

LINGUISTICS AND SEMIOTICS IN THE FRAMEWORK OF THE SCIENCES IN GENERAL

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Abstract

The paper examines the place of semiotics and linguistics, as well as their historical precursors in the framework of the sciences in general. Early classifications of the sciences considered include those of Aristotle, the Scholastics, Francis Bacon, and John Locke. The focus of this paper is on XIXth century systems. After a cursory glance at André-Marie Ampère's and Roswell Park's systems, the study will turn to the classifications of linguistics and semiotics within the systems of Adrien Naville, Ferdinand de Saussure, and Charles S. Peirce. The paper provides a brief survey of XXth century views on the place of linguistics in its relation to semiotics before concluding with a study of semiotics among the sciences of the XXIst century.

Keywords: classification of the sciences, linguistics, semiotics, Ferdinand de Saussure, Charles S. Peirce

1. Introduction

Where are the academic disciplines of linguistics and semiotics located in the more general framework of the sciences? In our age of increasing specialization in which new academic disciplines are shooting up like mushrooms and the sciences at large have more the appearance of a Deleuzian rhizome than the one of a Linnaean taxonomy, this question seems to have become marginal or even irrelevant. Nowadays, the place of an academic discipline seems rather a matter of the organization of universities into faculties and departments according to principles of administrative efficiency. This was different in the nineteenth century when the sciences were still considered a system in which the individual fields of research had a place that could be determined according to scientific principles.

Projects to develop general systems of the sciences have gradually disappeared from the agenda of the XXth century philosophy of science; at least in the context of semiotics. However, it is still worthwhile to review how linguistics and semiotics were located in the general framework of the sciences

by the founders of modern semiotics since Charles S. Peirce and Ferdinand de Saussure had conceptions concerning this issue that are indicative of their respective approaches to semiotics. While general systems of the sciences are hardly being any longer discussed, a related topic, namely the question of whether semiotics is a science at all, an academic discipline, a doctrine, a theory, an interdiscipline, a transdisciplinary approach, or something else continued to be debated¹.

2. Precursors: From Aristotle to Locke

In the early history of the ambitious plan to devise a comprehensive panorama or even system of the most important areas of human knowledge, the classifications of the sciences devised by Aristotle, the Medievals, and Francis Bacon are the intellectual milestones. Semiotics and linguistics are not yet mentioned in any of these systems explicitly, but precursors and elements of them are. In Aristotle's triadic system, which divides the sciences into the theoretical, the practical, and the productive ones, elements of semiotics can be found in the third of the three, which includes rhetoric and poetics. The first and the second deal with the study of nature and ethics, respectively. However, if we consider, with Peirce, logic as a precursor of semiotics, it is notable that this field of study is not included in any of Aristotle's three branches of the sciences but belongs to an extra domain of knowledge common to all areas of inquiry, which is the topic of Aristotle's *Organon*².

The Middle Ages had the well-known division of the sciences into the seven liberal arts with the *trivium* of grammar, rhetoric, and logic and the *quadrivium* of arithmetic, geometry, music, and astronomy. Here, modern linguistics finds its precursor discipline in the liberal art of grammar, whereas elements of semiotics can be found both in the arts of grammar and of logic³.

In Francis Bacon's *Advancement of Learning* of 1605, the division of the sciences is triadic, too, the fundamental triad being set up according to what Bacon considered as the three elementary human faculties, memory, imagination, and reason. Accordingly, the three major fields of the study of human knowledge

¹ For critical and bibliographical surveys of this issue, see Nöth 1990b and Sebeok 2001: 8.

² See Shields 2006.

³ See Meier-Oeser 2006.

are history, poetry, and philosophy. Philosophy, in turn, had again three branches, the doctrines of nature, Deity, and man, of which the latter provides the general framework for the study of Bacon's elements of linguistics and semiotics⁴.

Among the semiotic topics of the "doctrine of Man" are grammar and speech in native and foreign languages, logic, and the art of argumentation, rhetoric. Bacon proposes a model of the verbal sign according to which "words are but the current tokens or marks of popular notions of things"⁵, but his semiotic panorama also includes nonverbal signs for the study of which he conceived a "doctrine of gestures". Other semiotic topics of his "doctrine of Man" were "physiognomy" and the interpretation of "natural dreams". Bacon rejected the rationalist disparagement of feelings and the senses in cognition and proposed an empirical theory of cognition for the study of imagination, the senses and sensibility, perception, and reason. Instead of deploring the deceptive nature of the senses, Bacon attributes to the senses the role of "reporters to the mind [...] very sufficient to certify and report the truth"⁶.

Bacon's conception of the sciences as a whole is not one of a taxonomic or hierarchical system. Instead, its model is the one of a biological organism. This makes his system less rationalistic and more modern than the ones of some of his successors in the history of philosophy. The metaphor of the "tree of knowledge" has often been attributed to Bacon and it characterizes indeed Bacon's perspective on the sciences, although Bacon never used it literally. Instead, he used the following simile of the "branches of knowledge" in his *Advancement of Learning*: "The distribution and partitions of knowledge are not like several lines that meet in one angle, and so touch but in one point; but are like branches of a tree that meet in a stem, which hath a dimension and quantity of entireness and continuance, before it comes to discontinue and breaks itself into arms and boughs"⁷. In 1620, Bacon also refers to the system of knowledge as a "web": "Knowledge, which is delivered to others as a web to be further wove, should, if possible, be introduced into the mind of another in the manner it was first procured [...]"⁸.

⁴ Bacon 1605 [1827: 153-218].

⁵ *Ibid.*: 181.

⁶ *Ibid.*: 9, 182.

⁷ *Ibid.*: 123.

⁸ Bacon 1620 [1815: 39].

The “division of the sciences” that John Locke proposes in chapter twenty-one of the last book of his *Essay Concerning Human Understanding* of 1690 deserves a special mention since this treatise is the first to include semiotics as a main branch of the sciences. Locke’s classification is triadic, too. His main domains of the universe of knowledge are *physica*, *practica*, and *semeiotica*. Whereas *physica*, the precursor of the natural sciences, is concerned with “the contemplation of things themselves”, *practica* is “about the things in his own power, which are his own actions for the attainment of his own ends”. The term comes close to *ethics* as it was conceived in later centuries. The third realm of human knowledge, *semeiotica*, is the doctrine of signs, which includes the study of words and logic. In this context, John Locke gives his famous definition of “words as the great instruments of knowledge” and of the verbal sign as representations of ideas, which, in turn, are representations of the objects of reality:

“The third branch may be called *Semeiotike*, or the doctrine of signs; whereof being words, it is aptly enough termed also *Logike*, logic: the most usual consider the nature of signs, the mind makes use of for the understanding of things, or conveying its knowledge to others. For, since the things the mind contemplates are none of them, besides itself, present to the understanding, it is necessary that something else, as a sign or representation of the thing it considers, should be present to it: and these are ideas. And because the scene of ideas that makes one man’s thoughts cannot be laid open to the immediate view of another, [...] therefore to communicate our thoughts to one another, as well as record them for our own use, signs of our ideas are also necessary: those which men have found most convenient [...] are articulate sounds. The consideration, then, of ideas and words as the great instruments of knowledge, makes no despicable part of their contemplation who would take a view of human knowledge in the whole extent of it”⁹.

With his triad of *physica*, *practica*, and *semeiotica*, Locke thus reduces the medieval system of the seven liberal arts to two, *physica* and *semeiotica*, condensing the quadrivium of arithmetic, geometry, music, and astronomy to one, namely, physics, in the sense of the natural sciences, and the trivium of grammar, logic, and rhetoric to one, namely logic, alias semiotics. *Practica*, the precursor

⁹ Locke 1690 [1973: IV.21]. (Locke’s *Essay Concerning Human Understanding* is divided into four “books”. In philosophical treatises, reference to them is standardly made by the roman numbers I, II, III, IV. Locke’s famous reference to “semeiotica” is located in chapter 21 of the fourth book of his *Essay Concerning Human Understanding*.)

of ethics, law, and the social sciences, is Locke's new addition to the medieval canon of the sciences. The reduction of the trivium of grammar, logic, and rhetoric to semiotics is a symptom of the so-called decline of rhetoric in Locke's age. The reason why Locke did not include grammar in his list of the core sciences of his age is probably less disrespect for the discipline of linguistics. Instead, it is a symptom of Locke's rather modern approach to language teaching and learning, which gives preference to the direct method instead of the grammar-first method. As W. Uzgalis puts it, Locke "urged learning languages by learning to converse in them before learning rules of grammar"¹⁰.

3. Early XIXth century "pantological" systems of the sciences

In the *Order of Things*, Foucault argues that classification and taxonomy were the predominant epistemes of the Age of Reason¹¹. However, for the project of the classification of sciences, it was only in the XIXth century that the ambitious project of setting up comprehensive systems of classification reached its climax, which occasionally resulted in hypertrophic excess, as will be shown below.

Symptomatic of early XIXth century approaches to the classification of the sciences is André-Marie Ampère's *Essai sur la philosophie des sciences* of 1834¹² in which the author pursued the goal of a "natural classification" of the sciences following the example of systems of classification known from geology, botany, and zoology. As Williams puts it, Ampère's system gives, at first glance, the impression of "a fantastic and uncorrelated list of possible objects of investigation"¹³, but it turns out to be structured according to a very simple scheme. The system divides the sciences according to a strictly binary principle at three levels of depth, resulting in a tree diagram of no less than 128 sciences, some of which did not even exist yet but were postulated according to the binary logic of Ampère's classificatory system¹⁴. Semiotics is not included in the system, but elements of it can be found within the branch of "elementary psychology", whose binary division results in the distinction between logic and

¹⁰ Uzgalis 2016.

¹¹ Foucault 1966 [1970].

¹² Ampère 1834.

¹³ Williams 1970: 139.

¹⁴ See Rötzer 2003: 203-206.

“psychography”. Linguistics is called “glossology”, and it is divided into “lexicology” (again subdivided into “lexiography” [*sic*] and “lexiognosy”) and “glossognosy” (subdivided into “glossonomy” and “philosophy of languages”).

Ampère’s radically binary system divides the sciences into two fundamental branches to distinguish the “cosmological” from the “noological” sciences. The former deal with phenomena of the material world, the latter with the world of ideas. The division forebodes the XIXth century division of the sciences into *Geistes-* and *Naturwissenschaften* eternalized in the XXth century in C.P. Snow’s influential Lecture on the *Two Cultures*, which allegedly testify to a fundamental split of the realms of knowledge into the natural sciences and the humanities¹⁵.

To illustrate the XIXth century method of devising a general classificatory system of the sciences, Figure 1 shows the full system of the sciences that the Pennsylvanian Reverend Roswell Park, clearly inspired by Ampère, published under the title *Pantology* in 1843¹⁶. Like Ampère, Park classified linguistics as a branch of “glossology”, which he conceived as a branch of “psychonomy”. His idiosyncratic subdivision of “glossology” distinguishes the four branches of “General Grammar”, “Oriental”, “European”, and “Barbarous” languages. Logic, just like in Ampère’s system, descends from “psychonomy”, but it now belongs to the branch of “psychology”. The complete system has the diagrammatic shape of a palm tree. Notice that the tree of knowledge in Figure 1 suffers from a biological anomaly. The still undivided stem at its bottom, representing the domain common of all fields of knowledge, branches, as it grows up, several times, whereas the real botanical family of palm trees (*Arecaceae*) has unbranched stems.

¹⁵ Snow 1959 [1961].

¹⁶ Park 1843.

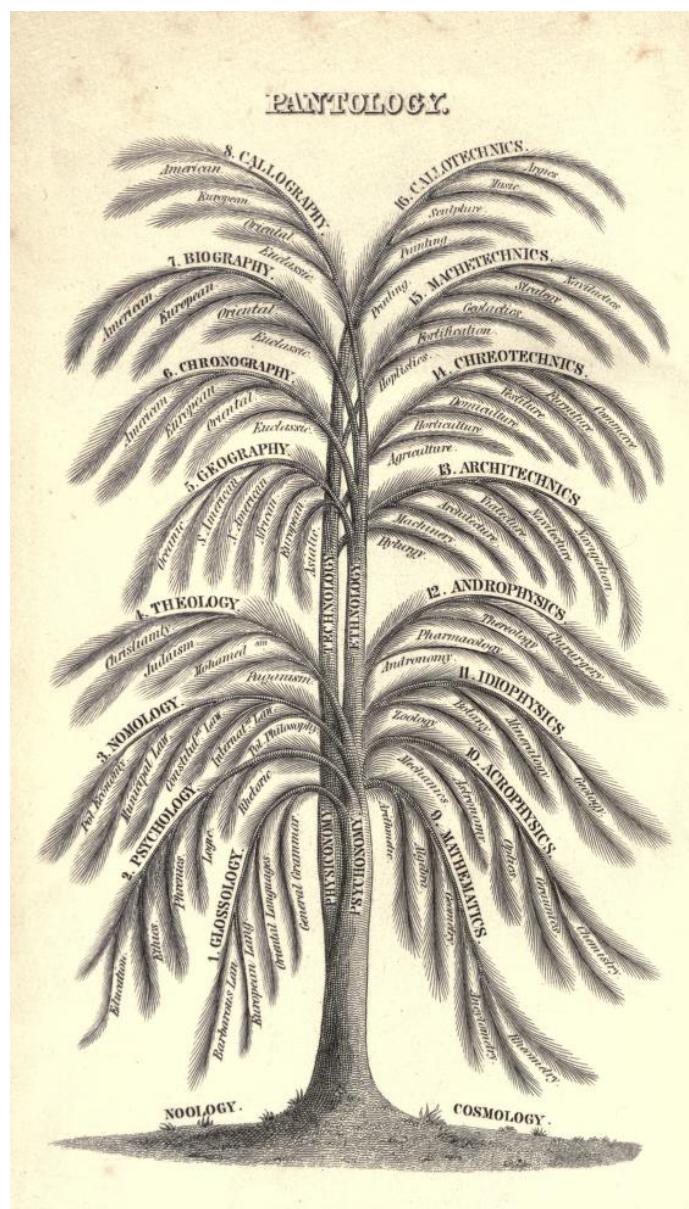


Figure 1. Roswell Park's pantological tree of knowledge of 1843 (frontispiece).

4. Saussure and Naville

Saussure discusses his ideas on the places of linguistics and semiotics (his *semiology*) in the canon of the sciences in chapter III.3 of his *Course of General Linguistics*. The author's main interest is in the relationship between linguistics and semiology, the science that, as he predicts, was destined to provide a general framework for linguistics as well as for other sign systems, such as writing, sign languages, "symbolic rites, forms of politeness, military signals, and so on"¹⁷.

¹⁷ Saussure 1916 [1986: 15].

Under the heading of the “Place of language in human facts; semiology”, Saussure expounds:

“Semiology would show what constitutes signs, what laws govern them. Since the science does not yet exist, no one can say what it would be; but it has a right to existence, a place staked out in advance. Linguistics is only a part of the general science of semiology; the laws discovered by semiology will be applicable to linguistics, and the latter will circumscribe a well-defined area within the mass of anthropological facts. To determine the exact place of semiology is the task of the psychologist. The task of the linguist is to find out what makes language a special system within the mass of semiological data”¹⁸.

Saussure thus conceives semiology as a branch of psychology, but he seems to have been somewhat undecided as to whether it should not be also conceived as a branch of sociology, instead, because in various passages of his *Course* he characterizes semiology as a science of social institutions, a discipline related to studies of judiciary institutions.

Roy Harris reminds us as follows that Naville’s *Nouvelle classification des sciences* antedates Saussure’s *Course* by a decade: “The birth of Saussurean semiology was announced, somewhat prematurely, in 1901 in Adrien Naville’s *Nouvelle classification des sciences*, [...] a revised and expanded version of a work by the same author dating from 1888”¹⁹. Saussure’s ideas are clearly in agreement with what Adrien Naville, his colleague at the University of Geneva, wrote about the two sciences in 1901. Did Saussure ignore Naville’s expositions when he referred to semiology, in his lectures on general linguistics between 1906 and 1911, as a science that did not yet exist?

Engler has shown that this is not the case²⁰. Instead, it was not Saussure who took the term from Naville but it was Naville who took it from Saussure. In 1888, Naville had not yet mentioned “semiology” in the first edition of his *Classification*. Actually, Naville gives explicitly credit to Saussure, when he classifies semiology and linguistics as two branches of sociology, and as Engler

¹⁸ *Ibid.*: 16.

¹⁹ Harris 2000: 41.

²⁰ Engler 1980.

comments²¹, Saussure may well have formulated the passage for Naville's 1901 reedition of his *Nouvelle classification* himself:

“La sociologie [...] doit admettre comme données toutes les conditions sans lesquelles nous ne pouvons pas nous représenter la vie sociale. Quelles sont les conditions? Je ne sais si la science les a déjà suffisamment distinguées et énumérées. Une des plus apparentes, c'est l'existence de signes par lesquels les êtres associés se font connaître les uns aux autres leurs sentiments, leurs pensées, leurs volontés. M. Ferdinand de Saussure insiste sur l'importance d'une science très générale, qu'il appelle *sémiologie* et dont l'objet serait les lois de la création et de la transformation des signes et de leurs sens. La sémiologie est une partie essentielle de la sociologie. Comme le plus important des systèmes de signes c'est le langage conventionnel des hommes, la science sémiologique la plus avancée c'est la *linguistique* ou science des lois de la vie du langage”²².

What is the place of linguistics and semiotics or semiology within the general framework of Naville's system of the sciences²³? Naville postulates a triadic division of the sciences in general (Figure 2). The first triadic division of his system distinguishes between the theorematic, the historical, and the canonical sciences. According to the author, these three sciences address the three fundamental questions of “What is possible?”, “What is real?”, and “What is good?”²⁴. The historical sciences, for example, focus on facts, on what *is* and on how it can be explained, and what the main divisions of history are. The third branch is called canonical or “poietical” because these sciences are concerned with the “ideal rules of action”; its subdomains are the arts and the doctrines of moral conduct.

In our context, Naville's first of the three divisions is of interest, the *theorematic sciences*. He defines them as “sciences des limites universelles et des relations nécessaires des possibilités ou *Sciences des lois*”²⁵. These sciences thus deal with the domain of whatever is possible as well as with laws. The theorematic sciences are subdivided into four, (1) nomology, (2) mathematics, (3) natural sciences, and (4) psychological sciences. Nomology is a mere “introduction to science”. Restricted to the question of what it is to know, it studies the concept of law in general. The natural sciences – Naville calls them “physical sciences” –

²¹ *Ibid.*: 4.

²² Naville 1901: 103-104.

²³ See Schinz 1903.

²⁴ Naville 1901: 12.

²⁵ *Ibid.*: 179.

include physics, chemistry, and biology. The fourth province of the theorematic sciences, the “psychological sciences”, has two domains, psychology in the narrower sense and sociology. It is in the latter that we find semiology, linguistics, economics, etc.

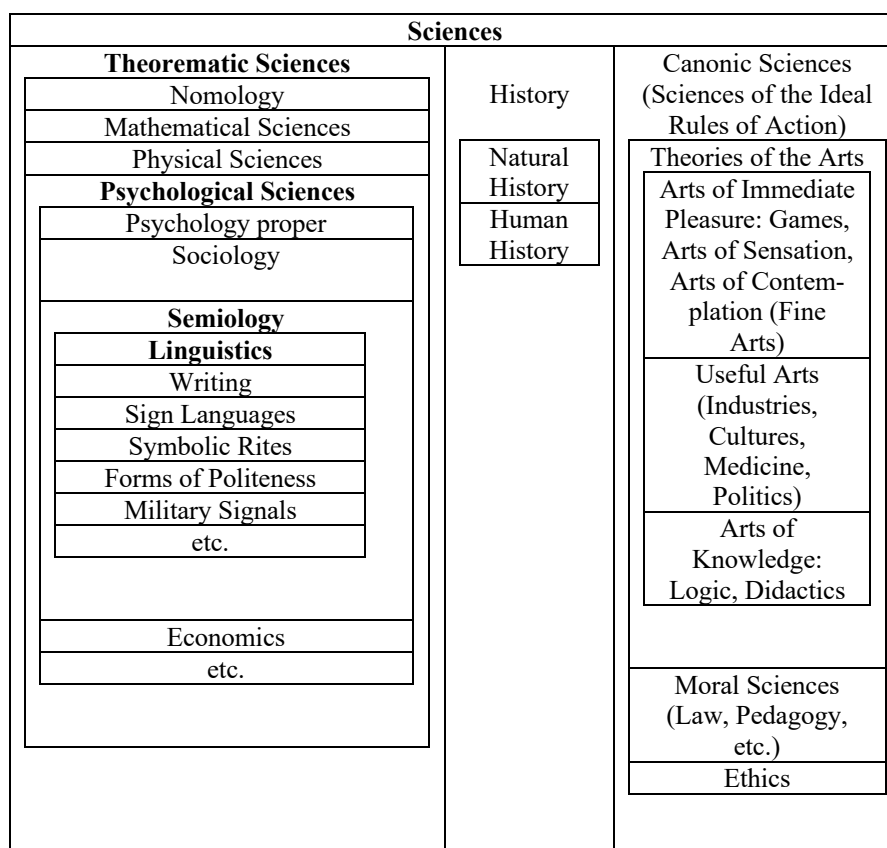


Figure 2. Diagram of Naville’s system of the sciences, with focus on semiology and linguistics (author’s diagram).

With the classification of semiology and linguistics as domains of sociology, Naville differs from Saussure, who, as quoted above, considered it “the task of the psychologist” to determine the place of the two sciences, but this divergence between Naville and Saussure should not be overemphasized. First, Saussure himself, as mentioned above, seems to have been somewhat divided as to whether semiology should not rather be conceived as a branch of sociology instead of psychology when he defines semiology as a science of social institutions, a discipline related to the study of judiciary institutions. Second, Naville classified sociology as one of the two branches of “the psychological sciences”, namely, “psychologie proprement dite” and “sociologie”²⁶.

²⁶ *Ibid.*: 101.

5. How Peirce locates linguistics and semiotics within his general system of sciences

The classification of the sciences is a recurrent topic in Peirce's writings. B. Kent²⁷, A.-V. Pietarinen²⁸, and others²⁹ offer comprehensive surveys and discussions. In the context of this paper, we have to rely mainly on Peirce's 1903 "Outline classification of the sciences"³⁰, which is one of Peirce's most advanced papers on the topic.

Peirce's system of the sciences of 1903 is triadic throughout. As Kent points out, he aims at a *natural* classification in the sense of a "classification of the activities of the scientists"³¹. The triadic organization at all levels implies that the sciences are classified according to Peirce's system of the three universal categories of firstness, the category of possibilities, secondness, the category of facts, and thirdness, the category of habits and purposes.

Peirce's conception of the place of linguistics and semiotics within the system of the sciences (Figure 3) is rather different from the ones of Naville and Saussure. To Peirce, semiotics is not a psychological or a sociological science. Instead, semiotics is a variant of logic, in the very broad and general sense of the study of signs of any kind. Peirce's logic, and hence his semiotics, is not a branch of psychology. The study of logic, as he conceives it, is not the study of mental processes. Different from Naville's classification, which distinguishes between nomology (the science of laws) and the psychological sciences (among them semiology and linguistics), Peirce's semiotics, conceived as logic, is a science of laws, the "science of the general laws of signs"³². Peirce classifies it as the third of the three normative sciences, which are esthetics, ethics, and logic. According to Kent's summary, the heuristic sciences "seek only to learn new truths; they are concerned with discovery for its own sake"; the sciences of review "seek to make the works of discovery comprehensible in the broadest sense", and the practical sciences are applied sciences that "seek to satisfy human desires"³³.

²⁷ Kent 1987.

²⁸ Pietarinen 2006.

²⁹ See Classification of the sciences (Peirce) 2016.

³⁰ EP2: 258-262 (see Peirce 1903 [1998]).

³¹ Kent 1987: 49-50.

³² CP 1.191, 1903 (see Peirce 1931-1958).

³³ Kent 1987: 131.

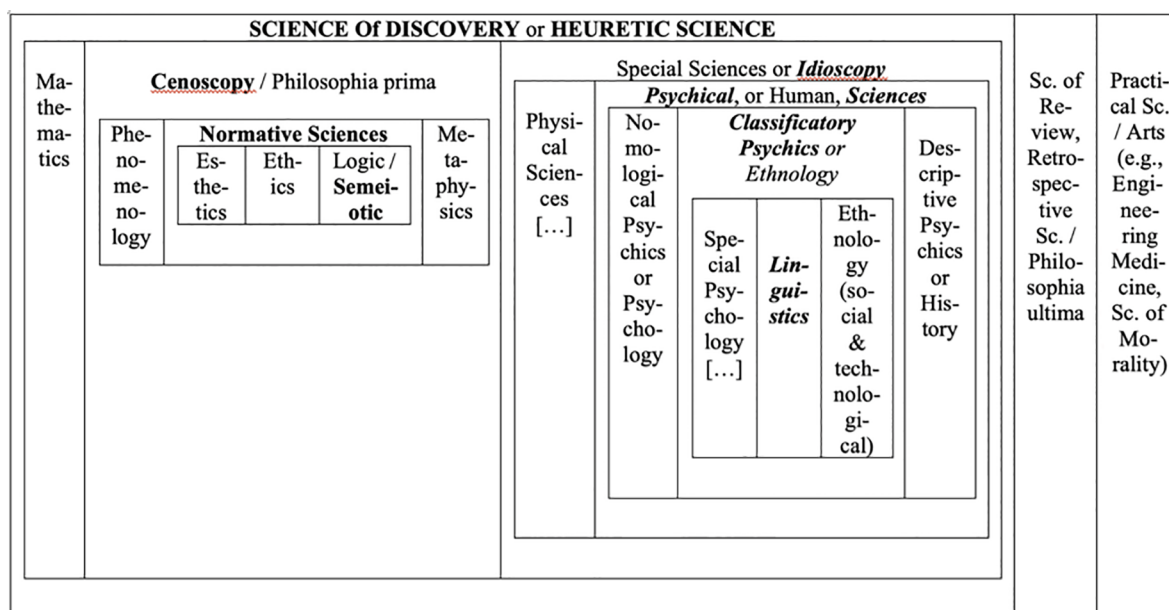


Figure 3. Linguistics and semiotics in the framework of Peirce's general system of the sciences of 1903.

At the first level of Peirce's system of the sciences, semiotics and linguistics still belong to the same division. They are both sciences of discovery or heuretic sciences, not sciences of review or practical sciences. The heuretic sciences are sciences of firstness insofar as the study of systems is a study of possibilities. What linguistics and semiotics have in common, at this level, is that they are both theoretical sciences concerned with research that leads to discoveries and new insights for the sciences' own sake. As far as linguistics is concerned, this means that Peirce conceives the study of language as a theoretical science. This excludes applied linguistics, which would belong to his "practical sciences".

It is in the triadic subdivision of the heuretic sciences that linguistics and semiotics separate. The first subclass of the heuretic sciences is mathematics, a science of pure firstness because it deals only with possible forms without concern for anything actual. Again, this excludes applied mathematics, which is a practical science. The second and the third classes of the heuretic sciences are cenoscopy or coenoscopy and idioscopy.

The distinction between cenoscopy and idioscopy comes from Jeremy Bentham³⁴. Both sciences convey a "scope", "view", or perhaps "panorama" of their field of study, which characterizes these sciences as "theories" in the

³⁴ Bentham 1843: 83.

etymological sense of the word (from Gr. *theorein* ‘to view, to look at’). The view offered by the first of these two is on “common” things (Gr. *coeno-*), whereas the second deals with “special” (Gr. *idio-*) things.

The difference between the two sciences explains why semiotics and linguistics are fundamentally different for Peirce. Semiotics is “common”, in the sense of a “more fundamental” science. The cenoscopic sciences “deal with positive truth [...], yet content themselves with observations such as come within the range of every man’s normal experience”³⁵. This is why semiotics is a “first” philosophy (*philosophia prima*), to be reviewed by the “last” philosophy, the retrospective science (*philosophia ultima*), whose task it is to review the diverse “sciences of discovery”. Linguistics, by contrast, is a field of research that deals with “special” domains. As Peirce puts it in 1902, the sciences of this class, to which linguistics belongs, depend “upon special observation, which travel or other exploration, or some assistance to the senses, either instrumental or given by training, together with unusual diligence, has put within the power of its students”³⁶.

Further differences between semiotics and linguistics become apparent within the respective subdivisions of the cenoscopic and the idioscopic sciences. Cenoscopy has three branches, phenomenology, the normative sciences, and metaphysics. The triad follows Peirce’s system of the three universal categories of firstness, secondness, and thirdness, just like the triad at the next lower level of classification, which subdivides the normative sciences into esthetics, ethics, and logic or semiotics. In contrast to Saussure’s semiology, Peirce’s semiotics, the science of the general laws of signs, is not a branch of psychology because logic has its own laws, which do not depend on cognitive or other psychological processes. As a normative science, semiotics is “normative” in the sense that it “lays down rules which ought to be, but need not be followed”³⁷. These sciences “are the very most purely theoretical of purely theoretical sciences”³⁸.

The idioscopic sciences as the general framework for linguistics are the only ones that have no triadic but a dyadic subdivision. Its twofold subdivision is into the physical and the psychical sciences. Kent notes that this binary subdivision

³⁵ CP 1.241 (see Peirce 1931-1958).

³⁶ CP 1.242, 1902 (see Peirce 1931-1958).

³⁷ CP 1.575, 1902 (see Peirce 1931-1958).

³⁸ CP 1.281, 1902 (see Peirce 1931-1958).

“presents a dissonance in the trichotomic system”, but she also points out that “Peirce, at one point, suggested that in time a third division may emerge to observe ‘the workings of ideas like Truth, Humanity etc.’”³⁹. In his 1903 system of the sciences, Peirce designates the psychical sciences alternatively as the “Human Sciences”.

Peirce divides the psychical sciences into the triad of nomological, classificatory, and descriptive psychics. As Kent summarizes,

- The *nomological* division studies the ubiquitous phenomena of the psychical and physical universes, ascertains their general laws, and measures the quantities involved.
- The *classificatory* division describes and classifies the various kinds among the objects studied and endeavors to explain them by means of the general laws, [and]
- the *descriptive* and *explanatory* division describes individual objects and events, which it subsequently seeks to explain⁴⁰.

In this neighborhood, linguistics is the second of three subdivisions of classificatory psychics, located between the first, special psychology, and the third, ethnology proper. In subsuming linguistics under the heading of a psychical science, Peirce agrees with Saussure, but Saussure would not have agreed with Peirce’s conception of linguistics as a classificatory science. For him, linguistics was a science of laws, namely, “of the laws of the life of language”, as Naville put it⁴¹. Peirce’s classification of linguistics is indicative of the pre-Saussurean approaches to language in the field of historical and general comparative linguistics, which Saussure revolutionized with his paradigm shift from diachronic to synchronic linguistics. Peirce’s characterization of the language sciences as a comparative study is the following: “*Linguistics* [is] a vast science, divided according to the families of speech, and cross-divided into (1) Word Linguistics; (2) Grammar; and there should be a comparative science of forms of composition”⁴².

³⁹ Kent 1987: 186.

⁴⁰ *Ibid.*: 134.

⁴¹ Naville 1901: 104.

⁴² Peirce 1903 [1998: 261].

6. A glance at XXth century views of the place of linguistics in relation to semiotics

The ambitious attempt at devising a comprehensive classification of the sciences in general was largely abandoned in the XXth century, at least in the research field of linguistics and semiotics and their contexts. Besides the poststructuralist aversion against taxonomies and hierarchies in general (Deleuze, Derrida) alluded to in the introductory paragraph to this paper, the new concept of interdisciplinarity contributed to the dissolution of the boundaries between the sciences.

Symptomatic for the emergence of the idea of interdisciplinarity is Charles Morris's conception of semiotics as an interdiscipline. In line with the ambitious project of finding a place for semiotics in the framework of the project for a Unified Science, Morris declared, "[s]emiotics has for its goal a general theory of signs in all their forms and manifestations, whether in animals or men, whether normal or pathological whether linguistic or nonlinguistic, whether personal or social. Semiotic is thus an interdisciplinary enterprise"⁴³. As scientists involved in the interdisciplinary enterprise of semiotics, Morris enumerated "linguists, logicians, biologists, anthropologists, psychopathologists, aestheticians, and sociologists"⁴⁴.

Within the concert of the sciences, Morris attributed to semiotics the double role of an individual science on equal footing with other sciences, such as linguistics, logic or biology, and the one of research tool for the sciences, when he declared that semiotics "is both a science among the sciences and an instrument of the sciences"⁴⁵. As an individual science, semiotics studies "things or the properties of things in their function of serving as signs", but "since every science makes use of and expresses its results in terms of signs, metascience (the science of science) must use semiotic as an organon"⁴⁶. This view of the role of semiotics in its relation to linguistics is reminiscent of Saussure's conception that linguistics is "only a part of the general science of semiology", while "the laws discovered

⁴³ Morris 1964 [1971: 73].

⁴⁴ Morris 1938 [1979: 1].

⁴⁵ *Ibid.*: 2.

⁴⁶ *Ibid.*

by semiology will be applicable to linguistics, and the latter will circumscribe a well-defined area within the mass of anthropological facts”⁴⁷.

In the history of semiotics in the second half of the XXth century, Saussure’s successors became soon divided in their conceptions concerning the relationship between semiotics and linguistics⁴⁸.

(1.) “*Linguistics is a part of semiotics*”, as Ernst Cassirer⁴⁹ put it bluntly, was the conception of one group. Among those who adopted this position was Roman Jakobson, whose assessment of the relation between the two sciences was, “[t]he subject matter of semiotics is the communication of any messages whatever, whereas the field of linguistics is confined to the communication of verbal messages. Hence, of these two sciences of man, the latter has a narrower scope”⁵⁰. According to this genuinely Saussurean conception, semiotics includes linguistics.

(2.) *Linguistics is a pilot science of and for semiotics*. This position is the second Saussurean view of the relation between the two sciences, a corollary of the first. It derives from the Saussurean dictum that linguistics is the master pattern [*patron général*] of semiology, which inspired generations of structuralist semioticians since Claude Lévi-Strauss to take linguistics as “the master-pattern for all branches of semiology although language is only one particular semiological system”⁵¹. The role of linguistics in semiotics is thus a heuristic one. Linguistics can serve as a guide to semiotics because it is much more established than semiotics. Another aspect of this argument is that language is the most highly developed sign system so that it can best explain the principles of signs in general. Bloomfield adopted this view, when he argued, “linguistics is the chief contributor to semiotic”⁵². Similarly, Weinreich referred to natural language as “the semiotic phenomenon par excellence”⁵³.

(3.) *Semiotics is the study of signs minus the verbal ones*, was the opinion of others, among them, Pierre Guiraud, who declared that since “it is generally accepted that language has a privileged and autonomous status [...], this allows

⁴⁷ Saussure 1916 [1986: 16].

⁴⁸ See Nöth 1990a: 229-231; Sebeok 1991.

⁴⁹ Cassirer 1945: 115.

⁵⁰ Jakobson 1973: 32.

⁵¹ Saussure 1916 [1986: 68].

⁵² Bloomfield 1939 [1974: 55].

⁵³ Weinreich 1968: 164.

semiology to be defined as the study of nonlinguistic sign systems”⁵⁴. According to this conception, semiotics would be a neighboring science of linguistics.

(4.) *Semiotics is a branch of linguistics*. This view of semiotics, as provocative as revolutionary, was first put forward by Roland Barthes. According to his conception, semiology is “a study whose units of analysis are no longer monemes or phonemes, but larger fragments of discourse. [...] Semiology is therefore perhaps destined to be absorbed into a translinguistics, the materials of which may be myth, narrative, journalism, or on the other hand objects of our civilization, in so far as they are spoken (through press, prospectus, interview, conversation)”⁵⁵. In this perspective, semiotics is at the same time an extension of linguistics, as Barthes sees it, as it is the reduction of semiotics to text linguistics⁵⁶.

(5.) *Linguistics is a metascience of semiotics*. This rather logocentric position, which reverses Charles Morris’s above discussed position of semiotics as a metascience of linguistics, is characteristic of Émile Benveniste’s statements on the relation between the two sciences. Benveniste distinguishes three types of relationship between semiotic systems, each of which implies a type of heuristic relevance of language in its relation to other semiotic systems⁵⁷:

[1] a generative relationship: language can generate other semiotic systems, such as scientific and artificial languages or religious and legal systems;

[2] a relationship of homology (or isomorphism);

[3] a relationship of translation or interpretation: language is the interpreting system of all other semiotic systems.

The latter argument, clearly inspired by Louis Hjelmslev’s dictum that “language is a semiotic system into which all other semiotics may be translated”⁵⁸, is the following:

“No semiology of sound, color, or image can be formulated or expressed in sounds, colors, or images. Every semiology of a nonlinguistic system must use language as an intermediary, and thus can only exist in and through the semiology of language. Whether language serves here as an instrument rather than as an object of analysis does not alter this situation, which governs all semiotic

⁵⁴ Guiraud 1971 [1975: 1].

⁵⁵ Barthes 1964 [1967: 11].

⁵⁶ See Engler 1970: 64-65.

⁵⁷ Benveniste 1969 [1985: 239-241].

⁵⁸ Hjelmslev 1943 [1961: 70].

relationships; Language is the interpreting system of all other systems, linguistic and nonlinguistic. [...] Language alone can – and, in fact, does – confer on other groups the rank of signifying system by acquainting them with the relationship of the sign”⁵⁹.

Benveniste’s thesis of language as a metasemiotics of nonverbal signs was most fiercely attacked by Thomas A. Sebeok, who denounced it as an “*ex cathedra* declaration [...] hardly more than an unsubstantiated dogma”⁶⁰. While it is true that language used to be the typical instrument of analysis in the study of nonverbal signs – today films and videos are as important –, this does not mean that nonverbal signs depend on or are derivatives of verbal signs. The logocentric view of linguistics as a metascience of semiotics confounds the object with the metalevel of analysis. From the perspective of biosemiotics and the semiotics of human nonverbal culture, Sebeok concludes that the argument of general translatability into verbal signs is “at best, likely to introduce gross falsification, or, like most music, altogether defy comprehensible verbal definition”⁶¹.

7. The future of semiotics? Concluding and speculative remarks on semiotics in the XXIst century

If history excludes the present, it is certainly too early to report on the place of semiotics among the sciences of the XXIst century within this paper. However, it has already become apparent, during the first two decades of the XXIst century, that the debate concerning the relationship between the two sciences of linguistics and semiotics, so much in the center of attention of XXth century semioticians, belongs now as much to the history of semiotics as the XIXth century concern for a general system of all sciences.

In contemporary semiotics, new advances in interdisciplinary research have broadened the scope. Semiotics is no longer restricted to trans- or semiolinguistic studies of texts. Hence, the relation between semiotics and the other sciences is no longer only a matter of the relation between semiotics and linguistics. Nor is semiotics restricted to anthroposemiotics, i.e., the study of human semiosis. Today, semiotics has relationships to a plethora of other sciences and

⁵⁹ Benveniste 1969 [1985: 239, 241].

⁶⁰ Sebeok 1977 [1985: 296-297].

⁶¹ *Ibid.*

interdisciplines besides linguistics. As “global semiotics”⁶², it has transdisciplinary connections with a plethora of sciences, which also constitute the foundation of new branches of semiotics, such as biosemiotics, ecosemiotics, zoosemiotics, phytosemiotics, mycosemiotics, cybersemiotics, technosemiotics, or physiosemiotics, just to name a few.

Furthermore, alternative models of the structure of the sciences have come to the fore. Semioticians no longer rely on hierarchical systems that assign a fixed place to semiotics within a taxonomic system of the sciences. The study of signs is now being reinterpreted as a study of *spheres*, which invites a dialogue with the new metaphor for the organization of knowledge put forward by Peter Sloterdijk⁶³. Yuri Lotman was the first to propose the semiotic variant of this model of knowledge organization, when he distinguished, in 1984, between the semiosphere and other spheres of knowledge, such as the noosphere and the biosphere⁶⁴. Whether the cosmic sphere of the material world, in which the biospheres and the semiospheres are embedded, should also be put on the semiotic agenda as a field of research to be studied under quasisemiotic perspectives is still an open issue⁶⁵.

⁶² Sebeok 2001.

⁶³ Sloterdijk 1998, 1999, 2004.

⁶⁴ See Kotov, Kull 2011.

⁶⁵ See Nöth 2017.

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