The non-symmetrical kaleidoscope of semiotics

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Abstract: This paper[1] attempts an overview of semiotics, starting from the more abstract and general philosophical level, with emphasis on the epistemological aspect, and continuing to its applications in a set of sub-fields with different expression forms. I examine in detail the existence of a radical break between Saussurean and Peircean semiotics and argue that these two paradigms are incompatible. I try to explain theoretically and demonstrate in practice why Peircean theory cannot be applied to textual analysis. I also try to illustrate the theoretical poverty of biosemiotics and, by comparing its *modus operandi* to that used for textual analysis within the same paradigm, to demonstrate that its use does not lead to any new discovery concerning the object of analysis but simply recycles the initial philosophical premises through it.

In contrast, I then attempt to show the fertility of the Saussurean, and particularly the Greimasian, tradition. I find particularly interesting the extension of semiotics from strict textual analysis to sociosemiotics, that is, the sociologising aspect of semiotics. Without disagreeing with the preservation of the integrity of the field through the rule of relevance, I argue against its isolation from sociology, reminding the reader of Saussure's *linguistique externe* and Hjelmslev's "metasemiotic of connotative semiotics", which allows us to pass from the *semiotics of relevance* to the *semiotics of articulation*, which I call "social semiotics".

Key words: Saussure, Greimas, Peirce, biosemiotics, sociosemiotics, social semiotics, cognitive semiotics, pictorial semiotics, cinematic semiotics, semiotics of settlement space.

Résumé : Cet article tente de donner une vue d'ensemble de la sémiotique, en commençant par le niveau philosophique le plus abstrait et le plus général, en mettant l'accent sur l'aspect épistémologique, et en poursuivant avec ses applications dans un ensemble de sous-domaines ayant des formes d'expression différentes. J'examine en détail l'existence d'une rupture radicale entre la sémiotique saussurienne et la sémiotique peircienne et je conclus que ces deux paradigmes sont incompatibles. J'essaie d'expliquer théoriquement et de démontrer en pratique pourquoi la théorie peircienne ne peut pas être appliquée à l'analyse textuelle. Je tente également d'illustrer la pauvreté théorique de la biosémiotique et, en comparant son *modus operandi* à celui utilisé pour l'analyse textuelle au sein du même paradigme, de démontrer que son utilisation ne conduit à aucune nouvelle découverte concernant l'objet de l'analyse, mais ne fait que recycler les prémisses philosophiques initiales à travers elle.

En revanche, je tente ensuite de montrer la fécondité de la tradition saussurienne et surtout greimassienne. Je trouve particulièrement intéressante l'extension de la sémiotique de la stricte analyse textuelle à la sociosémiotique, c'est-à-dire à l'aspect sociologisant de la sémiotique. Sans contester la préservation de l'intégrité du champ par la règle de la pertinence, je m'oppose à son isolement de la sociologie, en rappelant la « linguistique externe » de Saussure et la « métasémiotique de la sémiotique connotative » de Hjelmslev, qui permettent de passer de la *sémiotique de la pertinence* à la *sémiotique de l'articulation*, que j'appelle « sémiotique sociale ».

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Introduction

I found the position paper on "epistemic territories", prepared by the editor of *Degrés* and sent to the authors participating in this special issue of the journal, both insightful and helpful. The epistemic territories referred to is the field of semiotics and the position paper offers a rich set of theoretical points to clarify the space within which the discussions should evolve. I believe that the following axes emerge: (a) the epistemological status of semiotics ("sémiotique Générale", "le global: science, discipline ou méthode?"); (b) the tension between a global semiotics and the fragmentation of the domain ("l'éclatement de ses objets"); (c) the epistemological status of territorial semiotics (the "sémiotiques spécifiques, le local", having a "spécificité épistémique", recognised in "territoires" such as the "spectacle vivant, à l'image, au son"), that is, the relation between semiotic systems with different expression forms and the general theory to the orbit of which they are attached; and (d) the relation of semiotics with extra-semiotic domains (between the "intrasémiotique" and the "extrasémiotiques"). I shall use these four axes as a theoretical grid organising the paper that follows.

Of course, the position paper demands a double reading ("l'éclatement de ses objets"), because the first and major issue is that we are faced with two radically different, asymptomatic and conflicting semiotic paradigms. It is common semiotic knowledge that there is a schism in semiotics due to the two figures whom all introductions to semiotics consider as the founders of the domain: Ferdinand de Saussure and Charles S. Peirce. Their lives have a direct overlap, since they passed away about the same year and Saussure was born when Peirce was 18 years old.

However, this chronological coincidence does not reflect faithfully their roles in the history of modern semiotics. When Peirce appeared on the semiotic scene, Saussurean semiotics had already been developing for about half a century and creating a tradition with multiple aspects. Peirce came to the attention of semiotics with the energetic work of Thomas A. Sebeok, who became acqainted with his philosophy through the writings of Charles W. Morris and for more than twenty years, from the end of the 1970s to his death in 2001, devoted his life to the diffusion of Peirce's theory. Sebeok's unique managerial capability and his uninterrupted and imposing presence in semiotic events of all kinds around the world was the main reason for the diffusion and establishment of Peircean semiotics.

The philosophical status of general semiotics

Empiricism/induction vs rationalism/deduction

Saussure and Peirce represent two different spheres of knowledge: Saussure was a linguist, Peirce a philosopher (and applied scientist[2]), and this difference has, as we shall see, a strong impact on the operational usefulness of their theories. I shall focus in this section on the broad paradigms on which these two approaches are founded.

[2] Peirce held a degree in chemistry from the Laurence Scientific School at Harvard and his regular position for about 25 years was in the US Coast and Geodetic Survey.

Both philosophy and science are divided between two opposite theories of knowledge, empiricism and rationalism, epistemological super-paradigms which nontheless present certain overlappings. For empiricism, the main source of knowledge is sense experience and experimentation, so that experience is the primary source of concepts and knowledge; reflective understanding is not rejected, but considred as a complementary function. For rationalism, the emphasis is the other way around: both concepts and knowledge are acquired primarily by reason and independently of sense experience. Among the three main theses of rationalism, the intuition/deduction thesis, the innate knowledge thesis implying *a priori* knowledge independent of sense experience, and the innate concept thesis entailing the existence of experience-independent concepts, the first is also shared by empiricists. For the rationalists, knowledge is founded on intuition and all the more on deduction, while the empiricists use the thesis in the more restricted sense that it only applies to the relations of the contents of our minds and not to the knowledge of empirical facts from the external world (Markie and Folescu, 2023: Introduction and sections 1.1, 1.2, 2, 3, 4).

Two differet methodologies are attached to these two paradigms: induction for the empiricists, deduction for the rationalists. Induction is defined as a process during which the initial premises, that is, specific observations, support to some calculable degree, by habit and/or custom, the theoretical generalisations drawn from them, while for deduction, the premises of the process must logically entail the conclusion. Inductive arguments provide support for generalisations (non-demonstrative inference), while for deduction, premises and conclusion are connected by logical necessity (demonstrative inference: if the initial premise(es) is true, the conclusion from it should be true); statistical generalisations, then, belong to inductive reasoning (see also Hawthorne, 2024: Introduction; Aune, 2017).

Induction for philosophers draws with it its own problem, the "problem of induction". The father of induction himself, David Hume, though he supported its validity, simultaneously considered as insoluble the problem of defining the logic upon which induction, as one aspect of the cause-and-effect relation, stands. This theoretical dead end could be considered as arising only at the level of philosophical reflection, and in philosophical practice Hume opposes to rationalism the view that inferences are inductive and supported by imagination rather than reason (Henderson, 2020: Introduction, 1, 6). Deduction too is not self-evident, because it may be difficult to prove the logical necessity connecting premises and conclusions.

Saussure vs Peirce

The preceding discussion offers an epistemological framework within which to assess the positions of Peirce and Saussure. Peirce is considered as one of the greatest American philosophers and was highly esteemed by both Bertrand Russell and Karl Popper. He was influenced by, but also critical of, many great philosophical thinkers, such as Immanuel

Kant. However, he rejected the *a priori* status of Kant's categories and came to consider his own views as more akin to Hegel (Burch, 2021).

According to Aaron B. Wilson (2016), Peirce's philosophical system is in a broad sense empirical, a point on which Bruce Aune (2017*)* also agrees. But, though this is the context of his philosophy, Peirce combined it with the opposite of empiricist methodology, deduction. Sun-Joo Shin (2024: Introduction) considers that Peirce's Existential Graphs are a novel perspective on logic and formalisation, and hence sees him as the founder of contemporary deductive logic.[3] We note that many philosophers consider that the basis par excellence of these graphs is Peirce's well-known tripartite classification of signs.

Contrary to Peirce, Saussure worked in the context of science and is well known as the forerunner of structural linguistics and generally structuralism. His approach to *langue* could be considered as idealist from a philosophical viewpoint, since it is totally detached from the referent.[4] Idealism cannot be defined in a uniform manner, but its common ground is the emphasis on the primacy of ideas vis-à-vis reality. From this perspective, Saussure's approach is the direct opposite of Peirce's pragmatism, which assesses ideas on the basis of their practical effects and efficiency: for Peirce, an idea is true to the extent that it is useful. This is the essence of the "pragmatic maxim", Peirce's normative rule according to which the conceived practical effects of an object of conception are identified with the conception of the object itself (see also Legg and Hookway, 2021: section 2).

The discussion of Peirce's work is the object of philosophers, not semioticians. On the other hand, Saussure's *particular* scientific choice cannot be assessed by philosophical criteria. Philosophy implies a global, universalist view of the world and man, and even in its branch of epistemology it deals with general theoretical matters concerning knowledge, with as a result that it does not offer a point of reference to judge the specificities of science.

The rule of relevance

Contrary to philosophy, any science has to define a single major specific perspective on its object. This perspective is the necessary precondition for the epistemological definition of any scientific field, whether of the human or the positive sciences, and is no other than the "rule of relevance" (*règle de la pertinence*). We find this principle already in Saussure. He states that no single science is in a position to exhaust the theoretical description of any empirical object and each science has to limit itself to *only one* of the possible perspectives through

[3] I believe it is clear from the previous discussion that no argument can support John Deely's connection of Peirce to postmodernism. Deely conceives of a discontinuous line in the West after Greek philosophy, running from St. Augustine to the "high semiotics" of the later "Latin" age to modernism, and leading to postmodernity. This last stage would be due to Peirce, who continued the Latin tradition and opened the fourth age of human understanding: Peirce (and secondarily Heidegger) is the last modern but also the first postmodern philosopher. Deely also goes too far when he states that the general notion of sign (*signum*) is the central element of postmodern philosophy (Deely, 2001: for example, xxx- xxxii, 61, 117, 155-157, 210-211, 224, 443, 508, 585, 588, 667, 680-681, 694-695, 738).

[4] Not only is Saussure not an idealist, but, as we shall see in the last section, his sociological conception of *langue* surpasses the philosophical division between empiricism and rationalism.

which an empirical object can be approached. The importance of the adoption of such an epistemological perspective may be shown by Saussure's view that, in the case of linguistics, the empirical object of research does not even exist prior to the adoption of a perspective, but is constituted by the very perspective itself: "c'est le point de vue qui crée l'objet" (Saussure, [1916] 1971: 23).

Hjelmslev similarly points out that a theory must be founded on the presuppositions that are necessary for its object (Hjelmslev, [1943] 1961: 10-11, 18). This demand for empirical correspondence is satisfied, according to Hjelmslev, by the "empirical principle", constituted by three methods of procedure ruling scientific description: in order of importance, that it should be free of contradiction (coherent), exhaustive and as simple as possible.

Based on Hjelmslev, Algirdas J. Greimas and Joseph Courtés (1979: Définition, Description, Opération, Pertinence, Procédure) also consider relevance as a rule of scientific description, which they define as an ordered sequence of operations that satisfies the criteria of scientificity, according to which, among the numerous possible features of an object, only those necessary and sufficient to exhaust its description are selected or, more loosely, the object is described according to only one point of view.

The same rule is applied by Umberto Eco to define the field of semiotics. According to him, all phenomena in society can and must be studied from a semiotic viewpoint and thus semiotics is a general theory of culture and finally a substitute for cultural anthropology; it is of central importance to approach social phenomena semiotically, "*sub specie communicationis*". However, Eco clearly states that social phenomena as a whole are not reducible to communication and to study them in this manner does not imply that material life can be reduced to spirit and pure mental facts, since such an implication would lead to idealism (Eco, [1968] 1972: 25-30 and 1976: 6-7, 26-27, 158).

All the above approaches converge in using the rule of relevance to define the object of semiotics: meaning. To scientifically study meaning as such, as an object of consciousness, by no means implies that the corresponding approach is idealist, only that the approach is adjusted to its object. Hence, Saussure is not an idealist, while Eco's view helps us to understand that a semiotic perspective does not exclude a different perspective on society – something I shall return to at the end of my paper.

Saussure and Peirce: positivism, anti-realism, the issue of truth and formalism

On the other hand, due to his formalism, Saussure could be accused of positivism. Positivism is a paradigm posing the issue of the relation of knowledge to reality, in semiotic terms to the referent, and thus of the nature of truth. I shall attempt to situate Saussure's and Peirce's views in respect to this issue by following the epistemological grid given by Léna Soller (2000), who divides the epistemological paradigms of knowledge into three broad categories, depending on their position in respect to the issue of truth.

The first paradigm, positivism, a development of empiricisism, includes realist epistemologies and supports the possibility of a direct knowledge of reality, that is, of its re-presentation: there is thus a direct connection to the referent. These epistemologies, believing in a truth-correspondence to reality, are obsolete reflection theories.

The two other catrgories are anti-realist, both excluding truth-correspondence but differing greatly as to the relation to the referent. Thus, the second paradigm, which is another aspct of empiricism, is mild anti-realism. It holds that, although the (extra-linguistic and extra-semiotic) referent, as part of the world-as-such independent from humans, cannot be re-presented, it nevertheless exerts pressures on the content of theories, which are instrument-theories. In this framework, a scientific theory cannot be just anything.

The third paradigm is a kind of radical conventionalism. Conventionalism holds that fundamental principles are due to social convention. Radical conventionalism, as the extreme form of conventionalism, holds that observations do not pose any constraints on the researcher and the scientist is completely free in theory-building, thus discrediting scientific views − including, ironically, its own. Science is a purely human creation, totally disconnected from any referent (Soler, 2000: 43, 109-126). We recognise in this last tendency the epistemological stance of poststructuralist and most markedly postmodernist theorising.

If we assess the positions of Saussure and Peirce in relation to these categories, it is clear that neither of the two is a positivist. Like Hegel, Peirce believed that no intellectual position is safe from revision, revision being an ultimately self-correcting process (Burch, 2021). This view conforms to his pragmatic conception of truth as the convergence of the opinions of all investigators through the process of inquiry; in this context, he identifies reality with the object represented by the general opinion. Thus, truth, for Peirce, is the final end of inquiry, but this view presupposes a one-dimensional answer to any inquiry, which manifestly does not stand (Legg and Hookway, 2021: section 3.1). It is clear that Peirce should be classified as a conventionalist.

For Saussure, the epistemological definition of *langue* is radically severed from the referent. One could attempt to accuse him of positivism due to his formalism, but such a criticism does not stand, because formalism is not exclusive to positivism: a nominalist (a philosophy close to idealism) formalism also exists (Weir, 2024: section 5). Formalism has been underrated in semiotics during the last decades, when a new tendency emerged to surpass traditional structuralism and move towards the dymamisation of "classical" structural semiotics – an anti-formalist attitude also adopted by post-Greimasian semiotics, although generally not in order to abandon the formal tradition, but to articulate it with the enunciative process. We need to remember that it is not only the positive sciences that appeal to formal models, but also human sciences such as sociology and economy. And, while Saussure's theory is formalist, this is also the case with Peirce's definition of the universal elements of experience, as will become clear in the next section.

To conclude, while for Continental semiotics, semiotics is an autonomous *scientific* field, Peirce's definition of semiotics makes it a branch of *philosophy*. Although both semiotics have as theoretical object the study of meaning, they define meaning in radically different ways. This will be the object of the next section.

The major fragmentation of semiotics

The meaning of meaning: Peirce's classification of signs

The differences in perspective between Saussure and Peirce revealed in the above philosophical comparison between them are greatly multiplied on closer inspection. Of course, as we shall see, there are also other important differentiations within semiotics, but they are secondary differentiations, in the sense that they present themselves as derivatives of one of the two paradigms installed by the above authors.

To start with the very definition of the object of semiotics, the Continental perspective on it follows explicitly or implicitly the rule of relevance and integrates semiotics within the context of culture. On the contrary, Peirce's conception of meaning is quite different. As Peirce (1932: 2.227) writes, "Logic […] is […] only another name for semiotic (*σημειωτική*), the quasi necessary, or formal, doctrine of signs". The Continental perspective, then, is "culturo-logical", as opposed to Peircean semiotics as "logical".

This is a crucial constraint of Peircean semiotics, because it limits meaning to its logical dimension only. It goes without saying that meanings are much richer than their logical component. This constraint, then, creates a Procrustean bed for any semiotic comprehension, comparable to most psychoanalytic and traditional Marxist approaches to semiotics. In all these cases, an a priori principle is established, into which any object of semiotic analysis is inserted.

In order to understand the conception of meaning of Peirce, it is helpful to see his semiotic within its wider context, which is his hierarchy of sciences. The starting point for the position of "semiotic" is one of the two branches of "theoretical" (as opposed to "practical") science, namely the "science of discovery" (as opposed to the "science of review"). In this line of classification, mathematics holds the summit, followed by philosophy, which includes phenomenology, and then by normative science, which includes three consecutive branches: aesthetics, ethics, and logic, which is formal semiotic.

Phenomenology is given by Peirce the task of defining the universal elements of experience, that is, the categories. It is clear that his starting point are the Kantian categories, universal forms of understanding which are presupposed for the formation of logical judgments. Phenomenology takes the form of a mathematical logic of relations, a use of mathematics prescribed by Peirce's hierarchy. He arrives at three universal categories, "Firstness", "Secondness" and "Thirdness", corresponding to the three different modes of approaching phenomenal entities: as having "monadic" (non-relational) properties; as involving a "dyadic" (two-term) relationship, in which case it is presupposed that each term has monadic properties; and as being terms of a "triadic" (three-term) relationship, in which case it is presupposed that dyadic relationships exist between the terms. Peirce believes that any greater complexity of relationship is only apparent and can be reduced to combinations of these three modes.

Directly related to these categories are the well-known concepts of three types of signs, icon, index and symbol: the icon is a *representamen* having the quality of Firstness, the index (or *seme*, Greek *σῆμα*) has the quality of Secondness and the symbol has that of Thirdness (i.e., rule). The sign as Thirdness is constituted by the equally well-known three constituents: the sign (in the narrow sense) as *representamen* (Saussure's *signifiant*), which is

the first term of the triadic relation and stands in some manner for something (anything) else, namely its *object*, the second term of the relationship, in such a way that it brings about a response to it, which is the idea it provokes or otherwise the interpretation of its meaning (by an interpreter), the *interpretant* (comparable to Saussure's *signifié*), the third term, which stands in the same relation to the object as the *representamen*.

The categories as phenomenological principles allow semiotic, according to Peirce, to formulate all classes of signs, thus accounting for any kind of experience, knowledge and representation (for the above, see Peirce, 1932: 2. 228, 2.275-276, 2.283, 2.292, 2.303; see also Pape, 1998; Ransdell, [1986] 1994). In other words, these categories lead to a fundamental classification of signs.

The classification referred to exclusively today is the one of 1903, discussed below. However, Peirce believed that the logic through which this classification was constructed was not unquestionable and passed in 1904 to a different logical scheme and classification. This classification is far more extensive and results in theory in the generation of sign classes up to the tenth power of ten, although in practice they are much fewer. Peirce never stabilised his sign classification and his estimates range from 10 and 66 classes up to the level of billions. Below, I discuss the "standard" classification of 1903 (Peirce, 1932: 2.243-264).

Peirce performs two consecutive operations. The first operation is the application of his three universal categories to each term of the sign structure (see the horizontal rows in Figure 1), leading to three consecutive trichotomies. The first trichotomy, which he considers as the simplest, follows from the application of the categories to the *representamen* and leads to three possible types of sign: *qualisign* (1), *sinsign* (2) and *legisign* (3). The second trichotomy applies to the object and establishes three kinds of relationship of the *representamen* to it, whence the classification of *icon* (1), *index* (2) and *symbol* (3). The third trichotomy, which is the most complex, gives the three possible types of interpretants: *rheme* (concept) (1), *dicent sign* (sentence) (2) and *argument* (3). I shall call this classification "*parallel*", because the three trichotomies are presented as three parallel groups of adjacent concepts (Figure 1).

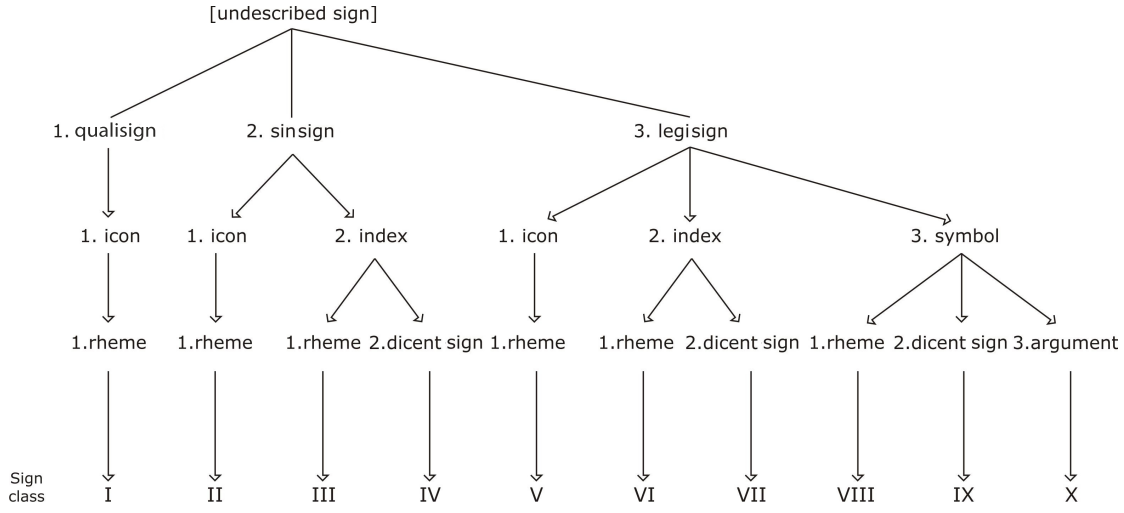

Figure 1. The ten classes of signs according to Peirce.

Figure 1 combines this parallel classification with another one connecting *perpendicularly* the elements of each trichotomy, with the result that the complete model forms a *tree structure*. The relations between the elements of each level are such that number 1 of the superior level can be related only to the number 1 of its inferior levels; number 2 of the superior level relates to numbers 1 and 2 of its inferior levels; and number 3 of the superior level to numbers 1, 2 and 3 of the inferior levels. In the lower line of this figure are found the end-nodes of the tree, identified with all possible classes of signs numbered from I to X (Figure 1). This classification does not represent a simple juxtaposition of classes, but a development from the simpler to the more complex.

Problems with the textual applications of Peircean theory

I believe it becomes clear from this presentation that Peirce's theory is, first, a theory of *logic*; second, a theory of *representation*; and third, that it operates with *individual* elements. What it is not, structurally, is a *textual* theory. We have in the last decades witnessed a proliferation of uses of the Peircean approach to all kinds of cultural texts, which seems to contradict this conclusion.[5]

As one would expect, Peirce has attracted considerable interest among philosophers. However, the philosophical studies of Peirce are as a rule of an interpretative nature, explaining his ideas – frequently in an erudite manners and great depth – but, curiously, without critical comment and without any further development of his theory.

As to the textual applications of Peirce, they encounter the following problems:

(a) It is not possible to pass directly from a *philosophical* paradigm to *scientific* applications, and the same holds for the transition from a general scientific paradigm to its applications. There is need for adaptation, which becomes much more complicated if there are more than one fields of application, each one with its own singularity. To take an example, positivism penetrated into a great number of scientific fields, such as sociology, anthropology or psychology, but in each case a particular set of concepts had to be defined, *specifically adapted* to the needs of each field.

This theoretical necessity was clearly displayed by the evolution of, for example, French semiotics. It started by blindly transposing the Saussurean linguistic model to the other semiotic systems (Greimas and Courtés, 1979: Sémiologie). It took years of effort by an important number of authors starting in the mid-sixties to elaborate a textual theory of literature. A comparable development occurred with pictorial semiotics, which after a tentative start became notable around the second half of the sixties, intensified at the end of the seventies and continues today.

(b) The vast difference between science and philosophy becomes manifest in their manner of proceeding with their object. Peirce is a good example of that: he offers a general theoretical model to judge logical representations. Contrary to this static situation, the scientific procedure is much more dynamic, because the definition of a scientific field, which necessarily depends on a wider epistemological framework, presupposes a set of operations. In fact, the field acquires its own autonomy by

[5] I note that the great majority of them are due to authors who are not acquainted in depth with Peircean theory.

incorporating three stages of operations, from the more abstract to the more concrete: a theoretical stage, a methodological stage and a stage of techniques.[6] These stages are tightly connected: with the background of an epistemological framework, a coherent theory is formulated, based on which a methodology is produced, to become the starting point for the definition of techniques. I emphasise that only the techniques allow the application of a method and hence the validation (or invalidation) of a theory.

Not only is this procedure is quite the opposite of the Peircean simple projection of pre-established elements on a text, but in addition, it is dynamic and allows a feedback loop, since the concrete application is able to improve the initial theory.

(c) It is rather odd that the scientific value of the textual applications of Peircean theory has not preoccupied researchers. A rough statistical assessment seems to show that the concepts found in the literature are about twenty:[7] most frequently, infinite semiosis, the triadic composition of the sign, Firstness, Secondness, Thirdness, index; probably less frequently, representation, *representamen*, icon, symbol, interpretant; rarely, the classes of signs and abduction.[8] The concepts scarcely ever appear all together; as a rule, few will be used in one and the same paper, and regularly without any in-depth discussion.

The poverty of the textual applications of Peircean theory is displayed, to give an example, in the work of Tony Jappy (2010), who attempts to formulate a Peircean visual semiotics. Part of Jappy's analysis is the comparison of three different images illustrating the same coastal area of the French town Collioure: a simple sketch, a sketch with the name of the town and a photograph. According to Jappy, the sketch is a sinsign according to the classification of the first trichotomy, a "'pictorial' icon" (an image) according to the second trichotomy, and a rheme according to the third. The sketch with the name of the town becomes an index because it has this caption; it is, of course, an image; and it is also a replica of the legisign "Collioure". The photograph is iconic, indexical – this time not because it has a caption, but because it is a photograph – a sinsign and a dicent sign (175-178, 185-186). The image as such is, as we saw, a qualisign, but also rhematic in nature (179); the photograph, with or without caption, is a dicent sign (181). There is a correspondence between the "classes" of different trichotomies, and in general, a sign is classified according to all three trichotomies (185).

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[6] The same conception of the components of a discipline is adopted by the planners Simin Davoudi and Jonn Pendlebury (2010: 616-617), who also add three functional components of a sociological nature, referring to the prerequisites for its constitution: a common approach and circle, academic, professional and scientific (journals and conferences) institutionalisation, and individual identities and careers.

[7] An observation of this kind raises a new issue for epistemology and is without question odd, empirical and statistical. But, once we think of it, we realise that any well-formed theory formulates some hundreds of concepts coherently and hierarchically connected. For example, Greimas and Courtés's *Dictionnaire* includes about 650 terms, organised into a tight conceptual network through dense cross-references.

[8] I will not add to this list the odd idea of some art historians to attempt to use the next arithmetical classification of Peirce with 66 classes of signs. As James Elkins points out (2003: 12, 15), this classification was left unfinished by Peirce.

What do we learn finally about these three images? That they verify Peirce's classification – something to be expected by definition, since, if it is well formed, it applies to anything falling within human conception, from the view of a mountain to the theory of relativity – and, then, that each one is a sum of certain types. Needless to say, the combination of these elements in each case can equally be found in an infinity of other cases from any possible semiotic system. But probably the crucial point is that each image is degraded into a disorderly sum of abstract universal properties, so that no hint is given about its semantic and visual properties and the connection between its elements: in short, the specific nature of images, their "imageness", is lost from sight, together with their cultural origin.

The meaning of meaning: Hjelmslev's semiology

I mentioned above that the scientific approach to meaning has been based on the rule of relevance and also that the meaning sought for is not logical but culturo-logical. The Peircean view poses a meaning which refers to anything meaningful that can be conceived by the human mind, thus covering every possible phenomenon, but the scientific definition narrows this huge domain by limiting the scope of semiotics to culturo-logical texts. Let us, then, define below the exact extension of this term.

A clear answer to this question is given by Hjelmslev. For him, not only natural language, but any structure analogous to it, is a semiotic, and he classifies semiotic systems in three types. The first is a denotative semiotic (called "biplanar" by Greimas and Courtés), consisting of two non-isomorphic planes, an expression plane of signifiers (Sr in Figure 2) and a content plane of signifieds (Sd in Figure 2), and in which none of the planes is itself a semiotic. There are two more complex types of semiotics. In the first, connotative semiotic, the expression plane is already a denotative semiotic (see the continuous lines on the right side of the central section of Figure 2). In the second case, metasemiotic, it is not the expression plane but the content plane which is a denotative semiotic (see the dotted lines on the left side of the central section of the Figure). A metasemiotic is, for Hjelmslev, a metalanguage, that is, a semiotic that has as its object another semiotic. He also points out that these two types of semiotics are of a relative and insecure nature. Greimas and Courtés consider calling them "biplanar", but, given that there may be more than one extended semiotic, that is, there may be more "higher" levels, they opt for the term "pluriplanar".[9]

[9] In spite of the radical divergence between Hjelmslev and Peirce on the definition of the object of semiotics, there are two interesting points of convergence. First, they both agree that no activity of the mind escapes semiotisation. Second, for Hjelmslev, the metasemiotic on the left side of the central part of Figure 2 is not, as we saw above, a static given, but we can envisage a process of metasemiotics, manifestly of continuously more precise metalanguages. In a similar manner, Peirce's *representamen* implies its naming, and clarification, by another *representamen*, which attracts its own interpretant and so on, opening a chain of theoretically unlimited semiosis (which does not exclude cases in which the new interpretant is no more developed that the previous one but equivalent to it – Lalor, 1997: 31).

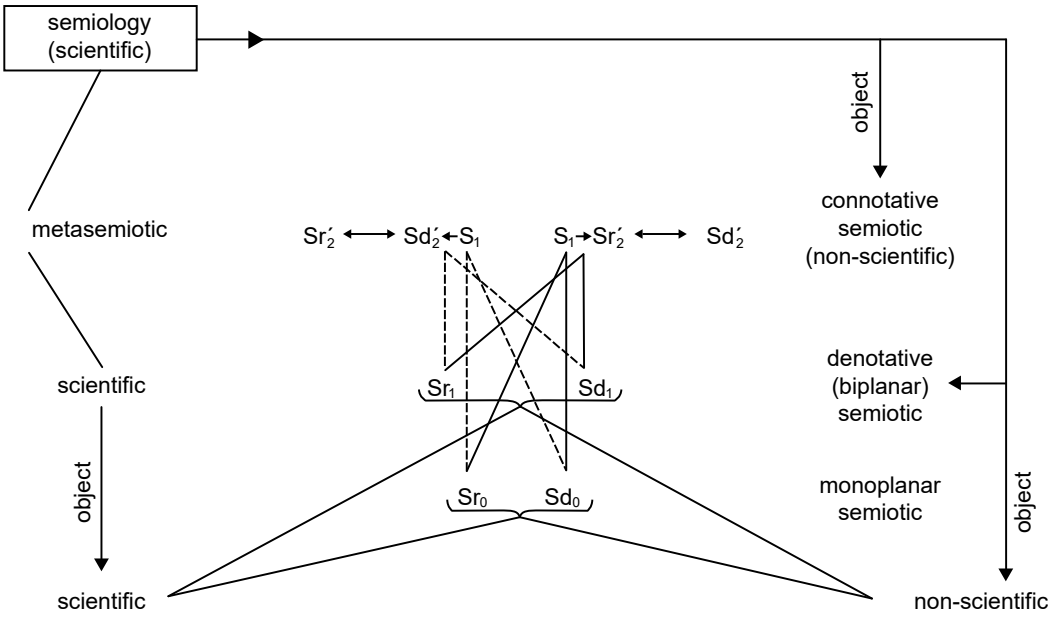

Figure 2. Types of semiotics according to Hjelmslev and Greimas and Courtés.
Sr: signifier. Sd: signified.

Hjelmslev also discusses systems with, in his view, only one plane, such as algebra and games like chess, but he does not consider a monoplanar system as a semiotic. Greimas and Courtés object on this point, because they consider that both categories of the monoplanar semiotics they define (formal languages or systems of "symbols", as they call them following Hjelmslev, and "molar" or semi-symbolic semiotics, such as prosodic or gestural semiotics, or the eidetic semiotics of pictorial signifiers) involve signification (see the bottom line of the central section of the figure).

As shown in Figure 2, Hjelmslev superimposes a second classificatory grid on the one just discussed, by differentiating two classes of semiotics, namely scientific (left section of the figure) and non-scientific (right section). This grid allows us to define the object of semiotics. Greimas and Courtés, rigorously following Hjelmslev, divide metasemiotic (left section) into scientific metasemiotic, the semiotic object of which is a scientific semiotic, and semiology, identified with Saussure's *sémiologie*, which has as object a non-scientific, connotative semiotic (right section) − for the above, see Hjelmslev 1961: 106-120; Greimas and Courtés 1979: Sémiotique).

Thus, the Saussurean, Greimasian and in general European Continental tradition conceives of semiotics as a *cultural* enterprise, a culturo-logical perspective or, otherwise, semiology studies *non-scientific* semiotics. In this manner, semiotics acquires a *specific* epistemological object, the study of cultural meaning, instead of being a philosophy of just about everything (for the above, see Hjelmslev, 1961: 106-120; Greimas and Courtés 1979: Sémiotique).[10]

[10] This being said, semiotics can analyse scientific texts semiotically, but, while when dealing with its own domain, it is able to have access to the very nature of its object, the true nature of scientific texts is referential, escaping the semiotic competence. Thus, in these cases, semiotics can be

From the individual sign to signifying structures

Both Saussure's and Peirce's semiotics are semiotics of the sign.[11] Nevertheless, the two theories are quite incomparable, because in Peirce the individuality of the sign is never surpassed, while Saussure conceives of the sign in relational terms. The very definition of the sign by Saussure is differential: "dans la langue il n'y a que des différences [...] sans termes positifs" (Suassure, 1971: 166). This last observation "sans termes positifs" brings *langue* to the highest possible level of abstraction, which goes beyond the empirical observation of the differences operating on all levels of *langue*. In fact, "la langue est un *système de pures valeurs* que rien ne détermine en dehors de l'état momentané de ses termes" (116, my emphasis). The word, "faisant partie d'un système [...] est revêtu, non seulement d'une signification, mais aussi et surtout d'une valeur, et *c'est tout autre chose*" (160, my emphasis) and "[la langue] se meut à l'aide de la formidable machine de ses catégories négatives, véritablement *degagées de tout fait concret*" (Saussure, 2002: 76, my emphasis).

In other words, value is *not* positively defined by its content – as is the case with the signified – but its meaning is purely differential and defined *negatively* by its relationship to the other values of the system of *langue*; that is, in each position of the system, a value is what the other values are not. The relation between signified and signifier may give an idea of the reality of the language system, but under no circumstances does it deliver the essence of it, which is value. So, value creates both the signified and the signifier, and this is also true, according to Saussure, for all grammatical entities, even for the letters of the alphabet (Saussure, 1971: 165-166).

This is how the referent is ostracised from Saussurean semiotics. Saussure is clear on this point, by stating that language is not a nomenclature, it is not: "une liste de termes correspondant à autant de choses" (197 : 97); that is, he refuses the formula "D'abord l'objet, puis le signe; donc (ce que nous nierons toujours) base extérieur donnée au signe". And he continues: "Si un objet pouvait, où que ce soit, être le terme sur lequel est fixé le signe, la linguistique cesserait instantanément d'être ce qu'elle est, depuis le sommet jusqu'à la base; du reste l'esprit humain du même coup" (2002: 230). In other words, direct knowledge of reality is impossible, because such knowledge is inevitably mediated by the process of semiosis. Due to its nature, *langue* has a conventional relation to reality. We can, then, consider, that Saussure's paradigm of knowledge is conventionalist, as was also the case for Peirce.

concerned either with the semiotic organisation of the textual language or with the semantic overlayer behind and above these texts, in sociological terms their ideology.

[11] Juri Lotman (2005) criticises both approaches as "based on a simple atomic element" and the Saussurean approach as limited to "a single communicative act" (206), to counter-propose his semiotic continuum of the semiosphere, extending beyond even the text. His intention is to surpass the concepts of both the sign and the individual text, hence the idea that the semiotic universe is equal to the totality of texts as individualities, in the name of the unified mechanism of the semiosphere (208) – on this concept, see the end section of the present paper.

Contrary to nomenclature, *langue* is, in cybernetic terms, an autonomous autoregulated system and, in mathematical terms, a structure, that is, a set of elements and their relations, subject to strict rules.

Within this network of relations, two "mental capacities" play a fundamental role in the organisation of the language system: coordination (the syntagmatic dimension) and, intertwined with it, association (the paradigmatic dimension) − (Saussure, 1971: 29). In their *Dictionnaire* (1979: Sémiologie), Greimas and Courtés attribute "l'impact décisif de F. de Saussure sur le développement des études sémiologiques " to his theory of language as a whole. We may now specify this observation on the basis of the preceding discussion. A formal theory of text must *necessarily* be structured according to certain principles, that is, elements, their relations and the rules presiding over them (difference/value, syntagm and paradigm), and, thus, *cannot but be isomorphic* to the structure of *langue*: *langue is the structural model for any text*. In other words, Saussure's linguistics implies a model of the text.

The incompatibility between the two paradigms

I have the impression that the three decades or so of the reign of postmodernism have had a serious impact on the scholars who received their education during these years and probably also on those educating them: the slackening of theoretical rigour. The borrowing from and mixing of different theories, that is, theoretical kitsch, became a legitimate process. I would not oppose to this attitude a rigid theoretical *idée fixe*, because manifestly every theory should evolve, based on both its internal needs and exchange with theories external to it, but in the second case it should be with comparable theories, belonging to the *same* paradigm. Otherwise, to detach individual concepts from an alien paradigm, from which they cannot be separated, is simply non-sensical, because these concepts draw with them necessarily their epistemological presuppositions.

A similar contradiction emerges with the attempt by not a few scholars to bring together Peirce and Saussure. I shall give here as example Eco's attempt at synthesis, appearing in his later writings. From his 1968 structuralist interpretation of the visual system, he later (Eco [1997] 2000) approached it as the Peircean Thirdness, with which he identifies Hjelmslev's content form. This is, for Eco, the domain of conceptual understanding and perceptual judgement, related to Peirce's immediate object (Table 1).

Firstness or Ground →	Mediation →	Secondness →	Thirdness
natural primary iconism natural semiotics/protosemiotics	individual sensation	primary semiosis perceptual semiosis expression form (retreat: perceptual *pre*-semiosis)	semiotics (Hjelmslev), visual system, conceptual understanding, perceptual judgement
selector: (a) filters the properties of the dynamical object (b) determines →	→	→ set of stimuli/ perceptual signals = code of perception	immediate object
non-systematic semiosis			traces of primary iconism
		expression form	content form

Table 1. Eco's attempt at reconciling Hjelmslevian and Peircean semiotics.

According to Eco, Hjelmslev's content form offers only a content to an expression coming from Secondness, to which corresponds a set of stimuli, the perceptual "signals" constituting a perceptual semiotics or primary semiosis (Eco, 2000: 254). These perceptual signals – which constitute the code of perception – are actually substances, which acquire the nature of expression forms. This *a posteriori* attribution of a signified, as Thirdness, to a signifier preceding it, as Secondness, is a direct offence to the indivisibility in Saussure of the two components of the sign.[12] Secondness is the result of the passage via individual sensation from Firstness or Ground (367). As to the semiotic status of his perceptual semiotics, Eco makes a concession by stating that it could be considered "only a precondition of semiosis" and he has "no problem in speaking of perceptual presemiosis." (127).

Firstness is seen as the source of the above set of stimuli (342), representing a "natural primary iconism" in the form of a "non-systematic semiosis" (which contradicts Eco's retreat to considering perceptual signals as presemiosis). This kind of semiosis would be a "natural semiotics" or "protosemiotics", a material anchoring of the sign in Peirce's Firstness. This Ground would be "a selector", determining the perceptual signals by filtering the properties of the dynamical object, which will be made relevant by the immediate object, i.e., the object as represented by the sign. The latter is transformed into meaning and the immediate object retains traces of the Ground (Table 1).[13] With the

[12] "La langue est encore comparable à une feuille de papier : la pensée est le recto et le son le verso; on ne peut découper le recto sans découper en même temps le verso" (Saussure, 1971: 157).

[13] A thorough account of the conceptual difficulties implied by the concept of Ground is given by Tyler J. Bennett (2016). He points out that Peirce himself gave two definitions of Ground. According to his early definition, it is a pure abstraction (such as the quality of blackness), referring to major features (Bennett mentions "essences") of the *representamen*, while his second definition relates the features of the *representamen* to the (move towards the) actual object. This definition is the one selected by Eco, who gives the Ground his own interpretation of primary iconism. It

adoption of Firstness, Eco comes once more in direct collision with Saussure, because the meaning found in Thirdness emerges from one and only one object, thus annihilating the principle of difference.

Given the violation of the Saussurean unity of the sign and the rejection of the principle of difference, it comes as a surprise that Hjelmslev appears as the model of Thirdness. It is a provocative use of Hjelmslev, based on a metaphorical reasoning of the kind: since Hjelmslev deals with signs and Thirdness is about signs, then let us isolate his form of the content to connect it to Thirdness.

Eco's foundation on Firstness leads him inevitably to universals. In fact, he suggests that natural semiotics, as the driving force for the production of semiosis, sets the framework for a *homogeneous* perception of an *intersubjective* kind. Thus, it does not come as a surprise that he states that there is an *innate* experience of similarity with the *external* world at the perceptual level (on the above, see Eco, 2000: 3-4, 13-14, 60-65, 100-117, 119, 125-131, 136-145, 256, 340, 347-348, 358, 377, 382-383, 401-402 n.4.[14]

We understand that Eco is anxious to protect semiotics from idealism and attempts to anchor it in a material basis. But this dive into the "real world" has a heavy cost, because whoever embraces a kind of referent as a basis for semiosis enters into the domain of universals, thus abandoning Saussure, Hjelmslev and any serious sense of cultural relativity.

Eco's foundational perspective, as that of almost all philosophers, is a universal mind that contemplates the world in general and this relation interprets the world of ideas. For this rationale, if we want to escape from idealistic apriorism, we must conclude that our ideas have a certain relation to reality. This kind of reasoning has two pitfalls: first, it is not the business of speculative philosophy to answer an issue, such as perception, that only biologists can answer, and second, once the biological question of the relation between brain and mind has been solved, a new and different question arises, namely the semiotic processes within the mind, creating the semiotic systems. That is, the biological emergence of meaning and the structuring of semiosis are *two different problems*, answered by different scientific fields.

Thus, Eco's explanation of the biological origin of semiotic systems, following from his idea of a universal perception, a combination of Peirce with biology, is not convincing. As we shall see in the last section, the same is the case with other biologising attempts.

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follows from his decision to focus on an elementary definition of the icon – rather than the index and symbol – as a space of possible comparisons preceding any actual comparison which characterises hypoicons, and it is this object that provides the basis for the features of the *representamen* (mainly, 214-218, 230). Eco also refers to the dynamical object (the position of which would be before Firstness in Table 1), which is a kind of simulacrum of the referent, since according to Peirce (see Albert Atkin, 2023: sections 4.1, 4.1.1), it is at the basis of a chain of generation of immediate signs, but it will be fully known only at the end of a very long process of inquiry.

[14] There is a marked convergence here between Eco and Deely, though there are also important divergences; one of the major differences is that Deely combines Peirce with the ideas of the biologist Jacob von Uexküll. Deely operates, as Eco does, with a direct passage from the physical world to sensation and a continuous development of the cognitive activity of semiosis from sensation to perception in the domain of the human *Umwelt*, i.e., the perception of the natural environment by humans, and finally to the world of signs, the *Innenwelt*, the inner world of humans, this last mediated by culture (Deely, 2001: 119, 338, 379-380, 649-650, 660, 683, 694-697, 721).

The theoretical status of "territorial" semiotics

Pictorial semiotics

The theoretical basis for a discussion of the "territorial" semiotics, that is, semiotic systems with different expression forms, was already posed above in two complementary (and seemingly contradictory) manners: first by rejecting the direct imitation of the Saussurean linguistic model, and second by asserting that *langue* is the model for all texts. I shall try to substantiate this latter view by briefly referring to three different semiotic systems, namely painting, cinema and space. The discussion below refers only to European Continental theory, because the weaknesses of the Peircean approach discussed above render any attempt to study its territorial use senseless. I shall start with pictorial semiotics, which defies the linearity of natural language by displaying a geometrical two-dimensional surface. The most traditional form of static visual image – and historically the most exhaustively studied – is painting.

We may consider Erwin Panofsky's iconography as the beginning of the modern study of painting (Panofsky 1955: 26, 28-29, 30-32, 40, 41). After a reference to the individual "motif" as "pre-iconographical", a "factual" meaning identifying visible forms with objects known from practical experience (i.e., denotative meaning), Panofsky defines the aim of iconography: it is the vehicle of "secondary or conventional" meaning, referring to the "cultural traditions peculiar to a certain civilization" (27). The motifs (images) are combined in compositions, "stories and allegories", that lead to a pictorial syntax, and are connected (I add, connotatively) to themes or concepts (types). Panofsky does not stop here, but continues with his iconology, the object of which is an "intrinsic" meaning, "content", referring to the "underlying principles which reveal the basic attitude of a nation, a period, a class, a religious or philosophical persuasion − qualified by one personality and condensed into one work" (30) – in Greimasian terms, the semiotic systems belonging to "social connotations" (Greimas and Courtés, 1979: Sociosémiotique). Thus, Panofsky's iconology enters the field of sociosemiotics, and further, of what we shall refer to at the end of this paper as social semiotics.

Eco is the semiotician who integrated Panofsky explicitly within semiotic theory, though it goes without saying that pictorial semiotics covers a much wider field of images than traditional painting. We saw above that Eco in 1997 posed the existence of a code of perception, on which he holds an ambiguous position. The same ambiguity is found earlier in Eco (1972: 214, 215), where he oscillates between the cultural origins of this code, as non-coded and thus a continuum, and its constitution by universal distinctive features. He ultimately opted for the second case, anchoring the distinctive features of the code largely in the elements of Euclidean geometry (in spite of the fact that he is well aware that this geometry is a product of Western culture).

From the set of perceptive stimuli of the perception code, "recognition codes" then make a selection and attribute to them sets of signifieds, that is, constitute signs. We find a concept similar to the recognition codes in the Greimasian semiotics of the natural world, our conception, visual or not, of the natural world (Greimas and Courtés, 1979: Monde naturel). Eco observes that in painting, the (denotative) signifieds of the recognition codes are homologous to the graphic signifiers, also founded on the codes of perception. The

signifieds of the recognition codes, when related to the graphic signifiers, lead to the "pictorial" code (Eco, 1972: 173-185, 215). The everyday recognition codes and, finally, the pictorial code correspond to Panofsky's pre-iconographical meaning.

Eco continues with Panofsky's next level, the "iconographic" code, which is grounded, for him, in the previous (denotative) pictorial code: the signs of the pictorial code become signifiers of connotation for the iconographic code (212). Eco also adds "rhetorical codes", though he does not touch upon the issue of composition. Finally, Eco like Panofsky passes to sociosemiotics by identifying a second and superior level of connotation, which he interprets in his own terms, which are of a less sociological nature than Panofsky's iconology: this level consists of "codes of taste and feeling", "stylistic codes" and "codes of the unconscious", the latter used for persuasion (216-217) – Table 2.

Erwin Panofsky	**Umberto Eco**
Pre-iconographical meaning: mainly *denotative*	*Recognition code* (*denotative*): sets of everyday signs. *Pictorial code* (*denotative*) established by the homologous relation between recognition signifieds and graphic signifiers
Iconography (a) motifs → themes or concepts (types) = *connotation* (b) combination of artistic motifs (images), that is, stories and allegories = *pictorial syntax*	*Iconographic code*: (a) *connotation*, including rhetorical codes (b) –
Iconology (*sociosemiotics*) underlying attitudes of a nation, a period, a class, a social group	*Superior level of connotation* (*sociosemiotics*): codes of taste and feeling, stylistic codes and codes of the unconscious
Social semiotics	–

Table 2. Comparison between the views of Panofsky and Eco on pictorial semiotics.

This is not the place to cover all the developments of pictorial semiotics, so I shall limit myself to two important developments evolving within the same paradigm in the wide sense. Group μ for many decades contributed to the in-depth analysis of images and, among their other significant achievements, identified (as Greimas also did) the plastic dimension as a new object of semiotic interest. Greimas sees the plastic dimension as coexisting with a figurative semiotics of the image. His "plastic formants", that is, the pictorial signifiers, are divided into "eidetic" and chromatic formants. The former constitute a "semi-symbolic" system, ruled by semantic oppositions (Greimas, [1984] 1989: 639-640, 642, 646).[15]

[15] I note here that a new perspective of connotative meaning is opened by the expression substance. Painting deals with two material entities: a "supporting" substance, on which visual images are imprinted, and a "supported" substance, the material of inscription, through which visual images are realised. In both cases, the material may be transformed into expression substance and lead to connotation.

The second development came from the attempt to dynamise the static visual text, the object of traditional analysis, by inserted it into a dynamic context. This attempt represents an extension from semiotics to sociosemiotics, which emphasises the act of enunciation, the mediating instance ensuring the establishment of a text on the basis of the possibilities offered by the abstract system of *langue* (Greimas and Courtés, 1979: Énonciation). In this direction, excellent work has been done by Jacques Fontanille (for example, 1995: mainly 99-124) and Maria Giulia Dondero (for example, 2016).

Ironically, there was a negative consequence from these new tendencies, namely the neglect of further in-depth investigation of the pictorial textual structure, according to its major dimensions of syntax and semantics. Actually, in respect to the former, Greimas poses the existence of a plastic "topological grid", allowing the segmentation of a painting into a few relevant elements. He founds his approach on what he considers to be two topological categories, a "curvilinear" (for example, *enclosing vs enclosed*) and a "rectilinear" (for example, *left vs right*), and envisages wider structures deriving from them (Greimas, 1989: 638-639). Of course, such a grid could be also used for the figurative level.[16]

We find the same logic with Group μ (1992: 210-217) and also with Jean-Marie Floch (1985: 145-165), though in his case with an interesting peculiarity: he also uses geometrical descriptions for the analysis of what he considers to be plastic syntax, but he subjugates them to the same logic of oppositional pairs. This kind of analysis is not inaccurate, but it is too abstract and neglects the fact that any kind of static image is first and foremost of a *geometrical* nature and it is here that we should first turn to define pictorial syntax.

As to the semantic dimension, it comes as a surprise that the vast possibilities of the concept of isotopy have not yet been properly utilised in pictorial semiotics. What I have in mind is that isotopies are not found only at the discursive level, but traverse all the levels of the generative trajectory, starting from the master isotopy of the semiotic square(s). Thus, isotopies are not simply juxtaposed, but are hierarchically related, which presupposes the identification of an underlying structure.

Cinematic semiotics

With cinematic semiotics, we pass from the pictorial two-dimensional space of static images to the (as a rule) two-dimensional space-time of cinema, centred around the dynamic image. The standard reference of the field is still the major theoretical breakthrough achieved by Christian Metz on the basis of Saussurean semiotics. For some decades, however, these references have been rather ritual, both because attempts to follow Metz's logic led to an impasse, and because interest shifted from the text to the spectator. This turn is parallel to the post-Greimasian enunciative semiotics, with the difference that the latter focuses on both ends of the communication circuit, the instances of both production and consumption, while the cinematic turn, mainly cultivated in the Anglo-

[16] A proposal that we can connect to Greimas's chromatic formants came from Jean-Marie Klinkenberg (1996: 118-119, 291; see also Group μ 1992: 250), who points to the existence of a "toposyntax" or "topological syntax", namely the syntagmatic relations between colours.

Saxon world, focuses exclusively on the spectator and is usually related to a cognitivist approach, which we shall return to in the last section of the present paper.

Given this situation, the *textual* analysis of cinema has been paralysed. I shall try below to formulate a path to a Greimasian analysis of cinema, after a brief critical review of Metz's theory. I will, however, start with Eco's approach, because the difference of their views better illuminates Metz's contribution.

Eco originally argued that cinema has a triple articulation. The photogram (frame) is an image and Eco conceives of the image, as we saw, as a function of his perceptual distinctive features, which would constitute the third articulation of cinema. He believes that the decisive factor of the passage from the photogram (frame) to the shot, i.e., the passage from the static to the moving image, is to be found in kinesics, that is, gestural semiotics. A photogram would be structured by *kines*, iconic signs (the second articulation of cinema), which, however, function as elementary units of movement (including facial expressions) deprived of signification and of a differential value for the next level of *kinemorphemes* (the first articulation). The kinemorphemes are kinesic signs, constituting a (dynamic) pictorial sign or utterance (Eco, 1972: 223-229).

But, even if the kines could be non-significant, something quite debatable, they are not a convincing approach to an analysis of cinema. They reduce action (doing) to movement, and they are only part of a wider composition, from which they cannot be abstracted. The kinesic system is only a secondary (sub-)sub-system of cinema. Thus, the triple articulation is reduced to a single articulation and cinema is transformed from *langue* to *langage*.

This is exactly the position of Metz. There is a "syntagmatics" (*la syntagmatique*) of the cinematographic "code", which is an abstract system of syntactic rules, and a paradigmatics (*la paradigmatique*), and their articulation constitutes the code, the language of cinema as a system (Metz, 1971: 122-124, 129). He defines patterns (for example, A, B) that are repeated in different variants, which constitute classes of montage. He then proceeds by combining these classes according to eight types of syntagmatic arrangement, constituting his "*grande syntagmatique narrative*" (Metz, 1966).

What differentiates A from B − and here emerges a major problem for Metz − is a logical opposition *A vs B* (Metz, 1971: 128-129, 143 n. 8). For Metz, the terms of the syntagm A-B are also members of a paradigm A/B. But this view leads to a mechanical recycling between the syntagmatic and the paradigmatic dimensions: in other words, the development of the former does not add any new information to the latter (it remains A/B) and this does not have any semantic specificity. The result is an erroneous conflation between two distinct semiotic processes.

This approach also abolishes narrative, because Metz's discursive units are of a semio-technical, not narrative, character. Their structural nature is that they originate from a focus on images. This implies that the trigger is the (denotative) expression plane of sequences, more exactly the expression plane of one sequence as opposed to that of another sequence. But Metz also links connotative significations to these selected sequences, without explaining their theoretical relation to his syntagmatic classes. In Greimasian terms, these significations create an *ad hoc* universe of isotopies, instead of following the semantic component of the generative trajectory. Metz's bottom-up operation encounters the higher-level isotopies from the narrative generative trajectory without any guarantee of matching. To do justice to Metz, he is aware of these two manners of analysing a film, but

he does not discuss the tricky issue of the articulation of his "sémiologie" of film with the "narratologie" of film.

There is a major difference between cinematographic and pictorial syntax. The syntax of the image is *geometric*, while that of cinema is *narrative*. The practice of *momentarily* introducing an intentional visual syntax is common in cinema. It is used *ad ho*c in accordance with the needs of the topic treated or for stylistic reasons, so that its appearance is erratic, of very limited duration and continuously changing, probably with the repetition of certain patterns; as a consequence, with very few exceptions, cinema lacks an overriding and omnipresent visual compositional principle, as we find in the static image.

Montage is a late stage in the editing of a film. Without disputing its importance, the major structural presuppositions of a film are already in place before this stage. Metz's confusion between paradigmatic and syntagmatic can be resolved by having recourse to the narrative generative trajectory, in which these two dimensions follow parallel but interrelated courses. The discursive level of this process does not correspond to any actual semiotic manifestation, since it belongs to a step before its integration within a particular semiotic system with its own level of expression. Greimas and Courtés (1979: Textualisation) call this manifestation in a particular textual form "materialisation".

As in all cases, so in cinema, there must be a passage from the discursive level to the semiotic system in which it takes form, an articulation. In cinema, materialisation presupposes the articulation of the discursive structure with the cinematic level, which usually begins with the script. The script belongs to the preliminary stages of the emplotment of a story, followed by the cinematographic stages, which start from the *mise-en-scène* and include montage. In the context of Greimasian narrative theory, the syntax of montage is shown to be a late operation in a film, taking in Metz the form of *la grande syntagmatique*, which unquestionably is a priority object for cinematographic analysis.

Within the same theoretical context, the cinematographic semantic level acquires its own character as a structure of isotopies, an object also crucial to pictorial semiotics. The final film as text is visual, but is also subject to the narrative structure of isotopies. The analysis of any film will show that, though there are specifically visual isotopies, they rarely occur in isolation but are generally closely aligned with the isotopies derived from the narrative (a cinematographic text follows the same principles of semantic coherence as any other kind of text).

The semiotics of settlement space

The geographer Yi-Fu Tuan, for example, argues that there is a radical difference between two kinds of approaches to space: the one to (material geographical) "space" and the other to (semiotic) "place". The concept of *space* refers to an external, material object and implies an intellectual, abstract, neutral and indirect manner of understanding geographical entities, while that of *place* refers to an internalised and meaningful object, a direct experience of space in consciousness, invested with meaning, values and feelings (Tuan, 1977: 5, 17). The object of a "semiotics of space" is in fact this concept of *place*, though I shall use the term "space" for reasons of convenience.

With space-as-place, we pass from two- to three-dimensional semiotics. But there is another major difference as well. Painting and cinema are by their nature communication

systems. However, in his semiotic analysis of architecture, Eco rightly points out that the objects of architecture *are not created to communicate, but to function*, which does not prevent them from communicating their function. Thus, the semiotic view of architecture should not transform it into a communication system. From a semiotic viewpoint, architectural forms are spatial signifiers having denotative signifieds of a spatial (i.e., functional) nature, and these architectural signs are the vehicles of connotative signifieds which form a system of anthropological values, constituting a global ideology of functions (Eco 1972: for example, 261-276, 303-306, 311).

Greimas with his "topological semiotics" offers a semiotic theory of space covering both the semiotics of architecture and urban semiotics.[17] He founds the field on the opposition extension *vs* space, from the first term of which signifying space emerges through the opposition expression substance *vs* form; signifying space is constituted as place (*lieu*), which is a text. There is a primary spatial text, composed by purely spatial signifiers, which, however, exist only as a function of immediate and specific signifieds. The spatial signifieds of this primary text are used to receive new articulations and thus autonomous discourses speaking about space are created, secondary to the primary text (Greimas, 1976: 129, 132-134).

Greimas extends his urban semiotics to sociosemiotics. The producer of space is an enunciator, a collective actant including both collective (for example administrative agencies) and individual actors (for example the planner, the economist, the mayor). The actors assume different syntactic roles during decision-making, and in the planning process an amalgamation of values, sometimes contradictory, takes place, from which emerges an implicit ideological model of the city (Greimas, 1976: 151-153).

I shall concentrate below on urban discourses, for which I propose the following analytical grid. There is initially a division between the *direct*, immanent, semiotic study of actually existing urban (or rural or regional) space, which I shall call the study of *space-as-text*, and the *indirect* study of *space-in-text*, with the mediation of spatial discourses. This second type is then divided according to two different groups, the first centred on immanent analysis and the second belonging to sociosemiotics. Among the discourses of space-in-text, I shall briefly discuss below the immanent analysis of the discourses of the production of space with reference to three historical cycles, the precapitalist, the modern and the postmodern eras.

We find in precapitalist cultures a collective spatial model or several closely connected models of great temporal duration, which preside over the construction of settlements and define their organisation and form – frequently in a flexible manner, due to external constrains. This model is not unique to space, but is a general sociolect, materialised in all expression forms of a culture and at all scales of space. It is founded on a condensation of the cosmological myth(s), which thus becomes the dominant isotopy of the model, together with a closely related anthropomorphic isotopy. These isotopies become the nucleus of a set of other isotopies connected to them to a greater or lesser degree, the nature of which is culture-dependent. The spatial model has a simple two-dimensional geometrical form, even if some of its parts refer to three-dimensional elements. This form

[17] I prefer "semiotics of settlement space" rather that "urban" semiotics, since a great number of societies of the past did not built cities; today, in addition to cities, we also have towns and villages.

is structured by a simple syntax, which is also the vehicle of all major isotopies (on the above, see Lagopoulos, for example 1995).

In modern societies, this rigid geometry disappears and is replaced by more open models, nevertheless equally imperative. We owe to Françoise Choay (1965) the study of the urban planning discourses on the production of space from the 19th century to 1964. She concludes that they can be grouped according to two major models, a "progressivist" and a "culturalist" model. The progressivist model is modernist, rests on faith in science and technology, is dominated by the idea of progress and proposes an instrumental city, a city-machine. The culturalist model, on the other hand, is anti-industrialist and turns nostalgically towards the "organic" city of the past, particularly the medieval city, as a human collectivity.

While the two models are systematically opposed, I believe that we can unite them in the same urban semantic micro-universe, based on Michel Foucault's conception of modern *épistémè*. According to Foucault, from the end of the eighteenth century emerged in biology the concept of function, which, together with other concepts deriving from biology, economics and philology, organised the domain of the human sciences. In this new context, man is conceived as a biological being (Foucault, 1966: 276-279, 321, 366-369). This idea, together with the concept of function, converges on an organicist conception of the world.

We find in this conception a common link between the two models proposed by Choay. They are opposed according to the isotopy instrumentalism *vs* community. If we apply to both members of this pair the isotopy organic *vs* disorderly, deriving from the organicist conception, we get as sub-divisions of instrumentalism the isotopy function *vs* dysfunction, and, as sub-divisions of community, organic *vs* dissolved community. On the instrumentalist side, the city is a machine, but an *organic* one, a *functioning* organism, and on the romantic side the city must be a small *organic community*.

The isotopies function *vs* dysfunction and organic *vs* dissolved community are higher-order isotopies, derived from a set of descriptive isotopies. This semantic axis is clearly displayed when we compare the two models: there is a systematic opposition between the first members of the two models, such as open *vs* closed city, nature inside the city *vs* nature outside the city, focus on spatial relations *vs* focus on (the individual and) social relations, strict geometrical orthogonality *vs* irregular form Figure 3).

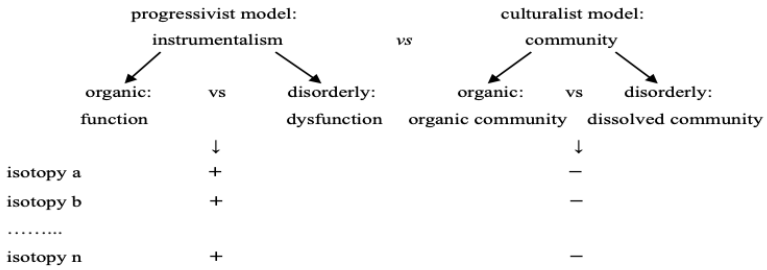

Figure 3. The semantic micro-universe regulating urban planning discourses on the production of space (from the 19th to approximately the middle of the 20th century).

While, then, there is in these models a clear semantic structuring, we cannot find any semiotic syntax. The reason behind this oddity is due to the nature of architecture as discussed above. While in precapitalist societies the functional necessities are subsumed under the symbolic realm, in modern societies they acquire primacy, which become all the more evident at greater spatial scales than the individual building or a complex of buildings. In the modernist models of urban planning, the relation between spatial elements, which are the spatial functions, are formulated in the context of a functional/technical language.

The postmodern approach to space is inimical to the functionalist conception and disguises functional demands by emphasising myth and narrative (also covering deconstruction), with as a result that postmodern spaces were given a radically different character from the one they had in modernism. Marc Augé makes a distinction between historical and contemporary postmodern space. The "non-places" of "overmodernity", as he calls it, are infrastructure and installations, such as highways and airports, the means of transportation themselves, shopping centres, big hotel chains and recreational spaces (even refugee camps). These are just "spaces", determined by economic interests, as opposed to "places" bound to a culture localised in space and time. These spaces use history and locality as an element of spectacle and the images they embody, which show a world of consumption accessible to everybody, are the postmodern form of alienation, which nonetheless has a certain power of attraction (Augé, 1992, p. 41-50, 100-105, 117, 130, 133, 136-139, 144-148).

This power of attraction follows from the fact that postmodern space is a "themed" environment, to use Mark Gottdiener's expression; that is, it is strongly connoted. For Gottdiener, postmodern space offers the past, but in a superficial, shallow manner. Nostalgia plays a crucial role in the postmodern model – just as in the culturalist model − but it is related to the arbitrariness and superficiality of postmodernism's pseudo-historical reconstructions − thus having a different quality from the nostalgia of the culturalist model. In respect to the consumer, the postmodern experience is ambiguous, because it combines the experiential factor with playfulness, but with a certain distancing. It is no longer an existential experience of space, but a frivolous "experientialness" (Gottdiener, 1997: 70, 75-76, 128, 145, 151).

I believe that we can conclude that the overriding isotopy of postmodern space is (a constructed, fictional) traditionality *vs* modernity, which displays it as the capitalist counterpart of the romantic culturalist model.

To conclude

The study of these three different semiotic systems allows certain theoretical generalisations.

First, syntax varies between different semiotic systems and even within the same system. In the case of the precapitalist models of settlement space, guided by culturally sanctioned symbolic concerns, it is very simple, based on basic geometrical figures; a narrative is integrated within them, but operationally semiotic analysis deals with an object quite similar to painting. In modernism, urban syntax disappears as a semiotic phenomenon. And in postmodernism, both in architecture and small-scale urban interventions, priority – under

the influence of linguistics and semiotics – is given to the creation of individual myths and narratives (Tschumi, 1996: 140, 200, 253), necessitating individual narrative analysis.[18] We see, then, that the nature of the syntactic models even of one and the same semiotic system may vary historically.

The syntax of pictorial semiotics is geometric, like that of precapitalist spatial models, and pictorial analysis needs to give more emphasis to the semiotic study of geometrical configurations in addition to Greimas's topological grid. On the other hand, this type of syntax is quite local in cinema, the syntax of which is founded on narrative, with as a second important organising principle the syntax of montage, which presupposes the extension and reformulation of Metz's *grande syntagmatique*.

However, what *remains stable* in all cases is the methodology used for the semantic level, based on *isotopies*.

The general conclusion we can draw in respect to the epistemological status of semiotic systems with different expression forms is that they have a *relative autonomy*, autonomy because of the specificity of their nature, relative because they may all be studied as partial aspects of *one and the same general semiotic theory*.

Semiotics: A positive or a socio-cultural science?

The biologising approaches

The continental perspectives

As we saw, the original divide in semiotics derives from the two founders of the field. Their followers, however, have proceeded to new and radical departures from both of them, pushing the limits of semiotics outside itself by articulating it with different aspects of biology.[19] These attempts have appeared on both sides of the Atlantic. I shall deal briefly with this new divide, starting with the Continental views (which include those of Eco, mentioned above).

The semiosphere is a concept coined by Juri Lotman which became central in the Moscow-Tartu School and is widely used by semioticians of every theoretical origin. Lotman was inspired by Vladimir I. Vernadsky's ecological concept of "noosphere" (and "biosphere") and Mikhail Bakhtin's concept of "logosphere", also derived from Vernadsky (Mandelker, 1994: 385). Lotman conceives his semiosphere by analogy with the biosphere; so far, then, we might think that we are dealing with a metaphor. But Lotman also borrowed from Vernadsky the biological principle of the pair symmetry–asymmetry, which he explains with the metaphor of a mirror (enantiomorphism) and considers as "the primary 'mechanism' of dialogue" (Lotman, 2005: 221). He argues that there is a bilateral

[18] For example, the well-known architect Peter Eisenman prepared an urban plan for the Italian city of Verona, the place where the story of Romeo and Juliet is located. He based his urban programme on three variations of the story, one of which is Shakespeare's. After his own literary analysis of these texts, he believes that he found three fundamental structural relations, which he correlates to three design operations. Following Jacques Derrida, Eisenman states that both triads reject the anthropocentric philosophy of the subject and authenticity (see Kanekar 2015: 45-51).

[19] While Peirce did not attempt any connection of his classes of signs with cognitive processes, their universality implies a biological origin.

asymmetry between the right and left hemispheres of the brain and this dialogic communicative mechanism of exchange, establishing the consciousness of individual thought, is functionally isomorphic to the exchange between cultures. The invariant principle ruling all levels of the semiosphere, "from human personality to the individual text to the global semiotic unity", is the combination of symmetry–asymmetry (218, 220-221, 224, 225).

Lotman's "organismic turn" (Kull, 1999b: 116) or the shift of the school from Saussure to an organismic approach (Mandelker, 1994: 385) is an attempt at a grand, bold and organicist synthesis of the positive sciences and cultural studies, and is based on the ambitious premise that the symmetry–asymmetry pair is the universal basic structure, from the molecular level to the general structure of the universe to the structure of semiotic systems. Not without a touch of humour, Any Mandelker (1994: 388-389) characterises Lotman's approach as a "bioecological, neuroculturological theory". The symmetry–asymmetry pair is the basis of dialogue and a general semiotic mechanism, which, however, does not predetermine precise contents.

"Rightism" and "leftism", then, are not a metaphor, but the theoretical foundation of Lotman's biologising kind of semiotic. He subsumes in his symmetry–asymmetry pair something that he considers to be equivalent, namely Saussure's "mechanism of similarities and differences" (Lotman, 2005: 205), thus missing the very foundations of Saussurean theory (on the above, see Lotman, 2005: 205-208, 219-225 and 1990: 2-3, 123-124; see also Mandelker, 1994: 385, 390, 393).[20]

What seems to have escaped the attention of scholars is that, if Lotman's semiosphere seems to be founded on a local, Russian origin, he was nonetheless well aware of the work of Claude Lévi-Strauss, in whose work exactly the same positivist attempt to anchor the social sciences and humanities in the natural sciences is evident. For Lévi-Strauss, there is a kind of algebraic matrix of transformations, located in an autonomous collective unconscious human mind and operating beyond the control of any individual; behind this structure of the mind (*esprit*), however, there is the structure of the brain (*cerveau*). This matrix is based upon binary relations, of the form +/−. Lévi-Strauss conceives of a continuous regression, starting from the "I" of an individual, continuing to the "us" matrix of humanity, in which the individual vanishes, and extending from "us" to the biology of the brain. The regression does not stop here, but ends, for Lévi-Strauss, with the integration of life within its physico-chemical origins (Lévi-Strauss, 1962b: 129 and 1962a: 327-328; Leach, 1970: 41, 51-53).

This older generation of semioticians, then, looked for the roots of semiosis in cognitive processes, but also beyond them, while the newer Continental tradition focuses on the cognitive. I shall refer below to two characteristic attempts which maintain that they are founded on Greimasian theory, those by Per Aage Brandt and Jean Petitot. So, once more we find an extension of semiotics which was not foreseen by the founding personality, Saussure – and to which he certainly would not subscribe.

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[20] For an analytical discussion of the semiosphere and the two Theses of the School, see Lagopoulos and Boklund-Lagopoulou, 2014: mainly 436-443). This text was based on a keynote lecture, delivered at the invitation of Kalevi Kull, in the context of a conference in celebration of the 50th anniversary of the foundation of the school.

Brandt's model is the generative trajectory, on the basis of which he proposes his "generative phenomenology". Brandt's cognitive semiotics is based on a stratified three-level semiotic construction and starts from the "deepest" cognitive level, a "deep" structure performed exclusively by the mind itself. It covers the natural world in the form of the cognitive organisation of lived experience in its corporeal aspect. Through successive levels and sub-levels, the trajectory ends with the manifesting surface of lived experience, corresponding to the conceptual world as immediately given in consciousness (Brandt, 2003: 12-13 and 2017: mainly 86-89).

Petitot on the other hand attempts to combine Greimasian semiotics with René Thom's catastrophe theory, while also integrating cognitive neuroscience and Edmund Husserl's phenomenology of perception, resulting, like Brandt's attempt, in a very high level of abstraction. For Petitot, there are two basic levels of semiosis. The foundational level consists of interconnected elementary units that process information; this is the level of physical reality, natural semiotics, fundamental geno-physics and objective phenomenology, comprising universal topological syntactic-semantic infrastructures.

From this level derives the deep cognitive level of macro-symbolic dynamic structures; this is the morphological level of the natural world, that of the physics of meaning, pheno-physics, and the phenomenological structures of meaning. Not even Peirce is absent from this approach, since Petitot identifies the deep cognitive level with Firstness and Eco's primary iconism. According to the author, it is at this level that, paraphrasing Greimas, the semiotics of the natural world is to be found (Petitot, 1990 and 2017: 19, 24-25, 26, 28) – but this semiotics cannot be Firstness, since it is by definition Thirdness (cf. Eco).

The Peircean perspective

We witness a comparable attempt on the other side of the Atlantic. In 1963, Sebeok introduced the new field of "zoosemiotics", which may be considered as the first creation of a new Peircean school. In 1980, he extended zoosemiotics to "biosemiotics", a concept on which he had some doubts for more than half a decade; this passage was effected due to the decisive influence of Jacob von Uexküll (Kull, 2003: 51-52) and was grounded in Peircean semiotics. Four years later, he participated in a manifesto published in *Semiotica* (see Anderson et al., 1984), which aimed at promoting a new "paradigm" in semiotics. It proposes a general and global semiotics, there called "ecumenical semiotics", which would bring together the social, cognitive and humanistic sciences, on the one hand, and the life sciences on the other. I believe that this manifesto is the only Peircean text comparable to the Saussurean Schools and Theses.

According to Sebeok, semiosis is coextensive with life and semiotics studies natural processes in all kinds of living organisms. As a consequence, he divides biosemiotics into "zoosemiotics", "phytosemiotics" (semiotics of plants) and "mycosemiotics" (semiotics of fungi); he also defines four levels of "endosemiosis", that is, the processes that he considers as transmissions of signs inside the organisms of the above categories (Sebeok, 1997). An "anthroposemiotics", that is, the semiotics of culture, in included in this ambitious "global semiotics", but only as one part of it, the other part being biosemiotics. Zoosemiotics survives to this day, while phytosemiotics and mycosemiotics remain empty statements. Endosemiosis, on the other hand, is well represented and proposed as a general

biological theory (Kull et al., 2009); in practice, endosemiosis has become synonymous with biosemiotics.

Global semiotics is presented as a unified theory, thus implying the need for a *general theory*, able to account simultaneously for the *specificities* of the biological and the cultural aspects; this appears to be impossible, one reason being the problems encountered with Peircean theory in the case of cultural analysis, as discussed above, and surfacing again in the case of biosemiotics, as discussed below. What is left in respect to the assumed theoretical continuity from biology to culture is the possibility to formulate typological sequences, of the kind: first primary semiotic systems (Sebeok's endosemiosis), then, in succession, vegetative semiosis, animal semiosis, and cultural semiosis (Kull, 2009).

The culmination of the biologising approaches comes with the endosemiosis of biosemiotics, and my discussion will concentrate on the latter.

The major problem of biosemiotics is to prove that the semiotic concepts it uses are not metaphorical. Of course, the central issue is the assumption that there is meaning outside human culture. Kalevi Kull (2023) devoted an interesting paper to this subject, in which he examines all the approaches of meaning in biology, to conclude that with none exception, none of them corresponds to the literal definition of meaning. For him, meaning is not a physical process but a relation such that the perceived elements are not sequential but exist temporarily together (169, 171). This real meaning, "prelinguistic meaningfulness" (162), exists in biosemiotics and is associated with the organism's *Umwelt*. Nevertheless, after these bold statements, Kull states that "life is a process with the ability for meaning-making, *in some sense*" (162, my emphasis) and that he views meaning, "ordinarily used in biology as a metaphor […] as being on its way toward *becoming* a scientific concept" (161, my emphasis). This is a serious reservation, but, in spite of the radical problem it poses for biosemiotics, it passes unnoticed in the rest of his paper. I personally agree with Eco (2000: 107-108) that terms such as "communication", "sign", "meaning", "interpretation", "choices" and "to recognise" are used metaphorically for interactions between cells and the processes involved are not semiotic properly speaking.[21]

Even if Kull were right, the problem with biosemiotic meaning would not be solved. The dictum of Sebeok about life being coextensive with semiosis and "meaning" in the *Umwelt* is not valid, because phytosemiosis and endosemiosis cannot be explained in terms of *Umwelt*. To solve this problem, a new and evident metaphor was added. Kull (2009) relates his typology presented above, which he differentiates through semiotic "threshold zones", to the concepts of Firstness, Secondness and Thirdness. He uses this typology twice, first to differentiate the "pre-biological" and "chaotic" non-semiotic systems as Firstness, related to iconicity, from the triadic relation of life. Then, inside life, when we pass the lower threshold to the primary semiotic system of the living cell, there are three more levels, with between them a secondary and a tertiary zone respectively: vegetative semiosis, based on iconic relations (i.e., Firstness again), animal semiosis, a function of indexical relations (i.e., Secondness), and cultural semiosis, marked by symbolic relations (i.e., Thirdness). Kull's final step is to pass from Peirce to Uexküll, by arguing that there

[21] Metaphors in biosemiotics may reach a point that can only be characterised by a pejorative adjective, as in the case referred to by Kull, in which "cellular proteins were seen as iconic sinsigns" (Kull 2024: 593).

are three *Umwelten*: a vegetative, an animal and a cultural, plus "perhaps" (12) an *Umwelt* of the living cell (see also "the emergence of semiosis in certain complex cellular dynamics is *rather* probable" – Kull, 2024: 593-594, my emphasis).

Kull (2024) gives a very interesting assessment of the role of Peirce for biosemiotics. He distinguishes three cases of scholars writing on the subject: the non-biologists, strongly represented, who have a poor knowledge of biology, so that their works are not of central interest; the biologists without sufficient knowledge of Peirce; and those with a good grasp of his theory (593). Kull poses the crucial issue of a distancing from the use of Peircean theory in biosemiotics, noting for example that the combination of Peirce with Uexküll is based "on a particular reading" of both (594) and that criticisms of the Peircean model have led to attempts to combine it with other semiotic models (593, 595-596).

Kull also discusses authors who reverse the issue, shifting from the utility of Peirce for biosemiotics to the need to transform Peirce in the name of biosemiotics, which is even more troublesome. He informs us that it has been argued that the study of bacteria indicate the existence of an "objectless semiosis", challenging the universality of Peirce's conception of the sign as representation of an object, or demanding a new definition to cover a particular relation (594). Kull closes his account with a view supporting a "post-Peircean biosemiotics" due to deviations from Peircean theory, a biosemiotics retaining the useful concepts of Peirce but relieved of triadicity and Peirce's logical forms (594). The same proposal comes from another author, who wants to modify the set of icon, index and symbol in certain systems and adopt an evolutionary hierarchy following the sequence perception, association and participation (Favareau and Kull, 2024: 39). It goes without saying that views such as these announce a Peircean semiotics without Peirce.

In spite of this centrifugal situation, Kull is optimistic that "this model can still be productive" (Kull, 2024: 595). An ambiguity arises, however, about his view on the epistemological nature of the model. Together with Donald Favareau (Favareau and Kull, 2024: 46), he rejects the two extreme positions concerning the relation of signs to the referent, "naïve realism" and "radical skepticism" (as I also did at the end of the second section above). But earlier (Kull, 2009: 14-15) he had made the assumption that the "threefold classification of semiosis into iconic, indexical, and symbolic has an *ontological* status" (my emphasis). Finally, what does he believe is the epistemological status of the Peircean model?

To conclude

We may draw some general conclusions from the above biologising approaches to semiotics:

(a) Both the Continental and the Peircean biologising proposals have as point of departure the idea of the unification of the social sciences and humanities with the natural sciences, by founding the former on the latter. This positivist ideology originates from before WWII and has a triple rationale, namely that only the natural sciences offer reliable scientific models; the "soft" sciences are not in a position to acquire models of their own, and hence, that they need to imitate the positive models. It was not understood that the nature of the objects of these two domains of knowledge is radically different and that they must necessarily develop different methods of enquiry.

The argument is advanced again by Favareau and Kull (2024), who propose to "join the life sciences with the sign sciences" (38). They follow Deely (and, of course, Sebeok) in asking for a natural science that would include subjectivity (33; see also 34). This is why they criticise the abandonment of Scholastic thinking in favour of the "ideological physicalism" of modernity (what I have called positivist models) and maintain that this "reductionist materialism" has failed today (33, 38) – two points on which we agree, as is clear from my discussion above.

Nonetheless, I believe that the authors encounter four major problems. First, they follow an interpretation which is far from the views of both Sebeok and Uexküll, which were firmly dedicated to modern science. Second, they contradict themselves, because biosemiotics, as a branch of biology, cannot but be a modern science. Third, they fall victim to medieval theology, as represented, for example, by St. Bonaventure, who states that all creatures act in the role of *signs* which point to God.

Finally, the authors claim that biosemiotics can achieve this synthesis of the positive sciences with the humanities. Admittedly, they attempt to do something original, that is, to introduce a model of semiosis into a positive science. But this is in reality only part of the programme set by Sebeok, since biosemiotics should, as we saw, explain anthroposemiotics. Thus, what starts on the one hand as an assumed synthesis of a natural and a cultural science, returns on the other as an explanation of culture by biology.

(b) Biosemiotics displays the same weakness we encountered with the use of Peircean theory in the humanities, that is, it operates with an extremely limited number of semiotic concepts in comparison to the full domination of biological concepts. The twenty or so Peircean concepts used in textual analysis are necessarily greatly reduced, amounting to less than ten, since there is no possibility of using, for example, the ten classes of signs, infinite semiosis or abduction in biosemiotics. So, by definition, they are not in a position to reorganise the field of biology. The only remaining possibility under these circumstances is to use the concepts to *rename well-known biological processes*. We encounter exactly the same limitation as in Peircean textual analyses: an ineffective *recycling* of a minimal set of concepts.

It is probably this structural reason that led Kull in 1999a (385) to confess that "biosemiotics [his "semiotic biology" …] has still not found its place in biology" and in biological writings and congresses its presence is "quite rare". This situation does not seem to have changed significantly in 2024, because the same scholar (585-586) informs us that "Peirce appears seldom in canonical surveys of the philosophy of biology […] but that is probably because of the general absence of semiotic works in these surveys".

(c) The older and newer Continental theories are clearly differentiated in respect to their actual semiotic utility. If we put into brackets the biologising foundations they assume, both Lévi-Strauss and Lotman offer workable semiotic theories. Contrary to that, the newer generation does not offer any method for concrete semiotic analyses.

The socio-cultural approaches

Culture and society

In almost all semiotic studies in which the term "social" appears, it is used in conjunction with the term "cultural", without any explanation of their relation: implicitly, the two terms are considered as synonymous. A third, related term, "civilisation", makes the conceptual situation more complex but does not appear in semiotic texts.

In German, "*Zivilisation*" is opposed to "*Kultur*": the former refers to the *material life* of society, while the latter to its *intellectual aspect*. The same differentiation is also made in English and French, in the form of *culture vs société*, with the difference that "civilisation" is used as a broader term. In French, "civilisation" covers both "la vie intellectuelle, artistique, moral" and "la vie sociale et matérielle", a definition coinciding with the English differentiation between culture and society. This distinction is repeated in the Greek encyclopaedia *Papyros, Larousse, Britannica*: civilisation includes both intellectual life and ways of living (standardised behaviour, such as language, gestures, dress) and the material life of a society as a whole.

Ordinary language, then, clarifies what is generally missing from semiotic studies, namely the differentiation between culture, that is, the *semiotic* dimension of civilisation, and society, which is the *material* dimension of it, and which I shall call "material society".

At this point, it is important to avoid two possible misunderstandings. The semiotic dimension has no relation whatsoever to the Platonic world of non-physical, absolute ideas. On the contrary, the presupposition for the existence of semiosis in respect to the expression substance is the – manifestly material – ontological purport "out there". Thus, while the Saussurean sign is conceptual, its foundation is material.

As to material society, its study belongs to non-semiotic sciences, the objects of which is defined, through a semiotic perspective, by Hjelmslev (1961: 77–80), who points out that the ontological purport of both the expression and the content substances is studied by non-linguistic sciences.[22] I clarify that by "material" I do not imply the possibility of the study of the reality of the ontological substance, but I consider it, in the conceptualist perspective, as a scientific construct, as is the concept of "culture".

The School of Paris, exceptionally for semiotics, is quite conscious of this differentiation between culture and society. It encountered the issue when it extended its approach from standard semiotics to sociosemiotics. On the other hand, the Tartu-Moscow School, while centred around sociosemiotics, has not been concerned with this differentiation, but simply identifies "society" with "culture".

I shall start below with the French approach, which had two interrelated aims: to give semiotics an orientation towards society and, simultaneously, to define the epistemological relevance of sociosemiotics. In epistemological terms, sociosemiotics indicates a legitimate orientation of semiotics beyond the strict definition of the field in the direction of sociology, which is in frontal opposition to the biologising orientation I discussed above.

[22] Indeed, he considers the deeper level of the two substances as having a form of the same sort as the linguistic form, whence he considers it as semiotic.

The socio-cultural view: sociosemiotics

In their second *Dictionnaire*, Greimas and Courtés discuss the relation between semiotics and society and detect two tendencies (Greimas and Courtés, 1986: Sociosémiotique). The first is to accept that social facts are irreducible to purely semiotic facts and are studied by a set of special theories, such as sociology, economics and political science; in this case, semiotics would be limited to investing these external realities. They opt, however, for the second tendency, that of a sociosemiotics integrated within general semiotics, which conceives of the social in semiotic terms. As they state in the first *Dictionnaire* (Greimas and Courtés 1979: Sociosémiotique), they reject an interdisciplinary sociosemiotics, the bringing together of two heterogeneous fields, in favour of a pure semiotic "intertextuality". The post-Greimasian semiotics of enunciation follows this line of research.

According to Courtés (1991: 245–246), who follows the same approach, the sociological tendency studies the external (social, economic, religious, etc.) conditions of production of an utterance (a text) and through them explains its composition and characteristics. He considers it as legitimate, but rejects the perspective of the subjugation of sociosemiotics to the social sciences and opts to remain within the text, thus within the semiotic relevance. However, he considers that both tendencies are valid.

This defence of the semiotic relevance is not without contradiction. In the entry on Sociolect in the first *Dictionnaire*, the authors accept the existence of social stratification into classes, strata or social groupings as "phénomènes *extra-sémiotiques*" (my emphasis) and state that there are semiotic configurations *corresponding* to them. However, they also argue in the first *Dictionnaire* (Greimas and Courtés, 1979: Sociosémiotique) that, while language can be correlated with the traditional social classes (the aristocracy, the bourgeoisie, the people), in modern industrial societies the criteria for social stratification have shifted to ways of life or forms of living ("modes de vie", vestimentary and culinary behaviour, housing preferences, etc.), which are signifying practices appertaining to the domain of non-linguistic semiotics.

This reasoning leads to serious questions. First, it is not possible to separate language from the other semiotic systems, which means that in traditional societies the articulation between semiotics and sociology should be the rule − in spite of the fact that these societies had their own forms of living. Second, the supposed extinction of social classes in modern societies originates from a peculiar apolitical kind of North American sociology, first liberal and later postmodern, which I would not recommend as a standard reference. Third, since the authors accept the correlation of language with social classes in traditional societies, there is at least one kind of semiotics that is founded on the articulation from social to semiotic, and thus we would have two different epistemologies for semiotics: interdisciplinarity when dealing with the "traditional social classes" and intertextuality (immanence) for modern societies.

If Greimas and Courtés consider, as I believe they do, that any interdisciplinary articulation is extra-semiotic, then we should consider that the semiotic approach for traditional societies should still be founded on forms of living. But if so, the differentiation between them and modern societies is superfluous.

I shall try below to give an answer to this contradiction by differentiating between the *semiotics of relevance* and the *semiotics of articulation*, two semiotics equally valid, in my opinion, for both traditional and modern societies.

We should retain a capital issue from the problematics of Greimas and Courtés. The nucleus and target of my discussion is semiotics as a cultural science. The biologising approaches have suggested biology as a foundation for articulating with semiotics. The Greimasian school, on the other hand, proposes another articulation, this time with society.[23] This radically upsets the biologising approaches, because they are based on a *linear* relation between biology and semiotics which does not take into account the *mediation of society*.

A Marxian interlude

The articulation proposed by Greimas and Courtés defines a causal relation between society and culture, which is close to the traditional Marxist view of the production of culture. The epistemological scenarios for the relation between these two components of civilisation are the following:

(a) culture produces society, which is the idealist position;
(b) society and culture interact, which is the mechanical functionalist position;
(c) c_1: society causally produces culture, which is the traditional Marxist position; and
c_2: society dialectically produces culture, which is the neo-Marxian position.

In his brief encounter with Marxism, Greimas opted for scenario c_1, as we can see from his approach to a semiotic description of history. Following traditional Marxist theory, he argues that society is a structure organised according to autonomous superimposed levels of different degrees of depth, moving from the deeper economic structures to the social structures, which are invested by the cultural structures (Greimas, 1976: 164, 165-166, 167). Since this view is today discredited, and since I am not an idealist nor do I believe in the simplistic functionalist interpretation, I consider scenario c_2 as the sociologically stronger position, and I shall try to briefly substantiate my choice below.

Louis Althusser and Étienne Balibar in their "structural Marxism" identify three major "instances" (societal components), internally structured and mutually structuring through their interrelations, which together compose the complex structured whole of society. There is a fundamental component, the economic, while two other structures form the superstructure of society: on the one hand, the political and legal instance, and on the other ideologies and the "theoretical formations" (philosophy and the sciences). "Structural causality" functions from the economic to the other two components, but it is dialectical, being determinant only "in the last instance", because this derivation is mediated in multiple ways, so that the superstructural structures are "relatively autonomous" (Althusser and Balibar, 1968: 120–125).

[23] We may probably explain this conception if we keep in mind that, at some moment, Greimas was preoccupied with the possibility of a connection between (traditional) Marxist social theory and semiotics. His sociological interest encountered resistance within his group, both on theoretical grounds and for practical reasons such as lack of sociological knowledge and infrastructure. The issue is discussed by Landowski (2017: 16).

A similar approach is found in the "cultural materialism" of Raymond Williams (1977). Williams gives his own version of the last instance as, "social being [that is, material life] determines consciousness" (3-4), in the sense of setting limits and exerting pressures on how humans conceive of themselves, their world and their possibilities for action. Determination is here equally flexible with the Althusserian, if in a different manner, because this "negative" form is supplemented by a "positive" one, originating (in the instance of consumption, following the diagram of Figure 4) from the inverse pressure of social subjects on society and consciousness. On this basis, Williams conceives of a doubly structured cultural component, integrating an "official consciousness" of fixed, "formally held and systematic beliefs" constituting the worldview or ideology of a society (see non-manifested culture in Figure 4), and a "practical consciousness", a "structure of feeling" or "structure of experience" which is constituted by meanings and values as they are experienced in process, actively in everyday life (see, for example, Williams 1977, 83-89, 130-134).[24]

A political economy position on the production of culture by society is also defended by the human geographer David Harvey. He argues that the central process of capitalism is capital accumulation. There have been a series of crises of over-accumulation and each crisis resulted in a new cultural form. Postmodernity was the product of a crisis reaching its peak in 1973 and postmodern society is a new stage of capitalism, with postmodern culture representing the cultural logic of this late capitalism (Harvey, 1989: for example, 55-58, 87, 124, 306-307, 327-328).

We find the same political economy perspective in Lucien Goldmann (1971: 21, 162), who distinguishes between two concepts, comprehension and explanation. Comprehension of a "signifying structure" implies the description of its signification and structure, while explanation involves its function within a larger cultural context. There is also a final step, the insertion of the latter within the whole of history.

We can find a comparable rationale, as a rare exception, in semiotics. It comes from the "sociological poetics" of Mikhail M. Bakhtin and Pavel N. Medvedev. According to the authors, ideology is incorporated as "semiotic material" into any semiotic product, such as language, literature or the arts, behaviour, dress, which are thus transformed into "object-signs" constituting the "ideological environment" of a collectivity. This environment includes a set of ideological spheres (semiotic sub-systems), all based on socio-economic reality, and the mediation of particular forms of communication between this reality and the ideological spheres explains both their different relations to this reality and the differences between them. Besides this individual nature of the ideological spheres, each of them is determined by the ideological environment and vice versa. Departing from the

[24] It is remarkable how this structure of feeling coincides with Greimas's view on the urban "modèle de vie", that is, the semantic representation of the "style de vie" in the urban environment, a model which, for him, partially renders the actant recipient's structure of the content − supplemented by a conception of the imaginary, absent city (Greimas, 1976: 154-155). We find the same idea in Fontanille. who, based on Hjelmslev's differentiation between form and substance, defines a set of "methodological regimes" of semiosis to which correspond different planes of immanence, moving from form to continuously deeper levels of substance: signs-figures, texts-enunciates, objects-supports, practices-strategies and forms of living-modes of existence (Fontanille and Tsala-Effa, 2017: 108).

rigid traditional Marxist reflection theory, Bakhtin and Medvedev presage Althusser's last instance by writing that each sphere is "*only obliquely* reflecting and refracting socio-economic and natural existence" (Medvedev and Bakhtin, [1928] 1978, 14, my emphasis; see in general 7-15, 18).

The diagram in Figure 4 shows the complex dialectics, covering all the views referred to above, between the main components of the social structure as a whole, namely the socio-economic, the political/institutional and the virtual cultural/semiotic (ideological). The foundational component is the socio-economic, which together with the political/institutional constitutes what I called "material society". These components are analytical concepts: in practice they cannot be isolated, since they function together as a system, through continuous mediations and feedback dynamics, though these are not of the same intensity in every case, as is clear from Figure 4. This dynamic shows that the semiotic component is not in practice external to the socio-economic component, but functions internally to it.

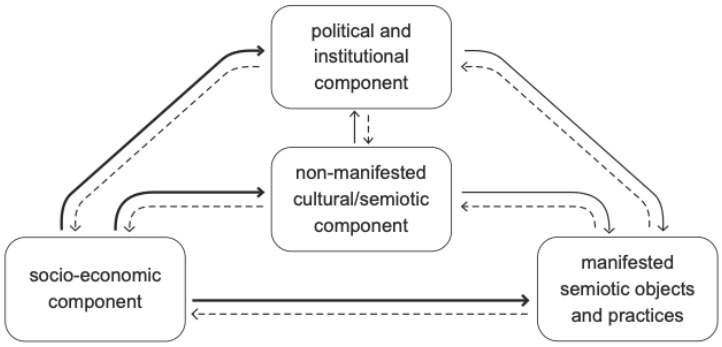

Figure 4. Social structure and the production of manifested culture.
——— : major influence. —— : influence. - - - : secondary influence.

The socio-cultural view: social semiotics

I mentioned above that the concept of society poses a major problem for the cognitive approaches. This is equally the case with global semiotics, because it assumes the same linearity between biology and semiotics. In these cases, the existence of society would demand a kind of connection between the social and the semiotic, both anchored in biology. There is a historical precedent to the attempt to found society on biology. The biological interpretation of society was attempted in the 1920s and 1930s by the "classical human ecology" of the Chicago School of sociology. The aim of this first tendency of the school was to explain the spatial distribution of social phenomena on the basis of animal and plant ecology (Theodorson, 1961: 3).

One of the main representatives of the approach, Robert Ezra Park, starts from the Darwinian struggle for existence, which he considers as the basic form of competition. Competition intensifies during periods of change and crisis, which are followed by periods of lesser or greater equilibrium, based on cooperation. This symbiotic relation between

humans leads to the principle of competitive cooperation, creating symbiotic communities which constitute the "biotic" level of society, the "community". This biological level is "pre-social", or "sub-social"; it originates from unconscious adaptations taking place during the struggle for survival and entails relations between individuals in the form of a biological physical economy. This is a biological determinism of society, in the form of social Darwinism. According to Park, this "substructure" produces a cultural "superstructure", which has a feedback influence on the former, without, however, altering it substantially[25] (Park, 1961; see also Theodorson, 1961: 3-4).

This tendency disappeared as a result of radical criticism, starting with the one by Milla Aïssa Alihan. Her general rationale is the impossibility of transposing the logic of the physical sciences to the social sciences, because economy cannot be abstracted from the social sphere. Processes which are unconscious in the vegetable and animal realm become conscious to various degrees in human society, and even competition is regulated by consciousness. Alihan points out that the references of this tendency to economy and technology have no relation to any physical order. According to her, the differentiation between a biotic community subject to physical laws and a society regulated by social principles is senseless (Alihan 1938: 69,75, 82, 84-87, 245-249).[26]

The insurmountable difficulties facing the biologising interpretations of semiotics show that the only legitimate choice for an interdisciplinary articulation of semiotics is to turn to the social sciences. In this case, the central question is the epistemological relation between immanent sociosemiotics and the articulation of semiotics with society. The answer of the School of Paris is clear: these are two legitimate domains of enquiry, but they have a parallel existence, and only sociosemiotics may be considered as falling within the field of semiotics. I shall challenge this view below.

I shall start by recalling that Saussure foresaw *four* linguistics: one of *langue*, another of *parole*, a diachronic linguistics and an external linguistics. The latter links language to its external social, historical and geographical environment. Saussure cites its relation to institutions, such as the Church, the school system, the court or the Academies; to political history, both external (for example, the influence of Roman conquests on local languages) and internal (for example, the impact of cultural development on the creation of specialised languages, such as legal or scientific languages); and to geography as a consequence of the geographical diffusion of a language (Saussure, 1971: 36-43, 114-117).

As is clear, while the first three linguistics are *immanent*, the fourth presupposes an *articulation* of language with external factors, but it *still* belongs, for Saussure, to linguistics − and, *mutatis mutandis*, to semiotics. The fact of articulation *does not expel* its product from its *legitimate affiliation to the field of semiotics*. This fact was made explicit by Hjelmslev, who calls this articulation the "metasemiotic of connotative semiotics" and considers it, in line with his simplicity principle, as the higher order of "metasemiologies". In this metasemiotic, "the largest parts of specifically sociological linguistics and Saussurean external linguistics will find their place in reinterpreted form. To this metasemiotic belongs

[25] We recognise in this view an attempt to introduce traditional Marxism into a biological approach.
[26] Since then, human ecology has evolved through three different tendencies, all sociologically oriented, of which the last one, cultural ecology, combines cultural values with the importance of the economic factor, in this manner encountering semiotics.

the task of analyzing various – geographical and historical, political and social, sacral, psychological – content-purports" and "Many special sciences, in the first place, presumably, sociology, ethnology and psychology, must be thought of as making their contribution here" (Hjelmslev 1961: 125). With this articulation, the passage is effected from sociosemiotics to what I have called "social semiotics".[27] It thus comes as a surprise that Greimas and Courtés, in their first *Dictionnaire* ("Connotation"), consider Saussure's external linguistics as a "sociosemiotic approach".

Saussure (1971) goes deeper than Hjelmslev in his view on the dynamics of external linguistics. *Langue* is socially grounded in the *communauté*, *masse parlante*, *masse sociale*, *forces sociales* (104, 107, 108, 112-113): "la langue est un *produit* des forces sociales" (108, my emphasis). But Saussure takes a final step, stating that its "nature sociale est un de ses *caractères internes*" (Saussure 1971: 112, my emphasis). In respect to the "phénomène sémiologique", "la collectivité sociale et ses lois est un de ses éléments internes et *non* externes" (Saussure 2002: 290). That is, the laws of the social collectivity are *internalised* into *langue* (and into all semiotic systems).

It is a kind of revelation that Saussure's social semiotic understanding of language converges with the Marxian understanding of the production of culture as represented in Figure 4. On this basis, we may conclude that the dominant isotopies of the semiotic systems and their structuring are due to the *forces sociales*, which we can manifestly relate to the Marxian socio-economic component. We should understand this choice as a main emphasis, since Saussure in his external linguistics also mentions the political/institutional factor, included in material society. It is true that for Saussure the semantic universe of the semiotic systems is a function of *valeur*, implying a mechanism of *autoregulation*, which might seem to contradict this convergence. However, in Althusser and Balibar's dialectics between society and culture, though semiotic systems are socio-economically determined, they are so only "in the last instance" and without losing their "relative autonomy".

To conclude, I propose that Saussurean semiotics requires a threefold approach, according to an expansion from a centre to a periphery:

(a) immanent semiotic analysis, semiotics in the strict sense, which remains the nuclear object of semiotics;

(b) sociosemiotic analysis, extending to the broader domain of communication and situation; and

(c) social semiotic analysis, or otherwise Hjelmslev's metasemiotic of connotative semiotics, articulating semiotics with the material processes of society.

[27] There is no doubt that sociology is in a position to contribute to this articulation, but it will do so from its own perspective and methodology, without the fine instruments of semiotics for the analysis of meaning.

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