and non-humans, scientists and instruments) *mobiles* previously described, which Latour now designates with the term *references*, 5 to underline their ability to report something to an enunciator, to refer back to him, making him capable, thanks to the concatenation of their mediation, to extend in space and time.

The last three regimes are focused, rather than on the *token* (*quasi-object*), on the ways in which what circulates allows for the formation and management of the relationships between enunciators and enunciatees. These are therefore modes of enunciation centred mainly on the *quasi-subjects*.

The first of these regimes is that of *Politics*, whose meaning must be sought not so much in the utterances that circulate, but rather in the fact that what circulates is primarily functional to define the number and roles of the actors who contribute to forming a collective identity. From this perspective, politics is considered as the outcome, subject to continuous negotiations, of

an insoluble topological problem: how does a multitude maintain the form of a whole? It is a 'singular plural' that must be constantly repaired by resolving at every point the One/All question. *I* say what *you* say, so I represent you. *You* say what *I* say, so you obey me. *We* are different from *them*. *He* is another (my trans.; 2017: 21).

The mode of political enunciation thus owes its peculiarity to the fact that it must ensure the continuous maintenance of the collective subject. In this sense, the vagueness of the message is the effect of a continuous pressure that requires the relationship between individual and multitude to be incessantly recomposed, in continuously representing the strength of a union that is in fact constantly at risk. The frequent indeterminacy of the utterance, "this vague, insignificant, ambiguous, variable character that allows it to circulate well and to be a good tracer" (ibid) thus implies that the marks of the regime of political enunciation are rather difficult to identify. The name assigned to the figures emerging from the logic of compromise that guides the ongoing work of recomposing the collective, understood as 'singular-plural', is: assemblies or groupings.

In the second regime that revolves around quasi-subjects, the enunciation does not consist, as in previous cases, in a process of sending through the *tokens*, but rather in the reverse movement, 6 in the return to level n-1, where the positions of

⁵The plural declension of the term once again explicitly reveals Latour's choice to distance himself from the debate on realism.

 $^{^6}$ In this sense, it would therefore be a mode of enunciation focused on the procedures of embrayage rather than débrayage.

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the enunciator and the enunciatee are again occupied by real people. This is the enunciation at play in *Religion* or in *Love*, in which the mediation of the *tokens* allows the enunciator and the enunciatee each time to celebrate their union, renewing it, as when the subject embodies with his/her own presence otherwise empty words like "I", "you", "now", "here" repeated as in an eternal first time (2017: 23). The presence of the relationship thus sanctions the permanence of existence. "If it is not the first time that I say 'I love you', I do not love. In love the 'I love you' is repeated for all the times that the relationship between two enunciators is established as a relationship of this, and not another, here and not elsewhere, now and not yesterday or tomorrow" (my trans.; 2017: 21).

To designate the peculiar ability of religious enunciation to renew each time the presence of what is absent, Latour uses the term procession (or tradition) highlighting that what these traces transmit, in terms of utterances, is meaningless until the moment when the enunciators and the enunciatees do not install themselves at the n -1 level, thus evoking the ego, $hic\ et\ nunc$ of the event.

If enunciation consists of the set of absent actors whose convocation is necessary for an utterance to acquire a meaning, there is a final mode of discourse that distinguishes itself from all the others precisely because it has a peculiar way of gathering, defining and associating people and utterances in a detailed manner. It is the *Law*, a mode of existence that responds to the need to trace promises and enforce commitments, multiplying "inside and around the statement the marks, the brands, the signatures and the seals that allow the reconvening of the absent" (my trans.; 2017: 23).

The marks of this type of passage-transfer are the *concatenations* (or *chains*), traces that hold together sequences of enunciators, utterances and enunciatees.

4.4 From Enunciation to Modes of Existence

The work of rethinking and expanding the notion of enunciation finds fulfilment in the publication of *Inquiry into modes of existence*. An Anthropology of the Moderns⁷ (2013), a work of great theoretical and methodological relevance that represents the most advanced point of the reflection dedicated by Latour and his research group to the paradoxes implied in the idea of modernization. As the title suggests, this is a highly articulate and original research not only in terms of the field in which it unfolds, that is, the different domains in which the social (Religion, Law, Science, Economy etc.) is articulated, but also for the form taken by the research project. The genre of the inquiry is indeed expressed under a dual configuration: the rather unusual one of a paper and provisional research report, devoid of notes and bibliographic references, in which the main results which emerged during fieldwork

⁷From here onwards: AIME.

are reported in a synthetic form, and the digital one constituted by an "augmented" version of the book.8

The latter is designed to simplify and at the same time enhance the reader's experience and for this purpose presents three distinctive features in the form of columns.

The first consists of an interactive vocabulary of the terms used in the work that allows for an in-depth study of their meaning. The second concerns the possibility of accessing all the documentation—absent in the material version of the book—used during the research. These are materials as heterogeneous as possible in form and format (bibliographic references, photos, videos) to which a section is added that allows artists to share relevant works regarding the theme of the research and therefore useful to extend its scope. The third finally allows readers to provide their own contribution in the form of criticism or to share documentation complementary to the existing one. In all respects, the digital platform thus constitutes an extension of the book and represents an attempt to shape a collective and continuously evolving body of research.

The aim of this section is certainly not to describe in detail the functioning of such a broad and complex anthropological study, but rather to highlight how, despite the progressive distancing from the lexicon of semiotics explicitly used in previous works, the theory of signification is in any case implied in some of the salient aspects of this innovative research project, testifying to a relationship that has never been interrupted. The purpose of AIME in particular is to further extend the scope of the reflection advanced in a series of previous works, particularly in We have never been modern, demonstrating how, in the face of an increasingly marked coexistence between humans and non-humans, stimulated by the evolution of scientific knowledge and techniques, our modernity masks the functioning of its own modes of existence, adopting a myopic perspective that manifests itself in a thought based on a very tenacious dichotomy, that between subject and object. The difficulty of such a research project lies in the fact that, as the well-known anthropologist Philippe Descola summarizes (2013: 53), moderns unlike premoderns "neither do what they say nor say what they do", stubbornly refusing to recognize the unstoppable multiplication of hybrids in whose production and circulation they are inevitably involved.

One of the most significant consequences of this denial is that the modes of existence that regulate the concatenations of the heterogeneous entities of our present reveal themselves as fragile, vulnerable. The paradox of the moderns can therefore be summarized in the fact that they believe in the total separation between humans and non-humans while at the same time nullifying it, as in a famous children's game.

If you turn round suddenly, as in the children's game 'Mother, may I?', they will freeze, looking innocent, as if they hadn't budged: here, on the left, are things themselves; there, on the right, is the free society of speaking, thinking subjects, values and of signs. Everything happens in the middle, everything passes between the two, everything happens by way of mediation, translation and networks, but this space does not exist, it has no place. It is the unthinkable, the unconscious of the moderns (Latour, 1993b: 37).

⁸ http://modesofexistence.org/

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Returning to the investigation into modes of existence,⁹ the option advanced by Latour is to focus the research around a series of large areas in which contemporaneity is articulated, rethinking them as collectives whose functioning is based on the coexistence and the mixture of humans and non-humans, of living and non-living entities, which reveal themselves to be no less numerous and diversified than those around which the experience of the premoderns takes shape.

The theoretical starting point of the investigation is the concept of "modes of existence", which Latour does not take from semiotic theory¹⁰ but rather from the philosophical thought of authors like Gilbert Simondon (1924–1989) and especially Étienne Souriau (1892–1979), whose work is part of the empiricist perspective developed by William James (1842–1910) and Alfred North Whitehead (1861–1947).¹¹ As Jacques Fontanille (2017) observes, reading Souriau's work allows Latour to make two significant transformations on the theoretical level, compared to what is presented in *Petite philosophie de l'énonciation*.

The first evolution concerns the relevance assigned to the ontological dimension. The theory presented in the 1999 article, focused as it is on existence understood as a process based on acts of enunciation-delegation, seems to presuppose a rejection of ontology, emphasizing the departure from Being. However, "if nothing else, these small plural ontologies, sometimes confused with the planes of immanence, seemed reconcilable with a semiotic approach. At least the multiple 'existential delegates' could pass for efficient simulacra" (my trans.; Fontanille, 2017: 49). Conversely, in AIME there is a change of perspective, what becomes relevant is not the multiplicity of acts of enunciation nor of the delegates, but rather the modes of existence which, although plural, are still ontologies. "Thus, we move from a small philosophy of enunciation to a modal anthropology" (my trans.; Fontanille, 2017: 50).

The second change is instead on the empirical level and consists in the explicit recourse to radical empiricism that can be summarized in Latour's statement, inspired by William James: "Nothing but experience but no less than experience".

This philosophical current plays a decisive role in the development of the project to investigate the anthropology of the moderns, because in the effort to understand experience, to give it meaning, it recognizes the primacy of the *relationship* and the *mediation* over the mere sensory data, claiming the need to consider everything that

⁹ See in this regard also: Biography of an inquiry: On a book about modes of existence (2013b).

¹⁰ In Greimas' theory, modes of existence play a determining role in the functioning of narrative grammar, in particular they define the positioning of an actant within his/her own narrative path. The semiotic modes of existence are three: *virtual*, *actual* and *realized*. A narrative program is defined as virtual when the Subject equips himself/herself, thanks to the action of a Sender, with the *wanting-to-do* or the *having-to-do*. When the Subject moves to the competence phase, he/she also acquires a *knowing-how-to-do* and a *being able to do*, which allow him/her to actualize his/her NP. The last mode of existence manifests itself in the performance phase in which the Subject completes his/her program implementing a transformation.

¹¹ For a reconstruction of the decisive role assumed by radical empiricism in defining the notion of modes of existence developed by Bruno Latour, see: Famy (2017) and Couégnas and Fontanille (2017).

forms the experience, thus overcoming that stubborn "bifurcation of nature" that manifests itself precisely in the Subject-Object dichotomy.

For Souriau, who in turn takes up William James, what characterizes the fundamental experience are indeed the alterations that manifest themselves in the process of existence. In this sense, the modes of existence do not constitute

a disengaged spectacle, a sort of cinema that would project 'alternative worlds' onto the screen of Being. They are not even a spectacle in which we would be immersed, but worlds of meaning that aggregate and take shape directly around the sensible experience we have of the alteration of existential processes and of the solutions that ensure their persistence (my trans.; Fontanille, 2017: 50).

The influence of this philosophical perspective is clearly manifested in the explication of the postulate that assigns two characteristics to the modes of existence: *ontological pluralism* and *contingency*. The definition of a mode of existence in fact depends on the specific ways in which it is established, the specific *trajectory* that ensures its persistence. Each mode thus distinguishes itself from the others because it elaborates within itself its own conditions of truth (veridiction).

To clarify what the project of an inquiry into modes of existence consists of Latour thus resorts to a series of questions that are useful to briefly report

what are the beings we are likely to encounter if we ask ourselves the question of their existence? What are their ways of being? What is their ontology? And, in particular, how does one detect their own requirements? On the basis of what hesitation, what category mistake, what crossing? And, finally, what do they leave in their wake when we follow their particular trajectory through the numerous networks ([NET]) in which we are able to detect them?¹²

The different keys of interpretation identified to try to account for the anthropology of modernity are fifteen, among these some take up what was outlined in *Petite philosophie de l'énonciation* and explicitly refer to the work of Souriau:

- Reproduction [REP]
- Reference [REF] which characterizes the domain of science
- Metamorphosis [MET], typical of therapeutic devices in which operate invisible beings "that bear psyches, each of which is capable of influencing us, moving us, messing us up, upsetting us, carrying us away, devouring us, or, on the contrary, making us do something we didn't know we were capable of doing, something that inhabits and possesses us from then on" (Latour 2013: 196)
- Fiction [FIC]
- Religion [REL]
- Law [LAW]
- Technique [TEC], which stands out for its ability to "interrupt, bend, deflect, cut out the other modes of existence, and thus by a clever ploy introduces a differential of materials" (2013: 228).¹³

¹² www.modesofexistence.org

¹³The example is that of the transformation of a tree mediated by technology which makes it possible to halt the natural process of development and death by modifying the duration, consistency

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To these modes of existence, others are added:

- Politics [POL]
- Attachment [ATT], one of the constitutive modes of the economy, which concerns the relationship between human beings and goods, and manifests itself in situations such as consumption, purchase, sale, production
- Another constitutive mode of the economy and institutions is that of the Organization [ORG], whose actors enact "a very particular alteration that defines frameworks, limits and ends to action which thus gives a feeling of being "inside" something more durable and stable, even though this interior is obtained by the regular path of scripts to which "nothing need be added"
- Morality [MOR], which does not concern the ethical dimension of action, but rather the set of estimates that can be made taking into account the goals set and the means used to try to ensure continuity on the plane of existence.
- The mode of habit [HAB], which consists in creating the impression of a smooth and uniform existence, without discontinuity.
- The mode of the network [NET], which consists in associating heterogeneous elements in order to guarantee their continuity on the plane of existence. This mode plays a decisive role because it is transversal and hierarchically superior to the others, in particular the network is what can allow a collective to overcome an obstacle that threatens its persistence thanks to the openness towards other modes of existence.
- Another mode that plays a fundamental role in the structure of the inquiry into
 the anthropology of modernity is that of the *preposition* [PRE]. This term, which
 Latour borrows again from Souriau, indicates an alteration of experience that
 determines the formation of a mode of existence. The preposition plays a role of
 orientation in understanding the world, defining the type of relationship necessary to make sense of the experience.

If you find yourself in a bookstore and you browse through books identified in the front matter as "novels," "documents," "inquiries," "docufiction," "memoirs," or "essays," these notices play the role of prepositions [...] they engage the rest of your reading in a decisive way since, on every page, you are going to take the words that the author puts before your eyes in a completely different tonality depending on whether you think that the book is a "made-up story," a "genuine document," an "essay," or a "report on an inquiry" (2013: 57).

• Finally, the "double click" [DC], an expression that Latour borrows from the casual gesture of using a tool like the mouse, indicates the illusion that what you are looking for, the information, is at hand, directly accessible. This mode is defined as "evil genius" because it gives the illusion that in accessing the experience any mediation, transformation, discontinuity is missing.

and shape of the matter. From this perspective, what technically exists does not consist in the materiality of technical objects but rather in what takes shape as a result of a *technical deviation*.

¹⁴ www.modesofexistence.org

An important aspect that emerges during the work of research and analysis of the different modes of existence concerns, in particular, their interrelation. These overlaps, described in terms of crossings, produce a harmonic combination in some cases, while in others they can take the form of a real conflict (interpolation). This is the case for the crossing [REF. REL] in which the mode of existence of religion and the truths on which faith is based are judged from the perspective of science. The advancement of Latour's research on modernity, compared to the typology of modes of enunciation examined in the 1999 article, is thus revealed in the development of a classification table organized in a series of categories. Without going into detail here about the overall articulation of the scheme, we report below some of the most relevant terms that make up the metalanguage of this vast (and open) research project. The *hiatus* consists of the small discontinuities and interruptions that any mode of existence presupposes, the overcoming of which guarantees its permanence. This dynamic can be clearly observed in the logic of combination and recombination of heterogeneous elements that characterizes scientific practice, as highlighted by Couégnas and Fontanille (my trans.; 2017: 3), drawing on Latour's work in Laboratory life.

Within the realm of science, for example, actual practice allows for the combination of completely heterogeneous elements such as the mood of the researcher [...] a malfunction of an experimental device, the performance of a new microscope, this or that discovery that an experiment allows to validate, the editorial policy of a journal and a publication relevant to research. But these disparate elements, which the network [NET] allows to assemble without it being possible to clearly identify the actants to whom to firmly distribute roles, will still give the impression that something circulates in a perfectly fluid and pure way, something we designate with the term *science* and which is similar to a thematic isotopy. Therefore, on the one hand, a discontinuous face of the network, based on the hybrid nature of the associated elements, which is revealed in practice. And on the other hand, an impression of continuity, theoretical, made possible by the good functioning of the network and legitimized by the effectiveness of the practice itself.

This example is useful to highlight how the identification of a hiatus plays a decisive role in the detection of modes of existence. It is indeed only thanks to the identification of interruptions that risk stopping an action program that it is possible to reconstruct its presence and articulation retrospectively. It is only the overcoming of obstacles that allows the unfolding of a course of action to be observed. In this, it is once again revealed, although implicitly, the proximity with the semiotic perspective on meaning that identifies one of the preconditions for the emergence of signification in the polemic confrontation between multiform agents.

The overcoming of obstacles is therefore made possible by *passages*, mediations that ensure continuity of action within an area. The relationship between modes of existence and passages is symmetrical, to each key of interpretation of modernity corresponds in fact a specific type of mediation. This is what is outlined in the case just described of the research practice in the laboratory, in which what characterizes the mode of existence of science [REF], distinguishing it from the others, is the passage that consists in the scientific proof. In this sense, ontological pluralism necessarily implies a pluralism of passage-mediations (Famy, 2017). The outcome of the series of passages that intervene within a course of action is finally defined as *trajectory*, a term that explicitly refers to John Austin's theory of speech acts (1962).

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Chapter 5 Latour for Semiotics



5.1 Resumption and Relaunch of a Dialogue on the Search for Meaning

After highlighting the role played by the theory of signification in the development of an original research project aimed at exploring the paradoxes of a modernity that stubbornly strives to reaffirm the separation between nature and culture, denying the existence of those hybrids that it itself is unable to curb, it is now possible to change perspective, reversing the point of view assumed so far, focusing attention on the impact exerted by Latour's work on contemporary semiotic research.

Following this approach, there are at least three areas in which the dialogue outlined in the previous chapters appears more intense and potentially fruitful.

A first field of study concerns the debate around an extended theory of enunciation, developed in parallel to the expansion of the phenomena of signification explored by contemporary semiotic research.

A second direction starts from the overcoming of the nature/culture dichotomy and revolves around the rethinking of the relationship between semiotics and cultural anthropology, recognizing the need to investigate the different modes of existence at play in contemporary phenomena considering notions such as *multinaturalism* and *internaturality*.

The third, finally, takes shape from the need to account for the sociosemiotic dimension inherent in artifacts, in their design, in the practices of their use, also with reference to the emerging signals of a "new society of devices", marked by the irruption of artificial intelligence and the Internet of Things, technical and social innovations enabled by increasingly extensive, complex, and pervasive networks of hybrid agents.

5.2 Towards an Extended Notion of Enunciation

Latourian reflection on enunciation and modes of existence has aroused lively interest, fuelling reflection on the implications of rethinking these concepts for a theory of signification. Moreover, upon closer inspection, semiotics is widely involved in Latour's work on modes of existence, to the point of manifesting itself, albeit implicitly, at every level.

I. In the enunciative conception on which the definitions of modes of existence are based, (II) in the trajectories that are defined as mediations capable of establishing beings and giving birth to meaning in action, (III) in the definition of a meta-mode of existence, that of the network [NET] which, as a direct descendant of the actor-network, is based on an actantial logic that allows subject and object to be traced back to a series of established positions and not to radical and absolute entities. (my trans.; Famy, 2017: 15)

Latour's position towards semiotics, as developed in the previous sections, remains in any case on a dialectical plane, particularly regarding the centrality that, in his opinion, is still recognized by the latter to the linguistic-textual dimension of signification. Specifically (1996a), he comes to explicitly recognize semiotics as the only organon that can effortlessly maintain the diversity of modes of existence, allowing ethnomethodology to extend to metaphysics, but only at the price of resorting to the notions of language and text, a problematic restriction that should be overcome, extending to things themselves the too restrictive definitions of semiotics. This critical position is particularly evident and problematic in AIME, where the domain of language is not only relegated by Latour within one of the modes of existence, namely [FIC], but above all is reduced to the sole dimension of natural language, to the faculty of "saying", to "speaking" rather than to the more general ability to produce meaning, to signify. A position such as this, in the current context of semiotic research appears decidedly reductive, as Fontanille (my trans.; 2017a: 51) effectively highlights:

It is not the option of semiotics today, which is instead interested in all semiotic regimes, regardless of the modes of expression and forms of textualization. Certainly, the terminology used (enunciation, utterance, textualization) testifies to the anchoring of this semiotics to research in the theory of language, but the definition, extension and use of these terms are not reduced nor reducible to verbal language and cover all observable manifestations of signification.

The evolution of semiotics testifies, in fact, to a significant expansion on the level of the phenomena of signification considered, with increasing attention, as we will see, directed to what can be defined as the "sense of modes of existence".

First of all, it is important to reiterate that within the field of semiotics there has long been a broad debate that does not at all exclude the possibility of extending the notion of enunciation well beyond the strictly linguistic dimension of signification. As proof of this, as highlighted in the first part of this volume, are the perspective of

sociosemiotics¹ advanced by Eric Landowski (1989), which assigns a central role in the phenomena of signification to interactions, and the work of Jean-François Bordron (2011) who postulates the presence of a semiotic dimension in the act of perception. Again, regarding the question of the relationship between linguistics and semiotics, it is necessary to highlight how Latour's overcoming of the notion of débrayage as a projection of the categories of subject, space and time is correlated to the explicit distancing from the Saussurean notion of *langue*. This key concept,

entirely acceptable for a linguist or a semiotician, who needed to consider language as a system and to take speech acts as individual actualizations, to get rid of the army of sociologists, historians, psychologists, and critics who claimed to speak directly about the context of discourse (my trans.; Latour, 2017: 10)

is considered incompatible with the concept of existence, understood as a concatenation of actions of passage-transfer between actants. However, it is important to remember that the overcoming of the notion of *langue* occurred, in part, also within semiotic studies, when the enunciation was re-evaluated, within a broad debate on its different modes of articulation, as a decisive tool to account for the mechanisms of formation of cultures, of the meaning that is implied in objects, in spaces, in everyday life practices.²

5.3 The Centrality of the Notion of Enunciative Praxis

Within the debate generated by the progressive rethinking of a cornerstone of semiotic theory, a concept that has assumed a growing relevance is that of *enunciative praxis*, a principle that aims to bring the social dimension of culture within the textuality, thus postulating the presence of an intrinsic sociality of semiosis. This concept, originally developed within the project of a semiotics of passions (Greimas & Fontanille, 1991) to explore the complex issue of the link between the cultural component of passions and the different modes of their manifestation in signification, has been widely taken up and developed since the Nineties (Floch, 1995; Bertrand, 2000; Fontanille, 1994, 2017b; Fontanille & Zilberberg, 1998), to the point of prompting a reformulation (Marrone, 2003, 2007). The central idea is that the enunciation cannot be circumscribed only to the action of appropriation of the potentialities of the language by a subject or an individual anthropomorphic instance

¹Further proof of the comparison, at times heated, between ANT and semiotics consists precisely in the refusal by Akrich and Latour to recognize the specificity of the sociosemiotic approach: "the word sociosemiotics is a pleonasm once it is clear that semiotics is not limited to the signs; the key aspect of the semiotics of machines is its ability to move from signs to things and back" (Akrich & Latour, 1992: 259).

² Emblematic, in this perspective, is the contribution proposed by Fontanille (2017b) on the evolution of the notion of enunciation.

endowed with speech, but rather constitutes a decidedly more extensive process, attributable to a collective and impersonal instance that manifests itself through a series of culturally situated acts, in other words through a *praxis* that takes shape in the use of languages.

The theoretical perspective advanced with the introduction of enunciative praxis thus consists in placing at the centre of reflection no longer the transition from the system of language (*langue*) to its individual realization (*parole*), but rather the way in which the collective dimension of the *semiotic use* that characterises, for example, common sense, stereotypes, genres of discourse, is able to influence signification, to the point of permeating the virtual system of language itself.

As Gianfranco Marrone (my trans.; 2003: 3) clarifies,

unlike Benveniste, who emphasized the importance of subjectivity in language, it is about insisting on the collective instance that is behind, or within, any enunciator: I who speak am not an I except in function of the socio-cultural instance that crosses me, and that speaks in me.

The enunciation is thus conceived as a procedure that consists in taking up and transforming preconstituted blocks of signification, in a supra-individual and potentially circular process of meaning production. In the proposal advanced by Fontanille and Zilberberg (1998), the enunciation is described in terms of a *praxis of mediation* that involves different modes of existence, as a sequence of transformations articulated in four steps: *virtualization*, *actualization*, *realization*, *potentialization* (Fig. 5.1).

The first part of the sequence concerns the process of signification and defines the way in which meaning emerges in the passage from the repertoire of virtual entities that defines a system of signification (paradigmatic axis), to its manifestation. In the next phase, the dimension of use comes into play, understood in the perspective of Hjelmslev, that is, as the set of habits, both linguistic and cultural, elaborated by a community over time. It is in this movement that the dynamics of the enunciation manifests itself in the form of *praxèmes*, that is, expressive resources capable of feeding the virtual system of the language, thus contributing in some cases to implement it, modifying its articulation. The dynamics of the enunciative praxis unfolds in four elementary operations of mediation: the *emergence* (from the mode

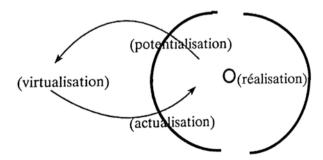


Fig. 5.1 Enunciative praxis, original scheme taken from Fontanille, Zilberberg (1998)

of virtual existence to the actualized one), the appearance (from actualization to realization), the decline (from realization to potentialization), finally the disappearance (from potentialization to virtualization). These four steps respond to two opposite movements whose tension is responsible for the functioning of the enunciative praxis: the first ascending (emergence and appearance), the second descending (decline and disappearance). In the test of textual analysis, significant evidence emerges: the minimum condition that ensures the functioning of this process consists in the juxtaposition of two different modes of existence, to the point that it is possible to outline some recurring combinations that bring out a "tensive field of existential modalizations". In particular, the term revolution designates the transition from one linguistic form to another, as happens in commutation; the *fluctuation* consists in the oscillation between two isotopies within a text, as in the mechanism that ensures the functioning of the rhetorical figure of the metaphor; the distortion is the outcome of a movement in which the emergence of one form corresponds to the progressive decline of another; finally, the remaniement (reorganisation) consists of a type of enunciative action that determines the prominent diffusion of a linguistic form at the expense of a pre-existing one, as in the case of the common use of terms that come from a foreign language and that render obsolete the forms previously in use within a community of speakers.

In any case, what is relevant is the idea that a figure implicated within a discourse can assume an enunciative thickness that relates it to "social exchange, the circulation of semiotic objects and discourses that take place in cultures and communities that retain or reject innovative or fixed uses and that somehow make 'canonical' the creations of discourse" (my trans.; Fontanille & Zilberberg, 1998: 134).

On an empirical level, consider the functioning of some rhetorical figures whose effectiveness depends on the relationship between a perceived content and a latent one, on the coexistence of two meaning effects whose different salience can be described in terms of an enunciative depth, as happens in the link that in a visual text is established between the foreground and the background. As proposed by Gianfranco Marrone (2003), enunciative praxis thus proves to be particularly useful for understanding the functioning of socially relevant genres of discourse, such as journalism, in which the narrative of a political event can take shape against the background of a non-political one, or the narration of a stock market situation lends itself to be represented by recalling social issues. Or, again, the evolution of brand discourses, which in the most relevant cases, from a semiotic point of view, reveal themselves increasingly less focused on the promotion of a product in itself than rather on the construction of complex valorisation strategies in which the commercial function emerges against the background of political and social themes. It is in this way that the different relationships between the contents that are established at the deep level of discourse can manifest themselves at the surface level according to a multiplicity of combinations (modes of existence), concretizing various logical relationships such as cause-effect, means-end or contradiction, to the point of substantially modifying the structure of the text and its meaning.

On a theoretical level, the innovation brought by enunciative praxis thus consists in the possibility of inserting, alongside the dimensions of the paradigmatic and

syntagmatic organization of discourse, a third dimension, provisionally defined *praxématique*, potentially useful to account for the way in which within specific places and/or moments, actual connotative taxonomies take shape thanks to the presence of three basic conditions: the *intersubjectivity*, the *iteration* and the *typification*.

If each act of enunciation thus potentially stands out against the background of a much more extensive, general and collective field of enunciative manoeuvres, signification can actually be rethought as the manifestation of a polyphonic type of praxis, that is, as the set of actions of re-appropriation and transformation of pre-existing enunciations.

The interest aroused by this notion is therefore also revealed in the connection with the semiotics of culture. The idea that within a discourse an element acquires an "enunciative depth" thanks to the way in which different degrees of existence are put into perspective, explicitly refers to Lotman's notion of semiosphere, to the distinction between the centre and periphery of a culture, understood as *expression* of a collective enunciation.

The research focused on overcoming a strictly linguistic perspective of enunciation has thus developed parallel to a significant expansion of the perimeter of the phenomena of signification analysed, fuelling a debate on the validity of the consolidated notion of textuality, with particular reference to the logics that determine the emergence, stabilization and evolution of practices and forms of life that permeate social life. In particular, the idea that stereotypes, as well as discursive innovations, constitute the product of a praxis that unfolds over time, acting against the background of a "collective memory" in which each text participates in a network of references to other expressive resources, has generated a heated debate on the overcoming of the limits of the temporal immanence of the text itself.

It is within this context that in recent years the evolution of reflection on enunciation, as a praxis that transcends the individual dimension of the linguistic act, has significantly coincided with increasing attention for Latour's theory. In particular, in the reflection on the way in which experience acquires a semiotic dimension, is endowed with a meaning, the perspective advanced by Latour on overcoming the asymmetry between subject and object is explicitly recalled. The starting point of this reflection on the emergence of meaning outside the canonical dimension of narrativity consists in recognizing the impossibility for a subject to define in advance the boundaries of what takes shape and unfolds on the plane of experience, as in the case of practices. Practices indeed have a very peculiar articulation; they manifest themselves in the form of

courses of action open at both ends of the chain [...] whose "object" (and consequently the "subject" who observes it) remain indeterminate and blurred throughout the course of action at least until the meaning of the latter is definitively fixed, from within the practice itself, through the actors involved in it (my trans.; Fontanille, 2014: 2).

This premise is particularly significant because it implies a change of perspective on the side of the theory of enunciation. Given that a course of action has a dynamic

articulation that makes it entirely different from a narrative text which, by definition, is intended as a construct endowed with a closure, the signification at play in practices cannot be examined by resorting to a narrow perspective of enunciation based on the subject/object dichotomy and on notions such as embrayage and débrayage. This does not mean, as previously highlighted, that the notion of text is obsolete, nor, even less, that a sort of opposition between a semiotics of texts and one of practices takes shape. Rather, what emerges is the progressive consolidation of a perspective according to which textual semiotics is not reducible to the analysis of narratives properly understood, that is, "objects" endowed with pre-established boundaries, but instead consists in a model of analysis of social phenomena where closure is not ontologically given but rather constitutes a criterion for textuality to occur. Therefore, if the knowledge of modes of existence is configured as an exploration that cannot be predetermined, because "there is no longer any preliminary separation between something to be built and someone who builds it" (my trans.; Fontanille, 2014: 3), how can we attempt to account for the signification in action in the courses of events that we commonly call practices? One of the possibilities lies precisely in taking into account the proposal advanced by Latour on how signification takes shape from the ability of an entity (human or non-human) to perpetuate itself over time, overcoming obstacles and trials, establishing dynamic relationships with other elements. We recall that Latour, to account for the fact that modes of existence cannot be defined a priori by a subject but are rather the result of the trajectory outlined by an entity in the succession of mediations in which it is involved, uses the term *instauration*, an expression taken from Souriau and useful to underline the non-anthropomorphic, impersonal dimension of meaning. The minimum conditions that guarantee the existence and meaning of a course of actions should therefore be sought not in the presence of an external subject of enunciation, but in the intensification and extension of heterogeneous entities related to each other that in this way acquire permanence, endowing themselves with an identity.

Now, the idea of an agency distributed among a multiplicity of actants capable of assuming different forms is not at all incompatible with the perspective of a semiotics of practices that hypothesizes that the signification implied in a course of action can manifest itself in the form of a concatenation of *tensions*, of *forces*, in a *propensity to movement* (Fontanille, 2014). In particular, the question from which Latour's theoretical operation starts coincides with that from which a significant part of contemporary semiotic research also starts and concerns the identification of the preconditions that make the experience of meaning possible. It is, in fact, in each case an attempt to account for the ways in which the experience of alterations in existence generate demands for meaning

It is therefore because experience is tied to existence, and vice versa, that we can hope to witness the emergence of meaning, that we are able to feel and suffer the 'lack of meaning' or the 'demand for meaning' and, therefore, commit ourselves to construct it (my trans.; Fontanille, 2017a: 51).

It is therefore significant that the term *instauration* is used in the metalanguage of semiotics to account for the way in which the elements involved in a practice

progressively assume an articulation, acquire a meaning, revealing themselves in all respects as actants capable of contributing to the maintenance of the course of action. According to this perspective, instauration can then be considered as "the general and primary form of enunciation" (my trans.; Fontanille, 2014), not attributable exclusively to an external or even omniscient subject, but rather to a plurality of instances capable of assuming a multiplicity of configurations in the set of dynamic relations that are established between them. "Therefore, we need to have a conception of enunciation that is able to take on this assumption: an impersonal enunciation—without object or subject—, diffuse—without identities set a priori—and in motion" (my trans.; Fontanille, 2014: 5–6).

Also, thanks to the comparison with the Latourian philosophy of enunciation we thus witness an evolution of the notion of enunciative praxis, now understood in terms of a sequence of acts that act on a plane of immanence very different from that of textuality, that is the *experience*.

Something is instaurated but starting from what? For transformation or for conversion of which other entity? [...]. Our answer: it is about the transformation of experience. The human experience in search of its own meaning becomes a semiotic practice since it itself is accessible to experience. This elementary reflexivity is the starting point and the minimum condition for the search for meaning. It is precisely within this reflective experience that the necessary intensity and extension are perceived and grasped for there to be "instauration" (my trans.; Fontanille, 2017b: 7).

In the research on the "sense of modes of existence" there certainly remain distinctions between the positions of Latour and the perspective of post-Greimas' semiotics which, postulating the presence of a true and proper canonical sequence of practical enunciation, marks a clear distance from the network conception of meaning developed within the ANT, but the path towards an extended notion of enunciation is more than evident.

In any case, there are increasing signs that this key word in the field of semiotics is beginning to be considered, rather than as a fixed concept to be applied, as a "conceptual device" (Tore, 2016), an "epistemology" that implies a multiplicity of options and theories against the backdrop of a common style of investigation of the phenomena of signification.

"Enunciation" today can teach us that the source, the "origin", is not the subject or society, nor even language; it is rather the open and incessant production of meaning, the linguistic games and semiotic tools constantly at work and being remade, of which the "subjects", "society", "language" are only fixed and partial images. Or guard rails, at the edges, and not always necessary, of the paths of meaning. (my trans.; Tore, 2016: 27)

5.4 An Extended and Unified Theory of Enunciation

Further proof that some of the most fruitful repercussions of Latourian thought revolve around the extension of the concept of enunciation and the overcoming of an anthropomorphic approach, can be found in the growing interest in the process

of mediation-delegation that presides over the production of meaning. On this front, there is a line of research (Paolucci, 2010, 2020) committed to enhancing the compatibility between the philosophical approach to enunciation developed over time by Latour and the theoretical framework of interpretative semiotics. The proximity between these two perspectives lies precisely in the importance assigned to the logics of mediation-interpretation that make the emergence and circulation of meaning possible. The rethinking of enunciation as a chain of mediations between human and non-human actors, in which meaning is formed according to a sequence of translations, would indeed allow us to detect a resonance with Peirce's theory of interpretants and with the notion of encyclopaedia at the foundation of Umberto Eco's semiotic theory. We recall that Peirce conceives semiosis as a dynamic process in which what characterizes a sign is the potential to activate a virtually infinite chain of interpretations and translations where a decisive role is played by a mediation element: the interpretant. In this perspective, moreover, the notion of sign is very extensive: it can manifest itself in a multitude of ways that transcend the linguistic and textual dimensions to include experience itself. A further element of potential affinity with Latour's approach to modes of existence, and specifically to the role played by the domain of habit [HAB], is still in the mechanism of 'arresting' the unlimited semiosis described by Peirce and identified precisely in habit, understood as a consolidated practice of attributing a meaning to a sign within a context recognized as familiar. An indispensable reference in the reflection focused on overcoming the primacy assigned to the subject with respect to the process of semiosis is also the semiotic theory of Umberto Eco who in Semiotics and Philosophy of Language (1986: 44) states "[...] the sign always opens up something new. No interpretant, in adjusting the sign interpreted, fails to change its borders to some degree". And again: "[...] The sign as the locus (constantly interrogated) for the semiosic process constitutes, on the other hand, the instrument through which the subject is continuously made and unmade. The subject enters a beneficial crisis because it shares in the historical (and constitutive) crisis of the sign" (1988: 45). The semantic space, understood as an encyclopaedia, has a rhizomatic type of articulation, thus excluding the possibility of anchoring the activity of production and circulation of meaning to a stable and predefined starting point.3

The characteristics of a rhizomatic structure are the following: (a) Every point of the rhizome can and must be connected with every other point. (b) There are no points or positions in a rhizome; there are only lines (this feature is doubtful: intersecting lines make points). (c) A rhizome can be broken off at any point and reconnected following one of its own lines. (d) The rhizome is antigenealogical. (e) The rhizome has its own outside with which it makes another rhizome; therefore, a rhizomatic whole has neither outside nor inside. (f) A rhizome is not a calque but an open chart which can be connected with something else in all of its dimensions; it is dismountable, reversible, and susceptible to continual modifications.

³On the potential affinities between the exploration of Latour's modes of existence and the work of Umberto Eco, see also D'Armenio (2017), who, starting from the notion of trajectory as the result of overcoming a series of resistances, reinterprets the notion of encyclopaedia, hypothesizing the development of a general syntax of enunciation.

(g) A network of trees which open in every direction can create a rhizome (which seems to us equivalent to saying that a network of partial trees can be cut out artificially in every rhizome). (h) No one can provide a global description of the whole rhizome; not only because the rhizome is multidimensionally complicated, but also because its structure changes through the time (1988: 81–82).

This line of research, aimed at demonstrating the legitimacy of an extended and unified theory of enunciation, in recent years has been further relaunched by the publication of Latour's research on modes of existence. In particular, Claudio Paolucci (2020), starting from a philosophical reflection on enunciation focused on the work of mediation-translation carried out by multiform delegates, emphasizes the need to definitively overcome the consolidated perspective that theorizes this notion from the ways in which the anthropomorphic simulacra of a subject (enunciator and enunciatee), manifest themselves within the space of the text. In this proposal, enunciation, understood as an act, cannot be conceived as the performance of a subject external to the discourse, as the creative action of an instance that can be described in terms of a syncretism of I-here-now, but rather as a concatenation composed of different dimensions that manifest themselves in the form of a delegation process.

The focus thus shifts from enunciation conceived as the projection of categories founding the structure of the text (débrayage) to enunciation understood as a set of acts that allow different enunciating instances to prolong themselves through absence, passing the word to messengers-utterances, in other words, to persist by hiding under different forms. To clarify this proposal that considers enunciation as a polyphonic and impersonal act, reinterpreting it in the light of a theory of absence, recourse is made to the different etymologies of the term "person" in Greek and Latin. In both languages, albeit with inverse paths, two very distinct meanings emerge, one relating to the human person, the individual, the other to the character, the mask. As Paolucci clarifies, these different meanings correspond to what can effectively be considered two major theoretical perspectives on enunciation.

The first, consolidated in semiotic studies and therefore prevalent, is that of the Benvenistean tradition of enunciation understood as communication in presence between subjects. The second, clearly found in the philosophical proposal advanced by Latour, instead assigns a central role to delegation processes and conceives enunciation, well beyond the dimension of natural language, as the set of sending, mediation, translation acts that allow us to persist thanks to the actions carried out by a chain of messengers.

Starting from this last position, the possibility thus opens for semiotics to rethink enunciation both as an act and as a praxis, that is, as the action that allows a subject to shape a homogeneous utterance from a semiolinguistic point of view, but only through the mediation exercised by a multiplicity of elements and modes of existence connected to each other. "The body speaks, the language speaks, the norms speak, the uses and habits speak and enunciating means actualizing or potentializing some magnitudes that pulsate in the utterance, realizing or virtualizing others" (my trans.; Paolucci, 2020: 35–36).

The risk to avoid is therefore that of reducing the heterogeneity of the instances involved in the production of meaning only to the presence of a single culturally situated human actor. For this reason, the project of an extended theory of enunciation aims to overturn the perspective, conceiving subjectivity from the way it is expressed in a multiplicity of languages, and trying to rethink enunciation as a property of the different languages to prefigure for the subjects a series of positions to occupy when they use them. The Latourian conception of the role played by delegates in the construction of social phenomena manifests all its relevance here. The origin of meaning transcends both the presence of an instance capable of sending a messenger (nuncio), and that of a messenger called to act as a spokesperson. It rather must be sought in the possibility of operating a passage between the two, in the process of mediation-translation.

No instance of enunciation and no messenger stated before the act of sending in which we pass the ball to someone who speaks for us, even when we will be absent. Enunciation is an act that simultaneously establishes the categories of the utterance (not-I, not-here and not-now) and those of the enunciation (me, here, now), defining a principle of differentiation between them (my trans.; Paolucci, 2020: 38).

In this proposal that aims to rethink subjectivity from a semiotics of enunciation, a relevant aspect therefore concerns the emphasis placed on the *performative* and *prosthetic* nature of impersonal enunciation,\ that is, on the ability of modes of existence to act on the subject, to induce a transformation, provoking a change on the sensory, cognitive, and narrative level. Among the areas to explore to verify the validity of a non- anthropomorphic theory of enunciation on an empirical level are cinema and video games⁴, in which technological devices act whose peculiarities in terms of signification cannot be described by resorting to categories such as "enunciator", which flatten the dimension of enunciation on the simulacrum of an external subject.

According to this perspective, the formal apparatus of enunciation does not manifest itself as a trace, a simulacrum that refers to an out-of-text that remains absent from the experience of signification, but rather as a series of surrogate stimuli that enhance or reduce the perceptive and cognitive potentialities of the subject, acting as prostheses endowed with agency. As an example, consider the functioning of media experiences that prefigure types of immersive fruition that are not simply

⁴In this regard, consider the pioneering work developed by Christian Metz on cinematic language in Impersonal enunciation or the place of the film (1991). It is important to reiterate, in any case, that the theoretical proposal developed by Metz is not exclusively situated within a specialist debate on cinematic enunciation. Rather, his invitation to go beyond the terms "enunciator" and "enunciatee", substituting them with the expressions *source* (*cible*) and *target* (*foyer*) prefigures the possibility of radically rethinking the forms with which enunciation simulates its presence in texts characterized also by different substances of expression. "After all, what is enunciation, *fundamentally*? It is not necessarily, nor always, "I-HERE-NOW". Broadly speaking, it is the capacity that many utterances have of enfolding themselves, of appearing here or there as if in relief, and of shedding a fine layer of themselves on which the trace of *another nature* (or another level) is engraved; a trace that is concerned with the act of production and not the product, or better yet, if you like, is engaged with production from the far side" (Metz, 1991: 10).

reducible to simulacra of subjectivity, but rather to avatars, sensory prostheses that allow a subject to wear multiple and reconfigurable masks.

The determining role assumed by surrogate stimuli in prefiguring for the subject the possibility of accessing an engaging experience in terms of signification would thus allow us to move from a simulacral and anthropomorphic conception of enunciation to a performative one. In this perspective, the apparatus of enunciation is rethought, not by chance, in terms of a *device* formed by the concatenation of multiple instances that act in the utterance as "a third messenger who speaks for us" (my trans.; Paolucci, 2020), creating the conditions for the experience of meaning to be maintained and at the same time renewed over time, rather than being reduced to an act of unrepeatable creation that takes shape from an individual creative action.

In continuity with Latour's invitation to replace the conception of *homo faber* with that of *homo fabricatus*, an inversion of perspective is therefore reiterated with respect to the idea of enunciation as the action of an intentional and transitive instance, as an individual and foundational gesture of the utterance. In the effort to build a unified theory of enunciation, semiotics thus carves out the possibility of adopting a tactical approach, reiterating the presence of a potential and fruitful continuity between the Latourian perspective on modes of existence and the Peircean theory of semiosis:

It is no longer the structures of enunciation that are projected out from a "subject", but *it is the structures of already enunciated utterances that define the possible acts of an enunciating instance*. Therefore, we will no longer only have traces of enunciation in the utterance, but also *subject positions* within the semiotic movement (my trans.; Paolucci, 2020: 38).

If in the process of semiosis signs turn back and "make say", it must be recognized that every instance capable of participating in the enunciation must be considered as part of a network of discourses already realized and recorded in the encyclopaedia as interpretants, understood as mediation tools to access the experience of the world.

On the side of research revolving around an extended notion of enunciation, it is evident that the link between Latour's work of rethinking and conceptual extension and the field of semiotic studies is thus anything but dated or episodic. What emerges is rather the scenario of a potential mutual enrichment whose outcome largely depends on the ability to recognize that the separation between these perspectives is once again mainly played on a methodological rather than epistemological plane.⁵

⁵For this aspect, refer to the already mentioned dossier of Actes Sémiotiques 120 entitled Sémiotique et anthropologie des modernes. Retrieved from https://www.unilim.fr/actes-semiotiques/6676

5.5 Between Semiotics and Cultural Anthropology

The renewed interest of semiotic research in Latour's investigation of the paradoxes of modernity is also due, in part, to recent developments in the field of anthropological studies dedicated to exploring ontological pluralism within collectives of humans and non-humans.

The overcoming of anthropocentric prejudice, the emphasis placed on the notion of agency in the construction of associations between distinct entities and the radical criticism advanced against the nature/culture dichotomy define a research perimeter in which the dialogue between Latour and some central authors in the panorama of contemporary anthropology has proved particularly fruitful, generating significant repercussions for semiotic research. In particular, the primary objective of anthropologists such as Philippe Descola and Eduardo Viveiros de Castro is to uncover the ideology inherent in the so-called "great division" that opposes and at the same time legitimizes the categories of nature and culture, hindering the recognition of ontologies based on distinct modes of association between multiple entities. It is not the aim of this book to retrace the complex research work developed by the two scholars, but rather to simply highlight the productive dialogue developed with Latour, an exchange of research perspectives that prefigures the possibility for semiotics to account for the way in which meaning is generated, circulates and transforms in the concatenation of material and immaterial entities, both human and non-human. As we have seen, in the elaboration of the Latourian critique of modernity, the recourse to an anthropology defined as "a bit different", symmetrical, assumes a central role, to the point that "Network analysis extends a hand to anthropology, and offers it the job that has been ready and waiting" (Latour, 1993: 104). On the other hand, Descola, in the famous work Beyond Nature and Culture (2021), repeatedly recalls the works on the anthropology of the moderns and the politics of nature in the belief that dualism conceals, like a mask, the presence of a series of practices that contradict it. Against the backdrop of this common horizon of critical reflection, what particularly interests the French anthropologist, unlike Latour, is not a critique of the aporias that characterize the thought of the moderns, but rather the effects of a prejudice described as a "distorting prism" on ethnology and that hinders the elaboration of a "general grammar of cosmologies".

A sociologist of the sciences may well incur Latour's criticism if he believes that humans and nonhumans exist in separate domains, but nevertheless he will remain faithful to one dimension of his object. In contrast, an ethnologist who thinks that the Makuna and the Chewong believe in such a dichotomy would be betraying the thought of those he studied (Descola, 2013: 53),

As we have seen in the previous chapters, the theoretical and methodological option advanced by Latour to respond to the inconsistency of the binomial that opposes nature/culture does not consist so much in denying its terms as in highlighting the presence of a plurality of ontological combinations (nature-culture), assigning a priority role to the relationship rather than to the elements, to the concatenation that allows a heterogeneous collective to take shape and maintain itself over time,

rather than to its individual components. Descola's work, on the other hand, aims to demonstrate the lack of relevance of the radical opposition between nature and culture, proposing its overcoming in favour of a different kind of dualism, the one that distinguishes *interiority* and *physicality*, laying the foundations for the development of the famous classification of entities into four great ontologies: *animism*, *totemism*, *naturalism*, and *analogism*. The difference in perspective, compared to Latour but also to Viveiros de Castro, is certainly not insignificant and revolves around the conception of ontology. As Sedda (my trans.; 2021: 24) points out:

[...] while in the first two the ontologies tend to open the cultural space, to multiply worlds, to generate ontological alternatives, in the case of Descola the ontologies refer to schemes of relations that unify practices, generate internal homogeneity to the different collectives, overcome time, create stability and resistance to change.

We add that, not by chance, the same notion of collective, of which Descola recognizes the relevance, assumes in his work a partially different meaning compared to Latour's elaboration. Indeed, if on one hand the conception of a set composed of strongly heterogeneous entities is taken up, on the other the absence of any functional or finalistic dimension (the desire to live together) leads to an overcoming of the network perspective.

In short, it is not so much linguistic limits, the perimeter of a commercial network, or even the homogeneity of modes of life that mark out the contours of a collective. Rather, it is a way of schematizing the experience shared by a more or less vast collection of individuals (Descola, 2013: 176).

In this sense, Descola clarifies, the limits of a collective do not depend, as happens in a network model, on a preliminary decision of the researcher, forced to cut out the perimeter of the field of study based on the quality of the data to which he has access, but rather "from the area of influence of a particular scheme of practice". The borders that distinguish one collective from another are thus to be sought in the manifest discontinuities "with respect to other ways of being present in the world", in a perspective heir to structuralism that does not in any way preclude the possibilities of dialogue with post-structuralist semiotics and that rather further fuels the debate on the validity of a network model at the foundation of associations between humans and non-humans.

In any case, it is clear that the overcoming of nature/culture is revealed as a very difficult goal to achieve, to get rid of naturalism is indeed a task that takes on the characteristics of a real enterprise for a subject who lives modernity, as Descola himself recognizes in this passage:

Although we may from time to time indulge in the type of ontological judgments that other modes of identification suggest, it is out of the question for any modern subject fully to become animist or totemist (as ethnographic experience attests) or even to return consistently to the ancient attractions of analogism (Descola, 2013: 149).

The way out proposed to avoid falling into the prejudice that assigns moderns privileged access to understanding nature, consists therefore in moving from the epistemological perspective long dominant in anthropology, the so-called *particular universalism* (Latour, 1991), to the option of a *relative universalism*, where the

adjective refers to something concerning relationship. The foundation of this perspective is not to be sought in the idea of nature nor in that of culture but, Descola argues, in the

[...] relations of continuity and discontinuity, identity and difference, resemblance and dissimilarity that humans everywhere establish between existing beings, using the tools that they have inherited from their particular phylogenesis: a body, an intentionality, an aptitude for discerning differential gaps, an ability to weave with any human or nonhuman relations of attachment or antagonism, domination or dependence, exchange or appropriation, subjectivization or objectivization (2013: 151).

The project of an anthropology of naturalism is far from a consolidated enterprise, as Latour himself reminds us of when commenting on Descola's work, highlighting the lack of ethnographic data compared to the other three great ontologies, a scarcity of empirical evidence already pointed out in *We Have Never Been Modern*⁶

Descola himself recognizes several difficulties in this definition of "naturalism": first, as far as the 16th century, they were still devoted "analogists" and it is only during the "scientific revolution" that they seem to have changed their mode of identification; but second, and more troubling for the present inquiry, while the three other modes depend on detailed ethnographies of the practice of collectives, "naturalism" is largely based on the theories developed by philosophers, theory that is so far from their experience.⁷

If Descola aims at overcoming the nature/culture dualism, the option advanced by Viveiros de Castro is different, and is shaped by the reversal, by numerous peoples of the New World, of the meaning commonly associated in the West with the two terms on which the Great Division is based. In the Amerindian conception "Every existent is a center of intentionality apprehending other existents according to their respective characteristics and power" (Viveiros de Castro, 2014: 54). What is defined as an *alter-anthropology of indigenous thinking* thus forces us to redesign the established conceptual maps, in other words to redistribute the attributes commonly associated with the paradigmatic terms of nature and culture such as: "universal and particular, objective and subjective, physical and moral, the given and instituted, necessity and spontaneity, immanence and transcendence, body and spirit, animality and humanity, and so on (2014: 55–56)".

Compared to the primacy of multiculturalism claimed by the moderns, Amerindian thought is therefore characterized by the presence of a *multinaturalism*. Where Western cosmology is based on the assumption of a uniqueness of nature (guaranteed by the universality of bodies and substance) and the multiplicity of

⁶In this regard, this passage on the urgency of moving to a symmetrical anthropology is emblematic: "Paradoxically, we know more about the Achuar, the Arapesh or the Alladians than we know about ourselves. As long as small local causes lead to local differences, we are able to follow them. Why would we no longer be capable of following the thousand paths, with their strange topology, that lead from the local to the global and return to the local? Is anthropology forever condemned to be reduced to territories, unable to follow networks?" (Latour, 1991: 116). As can be seen, the dialectic between Latour and Descola clearly revolves around the limits and opportunities of a network conception of the collective.

⁷See the entry "Anthropology of naturalism" in AIME (http://modesofexistence.org).

culture (result of the variability of spirits and meanings), "the Amerindian conception presupposes, on the contrary, a unity of mind and a diversity of bodies. "Culture" or subject as the form of the universal, and "nature" or object as the particular" (2014: 56). On the one hand, therefore, the presence of a similar "soul" is revealed, that is, a similarity of "perceptive, appetitive and cognitive dispositions", on the other hand, a profound difference emerges in terms of modes of expression and perception. This is the phenomenon of *perspectivism*, according to which "The way humans see animals, spirits and other actants in the cosmos is profoundly different from how these beings both see them and see themselves" (2014: 56). The outcome of the perspectivism inherent in what is defined as a "powerful indigenous intellectual structure" (2014: 55) is therefore twofold: on the one hand, it consists in the ability to operate a counter-description of the way in which Amazonian thought has been represented by the dominant paradigm of Western anthropological studies, on the other hand, in the opportunity of "returning to us an image in which we are unrecognizable to ourselves" (2014: 55).

In this work, the relevance of the dialogue with Latour's work is more explicit than ever, if on the one hand the French scholar recognizes the Amazonian concept of multinaturalism as playing an essential role in demonstrating the inconsistency of the binomial multiculturalism/mononaturalism, on the other hand, the relational and trans-ontological approach implied in the notions of collective and of actor-network constitutes one of the main references of Viveiros de Castro's work in the development of an indigenous cosmopolitical theory.

There are thus multiple reasons why the debate on multinaturalism has generated interest in the field of semiotic research, signalling the opportunity to relaunch the dialogue with cultural anthropology. A dialogue useful, on one hand, to re-evaluate the nature/culture dichotomy long considered as the foundation of the theoretical framework of the study of signification and, on the other hand, to rethink the methodologies of analysis for understanding the meaning at play within associations composed of a multiplicity of multiform actors, human and non-human. A proof of this growing attention is represented by the efforts of theoretical elaboration involved in the development of the notion of *internaturality* (Marrone, 2012, 2019) and the recent development of *anthroposemiotics* (Fontanille & Couégnas, 2018).

5.6 Multinaturalism and Internaturality

The first area of research concerns the potential for theoretical renewal that the different meanings of multinaturalism prefigure for a theory of signification that, in its most widespread manifestations, seems rather to be based still, predominantly, on a mono-naturalistic type of paradigm. As Marrone (2019) highlights, the growing interest sparked by the critique of naturalism, supported by the empirical evidence of contemporary anthropological research, helps to illuminate an aporia of semiotics that transversally affects the epistemological, theoretical, and methodological dimensions. On the first front, it is well known that for Greimas the distinction

between nature and culture, laid out in the logical articulations of the semiotic square, assumes a universal value. It should also be clarified that this articulation does not have an ontological characterization but rather a semantic one, to the point that its various manifestations are not considered as states of the world but rather as effects of meaning generated discursively.

If /nature/, in particular, is the product of a certain articulation of meaning, it is, in principle, plural, and it proposes itself as existing in function of changes in isotopies, discourses, narratives, cultures. (my trans.; Marrone, 2019: 11)

The aporia of semiotics thus consists in the presence of an epistemological mono-naturalism that implies a multi-naturalism on the methodological plane. This peculiar misalignment is further complicated if we consider the theoretical level, where one of the most significant contributions, as previously described and recognized by Latour himself, consisted in favouring the overcoming of the notion of character in favour of that of actant, understood as a syntactic position within a narrative grammar, as a force endowed with a variable level of agency, capable of assuming a multitude of configurations at the discursive level, of which the anthropomorphic one is only one of the possible options. In the narratives that shape many cultures, non-humans play roles that are anything but marginal or passive. Objects, spirits, animals, and plants commonly reveal themselves as narrative forces capable of helping or hindering, endowed with cognition, emotionality, in other words, capable of expressing an interiority, a soul. From the perspective of a dialogue with the positions taken by some of the most authoritative scholars in the panorama of the anthropology of nature, it is not then unreasonable to find in semiotic theory, that is supported by a rich tradition of analysis of narrativity, some distinctive traits of animism that contribute to strengthening the sensation of an ambiguous position of the discipline in the debate concerning the complex theme of a critique of the idea

[...] as semioticians, we find ourselves in an anthropologically embarrassing situation: at the epistemological level we are mononaturalists; at the theoretical level we are animists; at the methodological level we are instead multinaturalists. Semiotics as a rigorous scientific system is at risk. (my trans.; 2019: 11)

Against the backdrop of these reflections, the solution proposed to distance oneself from what effectively appears as a risky impasse consists of a tactical move aimed at recognizing the primacy of the empirical level in the study of signification, in particular in giving priority to the practice of analysing the ways in which meaning emerges and circulates in society in the form of a multitude of narratives, discourses, and practices that contribute to the production and circulation of socially relevant phenomena. In other words, it is about starting again from the perspectives of sociosemiotics and semiotics of culture, particularly claiming the usefulness of notions such as that of *semiosphere*, to be used to try to understand whether, and to what extent, naturalistic ontology is actually the only accessible in the context of Western society (according to a logic of a paradigmatic type that excludes other possible ways of attributing meaning to everyday life), or whether being "modern" does not instead consist in combining different forms of valorisation of entities, whether

human and/or non-human, according to a logic that could be defined rather of a combinatorial type. For example,

we can easily imagine someone who is a scientist (naturalist), consults the horoscope every morning (analogist), loves his cat by including it in the family status (animist) and drinks so-called natural wine (totemist). The problem will then be, following Jakobson (1935) and Lotman (1985), to understand which is the dominant ontology and which others are in hierarchy to it. (my trans.; 2019: 12)

The potential that arises from a comparison with the positions expressed by Latour and Descola becomes clear here.

On the one hand, a semiotics of everyday life, founded on overcoming a narrow conception of textuality, potentially stands in continuity with a symmetrical anthropology that also recognises in the collectives of moderns the presence of a work of association between distinct elements whose *forms* it is essential to first reconstruct.

On the other hand, the answer to the view that moderns cannot escape the ontology of naturalism, except by occasionally accessing other modes of identification, consists in emphasizing the need for a change of perspective in the study of signification. In continuity with a semiotics of culture, this perspective privileges, in the definition of identity, the study of the different modes of relationship between distinct elements rather than the identification of traits pertinent to individual ontologies. It values, in other words, the logics of negotiation and conflict that allow different cultures and modes of identification to associate with each other, establishing a relationship based on translation.

It is from these considerations that emerges the proposal to overcome the term multinaturalism, considered misleading because potentially associated with a conception of modes of existence understood as completely independent forms of life, in favour of that of *internaturality* which, in continuity with the expression interculturality, rather highlights the processual, dynamic and translative dimension at the foundation of the experience of signification, understood as expression of a multiform social body.

As evidence of an open dialogue with the anthropology of nature, it is in any case important to emphasise how the invitation to adopt the expression internaturality once again signals continuity on the epistemological level. Highlighting the primacy of the relationship over the inventory of distinctive traits, means recognizing that the different ontologies, like cultures, are constituted according to a series of correlations that manifest the presence of a combinatorial logic (Descola) and that the task of a critique of modernity consists primarily in unveiling the naturalistic alibi that disguises the presence of a complex work of mediation, association, reconfiguration unthinkable without the involvement of a multiplicity of distinct entities (Latour).

At the same time, it is particularly on this last point that semiotics can carve out a space that is both distinctive and enriching compared to the anthropology of modernity, for example, helping to account for the different ways through which ontologies such as animism, potentially inherent in relationships with non-humans so widespread as to often be indispensable, like animals but also, as we will see, the latest generation of wearable or domestic technological artifacts, are actually the

result of a series of social discourses (science, media, politics, advertising, art etc.) that prefigure types of cognitive and affective relationships, shape expectations, contribute to naturalizing new kinds of social actors.

It is, after all, a matter of rediscovering and re-actualising a dual vocation of semiotics: that of a discipline founded on the development of rigorous procedures for decomposing and analysing the phenomena of signification, at the service of a critique of culture.

5.7 Anthroposemiotics

A recent proposal aimed at further deepening the dialogue with the anthropology of nature is that of anthropo-semiotics (Fontanille & Couégnas, 2018) which identifies, precisely in the work of Descola, Latour and Viveiros de Castro, the opportunity to rethink some theoretical assumptions and methodological tools at the foundation of the analysis of signification, with the intention of relaunching the fruitful dialogue between semiotics and cultural anthropology initiated towards the end of the fifties. The premise is that anthroposemiotics would not constitute an "object-semiotics", that is, a new branch of the study of signification, but rather an epistemological and methodological point of view on the ways in which meaning takes shape and circulates in everyday life. The reference to the perspective of a symmetrical anthropology in the study of modernity is more evident than ever. On the one hand, notions such as collective and actor-network are explicitly evoked, on the other hand, the legitimacy of a research perspective on modes of existence is highlighted, which, while recognizing the presence of some paradigmatic realizations characteristic of zones of the world and circumscribed periods, conceives ontologies as "nomadic", that is, capable of circulating in time and space and "combinable", that is, potentially associable with each other in any place and at any time.

We semioticians belong to a naturalist type of world, but we gladly adopt a totemist position if we are lovers of wine, of vines and terroir, an animist position in the relationship that we maintain with our dog or with the plants in the garden that we take care of. We ourselves are also (structurally) animists when we consider that objects, elements of the landscape or, in general, non-humans can manifest the presence of narrative actants. Finally, we can also adopt an analogist position when we start to take seriously, and not as a rhetorical device, a metaphor or an allegory. (my trans.; Fontanille & Couégnas, 2018:14)

Anthroposemiotics therefore starts from the conviction that criteria such as proximity and distance that separate the researcher from the object of analysis have long ceased to be relevant to circumscribe the field of study, to identify the otherness to explore. The task of a semiotics in dialogue with the anthropology of nature will therefore be to offer an alternative perspective compared to that of ethnology, a "complementary point of view" on the meaning implied in everyday life, focused on the ability to analyse the different components that contribute to defining a network or a collective in properly non-anthropomorphic terms, therefore as actants capable of assuming different configurations. The distance with the positions previously

mentioned in the field of anthropological studies is once again traced back to the methodological level rather than the epistemological one, as emerges in this passage where the assonance between the two research perspectives is manifested: "Otherness is what is confronted with what is conformity, with dominant usage, with fixed or imposed representations, with doxa, evidence" (my trans.; Fontanille & Couégnas, 2018: 14).

The epistemological anchoring of anthroposemiotics, the horizon of its field of action are therefore traced back to the Hjelmslevian principle (1961) according to which there is no universal formation, but only a universal principle of formation. According to this perspective, the object of semiotic analysis is identified in the presence of "small 'local ontologies'" "at work in a more or less explicit way in all practices endowed with meaning whatever their dominant actantial scheme (predation, exchange, attachment etc.) and their privileged domain of manifestation (law, technique, hunting, environment, social networks etc.)" (my trans.; Fontanille & Couégnas, 2018: 230–231).

Faced with the irreducible plurality of modes of existence at play in what is proposed as a "concrete" semiotics, the object of the analysis is no longer understood as the outcome of a generative trajectory of meaning regulated by conversion operations between different levels, nor of a deduction made from a logically pre-existing founding principle, but rather as an "instauration", where meaning, in its becoming, "finds the risky path of existence at the mercy of repetitions, transpositions, translations, remediations, etc. in function of the plurality of conceivable semiotic systems" (ibid).

In what appears as an attempt, still underway, to reposition the epistemology of the discipline, the project of an anthroposemiotics is therefore explicitly based on the perspective of a situated epistemology that presupposes as a precondition the diversity and plurality of signification, where "it is no longer a question of understanding what kind of relationship scientific models have with an inaccessible being [...] but rather what worlds they establish there" (2018: 34).

If on the one hand fundamental notions of structuralist semiotics such as that of actant and narrative program are maintained, as well as the attempt to identify the planes of relevance (the empirical one of the phenomena that impose themselves on attention, that of semiosis that accounts for the underlying general cultural configurations, and finally that of the discourse-description of the research, here defined as "presentation"), on the other hand, the need to adopt a flexible method of analysis capable, from time to time, of being adapted to the distinctive characteristics of the "world" explored is reaffirmed. Thus, in the empirical analysis (focused, in the work of Fontanille and Couégnas, on the peculiar traits of a rich French regional culture, the Limousin) recourse is made each time to narrativity, to tensive semiotics, to enunciation, the latter explicitly re-read considering the Latourian perspective.

⁸ In the work of Fontanille and Couégnas the use of the term instauration explicitly refers to Souriau and the empiricist perspective that presupposes the plurality and variability of modes of signification.

The belief that the field to be explored is composed of collective formations, whose meaning manifests itself in the form of distinctive ontologies, where the analysis is only valid within an established world, on the one hand signals the precious effort of part of contemporary semiotics to develop models capable of accounting for the signification at play in the numerous manifestations of everyday life, on the other hand, it raises a series of questions that have long been of interest to the epistemological status of the discipline. As Anna Maria Lorusso argues by highlighting a passage from the work of Fontanille and Couégnas (2018: 257) claiming that "an opportunity emerges and unfolds, that's all we can say about it intuitively"

The idea of an initial "semiotic occasion", of a moment of contact with reality, to be developed according to a logic of imprint (empreinte) and influence, is a suggestive and perhaps realistic idea (a thousand times things really happen this way, all starting from an occasion-stimulus), but it is not enough to save us from the accusation of subjectivism and constructivism. Is the occasion the same for everyone? Or is it only for those who can grasp it (because they have particular abilities)? If the presence of an occasion is the moment of contact between the world and semiotics, how can we move from the singularity of this contact to a more abstract level of generalization? And how can semiotic knowledge, if it moves from one occasion to another, be constructed as coherent knowledge? (Lorusso, 2020: 11)

It is clear, in any case, how this recent research direction foreshadows, if not a turn on the level of a general theory of signification⁹ (think again about the longestablished perspective of sociosemiotics proposed by Eric Landowski focused on overcoming assumptions such as intentionality, linearity, and rigidity inherent in the narrative structures of exchange), certainly an attempt to re-actualise semiotics, the success of which significantly passes through the ability to face the paradoxes of a modernity that is all the more difficult to explore the more apparently familiar, in the belief that the contribution of a discipline with a critical vocation is more precious than ever to account for the different modes of existence implied in common sense. Following this perspective, anthroposemiotics should not be understood so much as the attempt to define a general semiotics, but rather as the effort to offer a different point of view on a general theory of signification. And this is where the comparison between semiotics and a "sister" discipline, cultural anthropology, can be valuable, in the need—no longer avoidable as emphasized by Francesco Marsciani (2019) to develop rigorous procedures for decomposition and analysis of the phenomena of signification without reducing the richness of the signification at play in everyday life to excessive formalism. In other words,

to account, not so much for the articulations, logics, grammars and combinations of events, which risk conceding a lot, too much, to a pre-definition of the object for which we will never be responsible, but for their signification, their articulation of value and the specific ways in which they do so" (ibid).

⁹In this regard, see the considerations of Lorusso 2020 on the potential elements of convergence, implicit in the work of Fontanille and Couégnas, with the interpretative semiotics of Umberto Eco and the semiotics of culture of Jurij Lotman.

5.8 Objects as Social Facts

Another area in which Latour's work has proven particularly stimulating for contemporary semiotics, both on the level of theoretical reflection and empirical research, concerns the study of the signifying capacity expressed by artifacts.

The interest of semiotics in objects is certainly not recent, just consider the seminal project of semiological investigation by Barthes (1957) dedicated to the exploration of the mythologies of everyday life. Since the first phase of semiological studies, what has aroused interest is the fact that the meaning of objects exceeds their use (Barthes, 1966), the signifying capacity of things in fact extends far beyond the perimeter of the function they perform. The semiotics of objects started precisely from the need to account for a paradox: "[...] these objects which always have, in principle, a function, a utility, a purpose, we believe we experience as pure instruments, whereas in reality they carry other things, they are also something else: they function as the vehicle of meaning" (Barthes, 1988: 182). The case of a functional object par excellence, like the telephone, for Barthes is paradigmatic, it indeed always has a meaning that is revealed independently of the function it fulfils "[...] there are bureaucratic telephones, there are old-fashioned telephones which transmit the notion of a certain period (1925); in short, the telephone itself is susceptible of belonging to a system of objects-as-signs" (ibid).

These pioneering studies thus contribute to defining the role of a semiotics of objects: that of revealing the naturalistic alibi that reduces the meaning of things to the evidence of their function and materiality, denying their capacity to signify in an articulate manner.

Over time, objects have acquired an increasing relevance in semiotic studies, fuelling a rather intense debate during the Sixties and Seventies, the outcome of which, thanks also to the involvement of experts and design scholars, was to sanction the transition from empirical functionalism to a research perspective and theoretical reflection oriented toward enhancing the symbolic dimension and practices of use.

In the following years, as Gianfranco Marrone (2002) observes, both the interest of designers in semiotics and that of the latter towards objects have faded, to the point of progressively highlighting a marked distance between the two disciplines.

However, the scenario changes again at the end of the Eighties, corresponding to the expansion of the field of analysis of semiotics and the development of a theoretical apparatus capable of supporting the analysis of the signification at play in the various areas of social communication. On a theoretical level, the abandonment of the notion of sign and the overcoming of any conceptual difference between text and context is crucial, a step that marks the birth of sociosemiotics.¹⁰

¹⁰ As Eric Landowski (my trans.; 1989: 9) states "Such, at least, is the challenge that we are formulating, that of a "socio-semiotics": instead of framing language as a mere support for "messages" circulating between senders and recipients, regardless of their own determinations (cf. information theory), we will first and foremost consider the interactions realised, thanks to discourse, between the 'subjects', individual or collective, who are inscribed in it and who, in a certain sense, recognise themselves in it".

The renewed interest of semiotics in the meaning of objects and design thus materializes in a series of publications, among these a monographic issue of the magazine "Protée" edited by Eric Landowski and Gianfranco Marrone, subsequently published in an Italian volume (Landowski & Marrone, 2002) with the addition of Latour's essay "A Sociology without Object?". In the introduction to the volume, an essential theoretical junction is highlighted regarding the outcome of research on the meaning of objects developed over time from the perspective of semiotics. The symbolic value of things is not at all reduced to a secondary function, the ability to express a meaning that transcends functionality is no longer understood as a simple connotation through which the object maintains "memory" and transmits the idea of an era, as in Barthes' pioneering study. Rather, the ability of objects to signify consists in the set of possible relationships that they contribute to realize and stabilize with a subject, in a process of valorisation that can vary depending on the life project of the latter. 12 This acquisition proves decisive for semiotic theory as it allows us to overcome the idea, rooted in common sense, of an asymmetric relationship between subject and object, of the conception of things as simple tools at the service and under the control of the human actor. At a time when objects in everyday life manifest, more often than we are willing to recognize, the capacity to act as subjects, to exercise, through delegation by human actors, a number of functions, expressing at the same time a variety of social meanings, they must therefore be recognized as constitutive elements of the society in which they act, as social actors.

Society, in other words [...] also includes all those objects to which purely human functions have been delegated. Social beings are human subjects, but also those "non-human" subjects that are objects, as well as, if not above all, those "hybrid" subjects, human and non-human together, born from more or less casual, more or less lasting encounters, between human and non-human actors (my trans.; Landowski & Marrone, 2002: 27–28).

On this level, the link with Latour's work proves to be explicit and fruitful in taking up and deepening an idea implicit in semiotic studies (the relevance and depth of the concept of the actant), making it possible to address the emergence of new subjectivities formed by the unprecedented union of human and non-human actors, with particular reference to the sphere of technological artefacts and the practices of their consumption.

Certainly, there remain differences with the perspective of semiotics, in particular regarding the impossibility according to Latour of reducing an actor to a field of forces or a structure. ¹³ However, the centrality assigned to the concepts of actant and

¹¹La société des objets. Problèmes d'interobjectivité (Volume 29, n. 1, 2001).

¹² "The instrumentality of the object claimed by functionalism traditionally understood loses further ground: not only the symbolic value of objects has a functional character within the social, but this symbolic value has multiple characters that derive not only from the moment of the production of the object, but from that of its consumption" (Landowski & Marrone, 2002: 15).

¹³ See in particular Latour's explicit reservation towards the 'positional' perspective on agency that characterizes structuralist semiotics "The weak point of structuralism does not lie in having sought rules beyond appearances, but in having imagined that any being could limit itself to 'occupying a position': in reality he always recreates it around himself, at least in part, making it a tool of mediation [...] if there are no subjects to dissolve, there are also no fields of forces in which to dissolve subjects because the force is never 'transported': there are only passages, 'translations' of forces' (Latour, 2021: 135).

mediation as translation allows to highlight once again the affinities on the epistemological level, highlighting the question of the constitutively social nature of objects.

However, objects are not means, but rather mediators-just as all other actants are. They do not transmit our force faithfully, any more than we are faithful messengers of theirs [...] In order to deal with the social body as a body, we need: a) to treat things as social facts; b) to replace the two symmetrical illusions of interaction and society with an exchange of properties between human and non-human actants; c) to empirically follow the work of localizing and globalizing (Latour, 1996b: 240).

Again, on the level of metalanguage, note the common recourse to the term *interobjectivity* which manifests the presence of a shared theoretical assumption that consists in recognizing the growing relevance assumed by the interactions that are established between the artifacts in the unfolding of daily life.

Progressively in semiotic studies there is thus an overcoming of the perspective on signification that characterized the research of the Sixties and Seventies (Mattozzi, 2010) in favour of a relational perspective. Significant in this sense, are the publication of a monographic number of the magazine "ElC"¹⁴ (2009) dedicated to the renewed opening of semiotics towards design and artifacts, which includes a contribution by Latour,¹⁵ as well as a dialogue in the form of an interview (Mangano & Mattozzi, 2010) in which the latter is once again involved on the subject of design.¹⁶

In the same years, a further effort to fuel the dialogue between the theory of signification and the sociology of technique was realized with the collection and translation into Italian (Mattozzi, 2006) of a series of important socio-anthropological research focused on the meaning of technical objects, including two essential essays to situate the relationship between actor-network theory and semiotics (Akrich & Latour, 1992; Akrich, 1992).

Further proof of the renewed interest in Latour's work on semiotic reflection aimed at exploring the phenomena of signification at play in society is the recent publication (Latour, 2021) of a series of his contributions that in various ways address the theme of the meaning implied in artifacts, their circulation, and the set of their uses and reinventions. The title of the collection, 'Politiche del design. Semiotica degli artefatti e forme della socialità', alludes to the crucial role played by objects in the construction of social phenomena and the overcoming of an anthropomorphic perspective on agency. The volume highlights the contribution of the theory of signification in Latour's research on the paradoxes of modernity, while also outlining some fruitful lines of research for a semiotics of artifacts aimed at

¹⁴Il discorso del design. Pratiche di Progetto e saper-fare semiotico. "ElC", Special Series 3/4, edited by Dario Mangano and Alvise Mattozzi.

¹⁵ A Cautious Prometheus? A Few Steps Towards a Philosophy of Design, Keynote lecture, History of Design Society, Falmouth, 3rd September 2008.

¹⁶ Latour's work is also widely referred to in italian semiotic research more generally focused on the issue of designing spaces, objects and interfaces. See in this regard: Deni and Proni (eds) 2008) and Bianchi et al. (2010).

exploring the ways meaning emerges in a contemporaneity marked by an increasing complexity of relations between human and non-human actors.

In particular, the conception of the domain of technique as a process of transferring agency between multiple actors, located in distinct spaces and times, proves particularly fruitful because, as argued in the preceding pages, it presupposes at its core an extended theory of enunciation. The attention given to objects is in fact justified by the consideration that their meaning, far beyond the functional dimension they express, lies in their capacity to act as place holders, that is, literally, in their capacity to contribute to the realisation of an objective (action programme), acting by delegation of a human, taking the place of an absent subject, committed to extending his/her own range of action through a process of displacements, delegations, deviations. Studying and analysing the constitution, evolution and decline of the hybrids produced by technique thus becomes essential to reconstruct that process of deviation of agency¹⁷ without which society cannot take shape and, above all, to reveal how the separation between things and subjects is the outcome of a process of stabilization (naturalization) that ultimately refers to the exercise, however disguised, of power.

It is not a matter of *machines* or *mechanisms*. These have never existed without mechanics, inventors, financiers, and machinists. Machines are the concealed wishes of actants which have tamed forces so effectively that they no longer look like forces. The result is that the actants are obeyed, even when they are not there (1988: 204).

Several times in the previous chapters, we decided to use the term "dialectic" to define the relationship between the semiotic perspective and the decades-long research on the paradoxes of modernity. It is not a coincidence, therefore, that even with reference to the field of investigation on the meaning of objects, distinctions emerge on the level of metalanguage. Where, as Ventura Bordenca (2021) reminds us, the French scholar outlines an extended notion of enunciation employing a series of terms used as synonyms, namely *débrayage*, *delegation*, *mediation*, *deviation*, *sending* or *translation*, for semiotics it remains essential to set the analysis of a social phenomenon in terms of a process articulated in clearly interdefined levels. A delegation action can therefore be understood as the outcome of a process that involves logically distinct planes, from the surface level of semio-narrative structures (with the presence of a series of abstract and distinct actantial roles such as that of the sender of a delegation and the addresee, or of possible helpers and opponents)

¹⁷The mediating role played by technical artifacts always presupposes the presence of a field of forces to contend with, so in this sense, it is good to remember once again, no object whether it is perceived as natural or social has a unique identity. As Mariano Croce (my trans.; 2020: 55) summarises using the example of a technological artefact such as the smartphone: "The interaction between actants that leads to the actualization of events presupposes a concurrence of forces that 'hybridizes' the outcomes. To which field does a smartphone belong? Isn't technology a field that lives in a constant relationship with its users? How many discoveries and research in various scientific fields are necessary for the production and purchase of smartphones? And isn't it true that a large part of the technological production system is based on the exploitation of wage labor and the use of natural resources, which lead to the forced conversion of entire areas of the earth?".

to that of discursive structures, in which the same roles are liable to assume a figurativization, to manifest themselves as actors, anthropomorphic or not.

In any case, it is precisely in the effort to overcome the asymmetry between people and things that the open debate with the perspective of semiotics becomes evident, a confrontation that can be described in terms of a sort of double movement that runs through much of Latour's research on the modes of existence of contemporaneity. The attempt to defend an anti-essentialist theory of action based solely on the principle of anti-reductionism, according to which there is no primacy of one entity over another, but only more or less stable and effective associations capable of withstanding a series of trials, leads to a peculiar double position expressed towards semiotics: on the one hand open criticism, on the other hand a revival of certain epistemological assumptions.

As Ventura Bordenca (my trans.; 2021: 31) highlights:

On the one hand, he criticizes structuralism, linguistics, and semiotics as domains of the symbolic, which would not be adequate to explain the world, as for Latour there is no "symbolic" added to "things"; on the other hand, asserting that there is no "proper" meaning different from a "figurative" one and that the world operates through a continuous process of shifts and translations, and that there is no "pure" language opposed to the world of "things", in fact, he makes a highly semiotic gesture.

Besides, it is worth recalling once again, the Latourian critique of the opposition between symbols and things, between proper and figurative meaning, dates back to a period of semiotic research that goes from the late Eighties to the mid-Nineties, to a scenario that is still centred on the notion of sign, where the weight of the notions developed in linguistics is still preponderant. Having made this clarification, it is then evident how the reflection on the paradoxes of modernity moves forward, marking a distance from the developments in semiotic theory that does not, however, lead to a rupture, to an unbridgeable distance, but to a distancing from the challenge of extending the tools for analysing natural language to a world characterised by hybrid associations.

Moreover, it suffices to recall how already in Greimasian theory the domain of the natural is conceived as semiotically relevant, as a "signifying world made up of both "nature" and "culture" (Greimas & Courtés, 1982: 374), a space in which the individual is inscribed from birth and whose meaning emerges through a process of integration guided progressively by learning.

The presence of a common epistemological horizon appears thus, once again, inescapable: if indisputable facts (*matters of fact*) are rethought as problems to interrogate (*matters of question*), it is because nature and culture are not dimensions given *a priori*, but rather areas to explore in the complex set of translations that are established between multiple entities (Latour, 1991, 1999), therefore, as meaning efects, in the sense of Greimas' semiotics.

The overcoming of a clear distinction between the domain of materiality and that of the symbolic leads, thus, to the radical criticism of another dichotomy particularly consolidated in modernity, the one that opposes the *facts* to the *fetishes*, that is the reality of nature revealed by science (the evidence of the data) to the mysteries of religion and magical thinking. Our contemporaneity appears marked, rather, by

the coexistence of facts and fetishes, the so-called *factishes* (*faitiches*), a Latourian term taken up several times in contemporary semiotic research. How else would it be possible to explain phenomena that are anything but passing or as irrelevant like the "telephone-man" (Dusi et al., 2002), in which the meaning of the technological device is to be found precisely in the overcoming of a separation between subject and object, in the function of a mediator capable of quickly generating and consolidating new types of relationships, behaviours, and affections, to the point of making them appear taken for granted, spontaneous, indispensable, in other words "natural"?

Insisting on reaffirming the primacy of reason over the symbolic, the dominion of man over things means falling back into the risky paradox of a sociology without an object, incapable of recognizing that without artifacts the social, and with it the human, are unthinkable. At the same time, accusing these kinds of bonds of fetishism, as often happens, means inevitably falling back into the paradox of a reductionist attitude incapable of accounting for the multiplicity of assemblages that are established between humans and non-humans, denying their meaning, understood as the ability to generate transformations not only on a pragmatic level but also and above all on an existential one.

The misunderstanding to grasp and circumvent then consists in not reducing the phenomenon of *anthropomorphism*, central in generating close ties between humans and technological devices, to the simple projection of a subject's behaviour onto a non-human. Rather, as Latour (1993) highlights starting significantly from the dictionary definition of the term "anthropomorphic", an artifact should be considered as such to the extent that it meets three conditions:

- It was conceived by a human being;
- It acts on his/her delegation, replacing a series of actions (place holder);
- It contributes to shaping the human, that is, to progressively generating a series of habits, so consolidated as to seem ordinary, which contribute to redefining the very existence of humans.

The implications of this anti reductionist perspective on the phenomena of social signification are valuable for a semiotics of artifacts, united by the need to overcome the anti-fetishist prejudice and committed to making visible the construction of what appears ordinary, to account for the ways in which meaning emerges and circulates in relations between humans and non-humans. Just think, as Dario Mangano (2021) reminds us, of the evolution of a technological object that has quickly established itself as a true symbol, the meaning of which is to be found far beyond the functionalities it is able to perform: the iPhone.

Today, the telephone no longer has a pragmatic but an existential value [...] it is no longer a telephone, it is a device [...] that has only one characteristic: to perform a mediation. This is how it becomes a hub, a 'concentrator', that is, the point where processes converge—or from which they depart—that invest and shape not a more or less ample number of aspects of existence, but existence in its entirety (my trans.; Mangano, 2021:352).

The use of the personal pronoun thus explicates the overcoming of the subjectobject dichotomy in a product valorisation strategy that celebrates the advent of a renewed symbiosis between the individual and technology, fostering the emergence

of a new mythology of contemporaneity. The union between human and non-human becomes so close and consolidated that it gives life to a new actor, the delegations assigned to the artifact on the cognitive, pragmatic, and affective level are so extensive that they transform the product into an extension of the subject, in a naturalization of the digital experience that makes the technological tool an integral component of one's identity. Thus, far from any reductionism, it must be noted that in everyday life technology and symbol reinforce each other, to the point that when a human measures himself/herself against an artifact of which he cannot fully grasp the potential, this commonly ends up being perceived as a "magical" object. ¹⁸

5.8.1 A New Category of Non-human Agents: Smart Objects as an Anthropomorphic Device

The acceleration of technological innovation applied to common objects in everyday life has contributed to making the social dimension of things increasingly manifest, prompting semiotics to recently put the notion of hybrid back at the centre. The mobile phone analysed with the tools of semiotics soon revealed itself as the ancestor of a new object intimately connected to the sphere of ordinary action: the smartphone. This, in turn, can only be considered as one of the many tools that animate the transition to a new phase of the relationship between human and non-human actors, namely smart objects, a term commonly used to designate a category of devices as wide and varied as possible, characterized by the use of artificial intelligence and advanced forms of interconnection. This vast category of products includes widely distributed objects designed for intensive and daily use, equipped with various levels of agency and autonomy, able to interact, at various levels of complexity, with other entities. In short, the characteristics that make these new products distinctive are identification, connection, position, the ability to process data and interact with the external environment. Smart objects therefore distinguish themselves from traditional products in two fundamental ways. First, they manifest unique abilities to interact with other entities, whether human (consumers) or nonhuman, like other objects (interobjectivity), secondly, these abilities allow them to express a series of peculiar roles during interactions that users can intuitively recognize. A paradigmatic example concerns the widespread smart speakers like Amazon Echo, whose functioning is enabled by Alexa, a popular cloud-based voice assistant. The voice exchange for managing Echo ensures a mode of interaction with the device's services that can be defined - at least phenomenologically—as "natural". In fact, it is not necessary to use a screen or interface of any kind: it is enough to say the name "Alexa" to order dinner, hire transportation, control the house lighting, listen to music, etc. With the proliferation of this kind of product, the overcoming of the asymmetry between subjects and objects is evident: the meaning of these devices

¹⁸ In this regard, see the considerations of Niola (2012).

emerges in the function of *mediators* that they are able to exercise in the concatenation of humans and non-humans in which they take part, in the ability to solicit and nurture new types of interaction, carrying out on delegation, in autonomy, an increasing number of everyday actions.

What we are witnessing and participating in is therefore the emergence of a new ecosystem of digital agents with particularly advanced agency, with an unprecedented ability to simulate and, at the same time, to stimulate "natural" interaction with humans, to fit effortlessly into the spaces and times of everyday life, exploiting the potential of artificial intelligence.

In this perspective, smart objects thus clearly represent the most striking evolution of the processes of interobjectivity/intersubjectivity at work in technical objects (Peverini, 2021; Finocchi et al., 2018), foreshadowing a new scenario in which the device's ability to express a 'personality', to favour the identification of the subject with an assemblage composed of heterogeneous entities, acting in connection with other enunciating instances (human and non-human) within extended, implementable, reconfigurable networks, takes on relevance.

Already 20 years ago (Dusi et al., 2002), as previously mentioned, within the framework of semiotic studies, the perspective of actor-network theory on technical objects was explicitly taken up, highlighting how behind the uses of the mobile phone unprecedented forms of relations between subjects and objects were concealed. The ties between humans and devices were described as characterised by unprecedented levels of pervasiveness, made effective by more and more extensive networks of action, characterised by a process of delegation without return, in which it was clear that what was delegated to the devices was at best returned as a service, certainly not as power.

Today, the increasingly close relationships between human and digital agents have taken on the traits of a real cohabitation, where the experience of new types of technological objects is so intuitive as to appear natural (think of the ease of activation and interaction of the *intelligent vocal assistant* through *wake word* like "Alexa" or "Siri" that allows even a child to interact with the product). This is actually the result of a sophisticated commercial process of collection, processing, and strategic use of data in which multiple entities are involved, some of which are in no way reducible to anthropomorphic categories such as "I" "you" or "he". What we are therefore witnessing and in which we are progressively more and more involved is the emergence and progressive consolidation of new forms of relations between humans and non-humans supported by unprecedented assemblages, in a process of enunciation, understood with Latour, as mediation-delegation between multiple actants, all the more sophisticated as it is unattainable for the consumer.

In the environment that takes shape from the complex interweaving of relationships between the development of artificial intelligence and a set of social, cultural, political and economic factors, where the seemingly natural spread of smart objects manifests itself in the ability to perform, by delegation, a large quantity and variety of tasks, in addition to the concept of interobjectivity, a notion that assumes increasing relevance and must be re-examined is that of *device*. This notion defines a complex phenomenon that is articulated on three interrelated levels of relevance, albeit

in a non-linear manner and with very different lines of evolution: technological, socio-anthropological and finally cultural, discursive and strategic (Eugeni, 2021).

The first level concerns the functioning of an object understood as a *device*, that is, as an instrument with peculiar technological characteristics. This first level interacts with a second dimension that regards the experiential situation of which the device is part and which in turn contributes to regulate/redefine its functioning. This second conception of the device is defined as *assemblage* and refers to the ways of concatenation that are established between multiple human and non-human entities.

Finally, to describe the whole set of conditions that make devices and assemblages imaginable and practicable Eugeni proposes to use the term *apparatus*. This third level, which clearly refers to the seminal work of Foucault, implies "the interaction of knowledge and powers from which the conditions of the subjects' experience, its activation and its forms derive" (my trans.).

The strong tendency to naturalize the experience of post-media devices calls for an in-depth analysis of the way assemblages work and hide the logics of their own functioning. Although in the perspective of media studies the reference to Latour's work is sometimes implicit, the similarities with his notion of device appear significant. The meaning of a device in fact extends well beyond the technical function it fulfils, it must be sought in the (always reconfigurable) process of mediation of which it is part, in the circulation of agency made possible by the concatenation of multiple entities, in the capacity of modifying relations between humans and non-humans by prefiguring new forms of life.

The critique of an anti-fetishist perspective therefore appears decisive to approach such a pervasive and complex phenomenon, in particular the rethinking of the notion of anthropomorphism proves particularly useful to account for the meaning implied in the functioning of these artifacts, understood semiotically as the ability to assume an identity, fulfilling a multitude of thematic roles, acting on different levels: cognitive, emotional, pragmatic.

From the point of view of their design, the *smart objects* are evidently the result of a massive investment effort involving market-leading companies, engaged in the development of artificial intelligence solutions capable of evolving interaction with human beings to a higher level, encouraging an increasingly broad and diversified adoption. Certainly, in the pervasive use of this kind of product, the ability to express a personality is essential, however, what appears even more significant are the repercussions of this simulation on everyday life, the ability to "give a new shape to the human", assuming by delegation the management of a series of relevant intersubjective relationships, such as the increasingly widespread practice of entrusting the reading of a book to a child before they fall asleep.¹⁹

In a scenario marked by the proliferation of smart devices in which "new devices seek to establish new assemblages" (Eugeni, 2021), the research prospects that emerge for the theory of signification appear potentially relevant. It has been 20

¹⁹ See the research commissioned by Charity Book Trust according to which a significant number of parents delegate the reading of a book to their children to technological devices: https://news.sky.com/story/alexa-read-a-bedti-me-story-parents-swapping-books-for-tech-new-research-warns-11726605

years since the pioneering study on the semiotic dimension inherent in the rapid rise of the mobile phone from innovative product to mass device, an essential component of new forms of life in which function and symbol interpenetrate in an inseparable way. Today the enormous diffusion of smart objects calls for an in-depth study of the meaning they assume in the set of relationships that unfold in everyday life. Smart objects can thus be considered as non-human (but at the same time anthropomorphic in the Latourian sense) agents interacting with other agents (other devices but also other human beings) giving rise to identification processes destined to 'refine' and evolve with the circulation of information and the self-feeding of knowledge of individual devices—as well as of the assemblage as a whole. Interaction with Alexa or Google seems to take the form of a kind of discursive-processual identification between the components at play in the assemblage, soliciting a flexible post-medial experience (Eugeni, 2015) (my agency is modelled on that of the smart object which, in turn, constitutes its own from the interaction with me and/or with all the other networked components that determine 'its' actions).

In this context, which in all respects appears as a transition dense with social repercussions in the construction/reconstruction of the meaning of everyday life, it is necessary to reiterate that it is not certainly the "materiality" of different categories of smart objects that is decisive, but rather the ability to camouflage their presence, to equip themselves with a "familiar" identity, to spread and consolidate themselves as common use objects.

Let's go back for a moment to smart speakers. Here it is no longer a question of some form/function dialectic because nothing, in these devices, authorizes some motivated or oriented valorisation of this relationship. The materiality of the object does not play a decisive role, much less does the design prefigure its functions, because these are by definition indefinite (or left to the potentialities of the indefinite assemblages between subjects and SO and/or between SO and SO through the network). In this regard, the considerations advanced by Betti Marenko (2014: 234–235) appear relevant:

Precisely because they possess an information shadow, a digital presence in the datasphere, their designs tend to become increasingly uniform [...] The uniformity of design language has nothing to do with the old modernist dictum "form follows function." Rather, it is predicated upon a different premise [...] the physical forms of objects with which we are entangled are increasingly neutral, standardized, and rational, while their content is understood via a combination of irrational and somatic competences. Fascination and magical thinking, triggered in great part by the fact that we typically do not know how these devices work, are meshed with intense somatic and sensorial activity.

A sociosemiotics of new smart objects is thus called upon to measure itself first and foremost against the process of "natural" cohabitation that affects the new assemblages between humans and non-humans, to account for the ways in which technological tools become devices, the more efficient (and powerful) the more apparently harmless and controllable, the more semiotically relevant the more apparently familiar.

Moreover, the fact that the great commercial success of this type of product is a far-reaching sociosemiotic phenomenon is clear from the proliferation of texts and discourses extolling or criticising their distinctive features, making smart objects

real social actors. Consider, on the one hand, the brand discourses emphasising the usefulness of smart objects, their reliability, their ability to fit naturally into every-day life, the playful dimension inherent in the user experience and, on the other hand, the growing criticism of gender stereotypes associated with the use of the female voice, the use of personal data, and privacy risks.

Where then, to begin to explore the meaning of a "new society of objects"? To understand the meaning of the new non-humans that inhabit our daily lives, one cannot fail to explore, first of all, how they are talked about and the relationships they have with us humans within the social discourses that define and consolidate their identity. In continuity with the proposal advanced by Marrone (2019), a theoretical and methodological perspective that appears fruitful is that of a sociosemiotics open to the theme of internaturality, committed to accounting for the naturalization at play in the new assemblages of humans and nonhumans. A good tactical solution is to start from a selection of texts and discourses that play a decisive role in prefiguring and orienting new forms of everyday life in which what appears particularly significant is the ability of the devices to work while concealing the logic of their own functioning, to act and to make do in a 'spontaneous' way. In taking the first steps of this exploration, one cannot therefore ignore the role exercised by brand discourses in the definition of a new society of smart objects, a proposal that may appear paradoxical considering actor-network theory's criticism of a semiotics too anchored to the analysis of narratives, but which is justified in the light of the internaturality inherent in numerous advertisements, more precisely of a sophisticated work of valorisation of objects, oriented towards defining their identity according to an animist mode of existence.

5.8.2 The Naturalization of Smart Objects in Brand Discourses

Given the constitutive indeterminacy of digital agents, the project of a sociosemiotics appears even more urgent in the task of reconstructing the ways in which new technological objects assume and claim a marked identity, display "naturalness" and "empathy", thus contributing to conceal or reassure us about the complex power apparatus of which they are an integral part. In this regard, it is significant how in brand discourses the relational dimension in which the agency of the device is manifested is rendered in a way that is anything but descriptive. For example, analysing a large textual corpus composed of commercials of smart speakers produced from the year of their entry onto the market (2016) to the present day, it is possible to note how in many cases brands' discourses do not focus at all on the technical characteristics of the product, understood as a device, but rather as an assemblage, an entity capable of contributing to the construction and strengthening of intersubjective bonds, helping to generate a transformation of everyday life and the different contexts in which it unfolds.

In numerous commercials, what takes on importance is certainly not the narrative function attributed to the technological product (the narrative role is clearly that of the helper who acts by delegation of a human, performing autonomously and effectively a series of daily actions), but the thematic roles that it acquires by delegation, contributing to shape new types of relationships with consumers. The exemplary case is that of Amazon, which since the launch of the smart speaker Echo for the Anglo-Saxon market (2016),²⁰ has presented the device as a component of a family, capable of assisting a father in entertaining his young daughter by performing numerous tasks in the absence of a maternal figure, in a process of familiarization with the intelligent vocal assistant, which culminates in the reading of a story to the girl before going to sleep, representing a practice, as we have seen, far from extraordinary. The ability to act by delegation, taking the place of an absent subject, is emphasized again in an Amazon commercial for the French market (2018) titled "Rayan et sa mère". In the story, Alexa helps a mother to re-establish a dialogue with her teenage son, allowing her to extend her to enter a precluded place, the boy's room, by remotely playing a song, until complicity and harmony are restored in a family unit in which the father figure is absent (Fig. 5.2).

The effectiveness of the device, explicitly portrayed as a mediator of conflictual relationships, is reiterated in another French commercial from 2018, in which a teenage girl, after several failed attempts to reveal to her parents that she is engaged to a girl her age, turns to the smart speaker with intelligent voice assistant as a close friend, a person she can confide in, and thus finds the courage to proudly reveal, again through a song, her homosexuality (Fig. 5.3).

If in the previous cases the role played by the *smart object* consists in acting as a mediator of intersubjective relationships, in the most recent brand discourses, signals of a more symmetrical, equal, relationship between subjects and objects emerge where the relationships between human and non-human agents are mediated by both. Paradigmatic is the case of the "Alexa's Body" commercial, significantly presented by Amazon on the occasion of the Super Bowl (2021), in which the smart

Fig. 5.2 Amazon commercial "Rayan et sà mère" (2018)



²⁰ https://www.youtube.com/watch?v=MEKEzCsnvUc.

Fig. 5.3 Amazon commercial "Faciliter son coming out avec Echo 'Alexa'" (2018)

Fig. 5.4 Amazon commercial "Echo 'Alexa's body" (2021)



speaker embodies the actor Michael B. Jordan, the object of the fantasies of a young female Amazon employee, who identifies his athletic body with the curvilinear and flawless shape of the device, until developing an erotic relationship with the unprecedented male alter ego of Alexa, portrayed in an ironic way (Fig. 5.4).

But what is semiotically most relevant in Amazon's communication is the marked tendency to represent, in an ironic way, artificial intelligence as a presence as irreplaceable as it is imperfect, plausible because unpredictable.²¹ In the American brand discourse Alexa loses her voice, fails to control connected devices, is responsible for sudden blackouts, does not respond to human commands but instead satisfies the desires of their pets to have access to huge amounts of food by executing online purchase orders.²² Finally, it jeopardizes the "serene" life of two celebrities (Scarlett Johansson, Colin Jost) by revealing intimate thoughts and embarrassing behind-the-scenes moments to the partners and their friends (Fig. 5.5).

²¹An analysis of Alexa as a paradigmatic manifestation of a post-media device that prompts a rethinking of some consolidated notions in the semiotic analysis of advertising language can be found in Eugeni (2019).

²²https://www.youtube.com/watch?v=e7iSdU7cuCA.

Fig. 5.5 Amazon commercial (2022)



The enunciation at work in these brand discourses thus serves to endow the device with a "personality", dressing the product with an animistic ontology (continuity of interiority/physical discontinuity), a choice that is anything but trivial if, conceiving enunciation in an extended (Latourian) perspective, one considers that the complex process of delegation (from human to non-human) and mediation (complexity and number of entities involved in the process of data collection, analysis and processing) that allows the product to function is inaccessible to the user. Nothing more relevant, in short, than the irony about the 'human' imperfection of the technological product, a sign of a meta-discourse that is anything but predictable or superficial about the limits and potential of a new society of intelligent objects.

5.8.3 Towards a Conclusion. New Devices and New Hybrids

The "telephone-man" (Marrone 1999) was configured as a hybrid-prosthesis, a new agent generated by the unprecedented association of human and non-human actors. Not only has this type of hybrid by no means disappeared, but today it is declining in a multiplicity of new assemblages that include wearability as a necessary condition to enable their functions (think of the very popular smartwatches).

If the hybrid-prosthesis recalls the famous example of the man-gun, different is the case of intelligent objects that do not include wearability as a prerequisite and whose functioning is rather entrusted to vocal interaction. With this type of technological artifacts, designed to integrate into domestic spaces, what is lost is the process of fusion and incorporation between the device and the human body. Is the notion of hybrid destined to lose relevance here? What about the body of this agent? Is it perhaps a disembodied assemblage? Questions that are anything but extemporaneous, just think of the statements made by Rohit Prasad, Amazon's vice-president and scientist in charge of the brand's artificial intelligence development, according to whom, in the near future, 60 s of recorded audio will be enough for Alexa to faithfully reproduce the voice of a human, assuming by delegation the place of a human, perhaps simulating the presence of a deceased person to alleviate the grief

of their loved ones. The trace of the voice will thus lend itself to be used to exhibit the permanence of a human that can however only be simulated, to flaunt a reproduction that does not attest a "was there", rather stages a "is still there". After all, the voice has now proved decisive in the anthropomorphism that governs our daily relationship with an ever-increasing number of non-humans; suffice it to say that the voice assistant is already able, during interaction, to modulate the volume to the point of whispering and recognising the emotional state of the subject with whom it 'dialogues' from the analysis of the sounds he or she emits. In the face of the 'humanisation' of the device made possible by the delegation of human beings to the product and the company that manages its functioning, a new kind of actor seems to be emerging, whose agency is based on a new and pervasive form of mimicry, in which the 'human' voice camouflages an assemblage of composite entities, all the more relevant from a semiotic point of view, as they are less and less perceptible.

In short, if the corporeity of this new assemblage may seem absent at first glance (unless one traces it back to the materiality of the smart speaker, but that would be really reductive given the anthropomorphisation mentioned above and the overcoming of the form-function axiom of the artefact), it remains, nonetheless, evoked by a voice that, it is worth reiterating, is as impersonal in the manner of its production as it is realistic, 'human', endowed with a 'grain' that is far from lacking in semiotic depth and yet to be explored in the meaning effects it takes on itself. It is then up to a sociosemiotics of collectives to explore the emerging signals of new forms of life, where fears raised by the pervasiveness of assemblages combine with reassurances about the possibility of interrupting their functioning, or at least, as refined brand discourses suggest, of making fun of the irreplaceable presence of our non-human companions.

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