

# THE SEMIOTIC HIERARCHY

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## 1. ABSTRACT

According to Louis Hjelmslev, semiotics is first and foremost a hierarchy. Its distinguishing feature is that it is guided by a dynamic principle by which it is split into dichotomies at all levels, yielding expression and content, system and process, denotative and non-denotative semiotics, and, within the latter, metasemiotics and connotative semiotics.



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Sémir Badir (2006), « The Semiotic Hierarchy », in Louis Hébert (dir.), *Signo* [online], Rimouski (Quebec),  
<http://www.signosemio.com/hjelmslev/semiotic-hierarchy.asp>.

## 2. THEORY

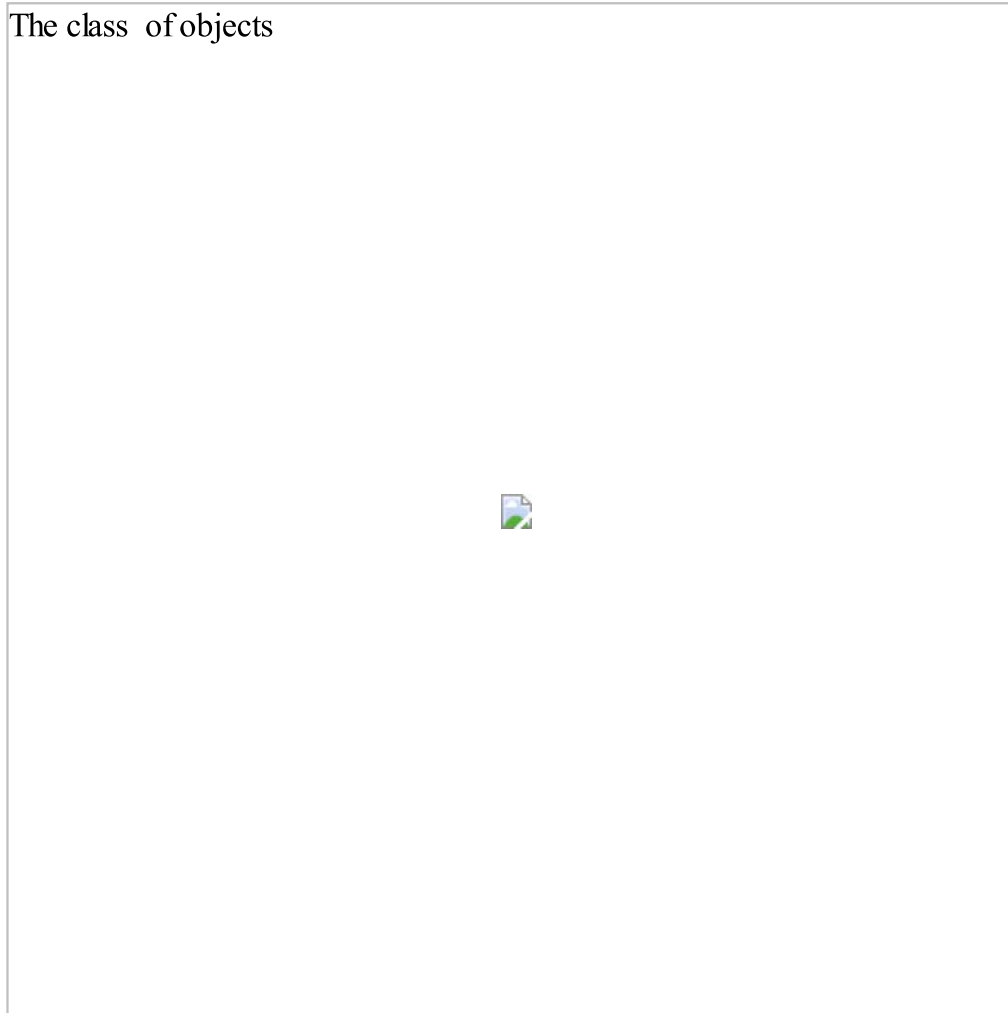
### 2.1. OVERVIEW

The terms *semiotics* and *semiotic* [n.] designate two *a priori* dissimilar things. By semiotics, we mean a field of study in which we can formulate a method for analyzing signifying phenomena, as well as a theory including all the particulars of this analysis. By semiotic [sg.], we mean the result of a semiotic analysis. So for example, there is a musical semiotics that seeks to map out music as a comprehensive signifying phenomenon. And furthermore, from a synchronic perspective (the music of a given period and culture), if not from a panchronic perspective (music in general), we can say that music is itself a semiotic [sg.], being possessed of both a system (distinctions in pitch, duration, timbre, and so forth) and a process (consistent relations between sounds in their various aspects).

According to Hjelmslev, the acceptations of semiotics and semiotic must be articulated in relation to one another. Semiotics as a field of study is (ideally) conformal to the results of its analyses. As such, it is also endowed with a system and a process. In order to preserve the distinction between the two terms, we must understand that semiotics as a whole contains specialized individual semiotics [pl.], some of which are useful in developing theories and methods (the ones that Hjelmslev calls *metasemiotics*), while others are meant to be articulated into semiotic hierarchies (this is the role of what he calls the *connotative* semiotics).

Francis Whitfield, the English translator of Hjelmslev's works, drew up a chart showing the semiotic hierarchy with its constituent parts (in Hjelmslev, 1975, p. XVIII; also translated into French in Hjelmslev, 1985, p. 17).

### The class of objects



#### NOTE: THE LIMITS OF GRAPHICS

The above chart shows only one aspect of the functions identified between semiotic components: their paradigmatic functions (the relations between classes and their members). A more complete diagram designed to include the distinguishing features of semiotics would also show the syntagmatic functions (relations of implication) that operate between the different components. Tree diagrams do not really lend themselves to this kind of representation. This is one difficulty that Hjelmslev himself was unable to completely resolve.

## 2.2. SEMIOTICS AND NON-SEMIOTICS

In his first work, *Principes de grammaire générale*, written in French in 1928, Hjelmslev sets out the principle of classification that is operative in any language [*langage*]. "Categories as such", he writes, "are a fixed quality of language. The principle of classification is inherent in all idioms, all times and all places" (trans. of Hjelmslev, 1928, p. 78). Thus linguistics, with its three levels of analysis (phonology, grammar, and lexicology) is a science of categories.

However he adds that "the science of categories must disregard the categories established in logic and psychology and venture right into language's territory to find the categories that are characteristic of it, that are specific to it, and that are not found anywhere outside language's domain" (trans. of Hjelmslev, 1928, p. 80). Hjelmslev soon extended this domain to include languages other than verbal ones, but not to the point of including any system of classification.

The semiotics [pl.] make up this larger domain, and they are distinguished from other systems of classification by a certain uniformity (or homogeneity) that forms the basis of their analysis at all levels.

### 2.2.1 EXPRESSION AND CONTENT

We find this uniformity first between the components of any semiotic. By custom, these components are called the *expression plane*

and the *content plane*. The reason for this is that as a general rule, expression forms are visible in the object (they are "expressed"), whereas it is in the content forms that signification resides (the semiotic object "contains" content forms). However, this is beside the main point, which is that we always analyze a semiotic object (usually a *text*) uniformly, with an initial distinction between two components. In other words, for Hjelmslev, as for Saussure, neither expression nor content can be given predominance; they must both be analyzed together (Hjelmslev, 1928, p. 88).

#### NOTE: ISOMORPHISM AND NONCONFORMITY

It is true that Hjelmslev subsequently states that the semiotic planes must also not be conformal to one another; otherwise the distinction between them is nullified (Hjelmslev, 1963, p. 112). It would require too many theoretical details to explain the principle of nonconformity here. Suffice it to say that this principle is not directly related to the issue addressed in this chapter, which is hierarchical organization, and that, furthermore, nonconformity does not in any way interfere with the isomorphism of the semiotic planes (that is, their structural parallelism).

#### NOTE: SYMBOLIC REPRESENTATION

Although it doesn't simplify matters any, we must acknowledge that the diagram of semiotics given above actually postulates a classification that is itself non-semiotic: It is a *symbolic* classification, for it can be seen as either an expression plane (the terminology Hjelmslev adopts in his theory) or a content plane (the meaning assigned to each of the terms it presents), and each of these planes is conformal to the other.

## 2.2.2 PARADIGMATIC FUNCTIONS

In one aspect of semiotic analysis, we use paradigmatic functions to establish distinctions within the individual semiotics. A paradigmatic function can always be expressed as two elements in an *either... or...* relation: "either this or that". In a semiotic, any element of any magnitude (a sound, word, sentence, idea, or abstract feature) can be analyzed in terms of these functions. There are three possible results: (1) two constants are identified; (2) there is no constant identified, so that the elements involved remain as variables; (3) one of the elements is considered to be the variable of the other.

#### The three types of paradigmatic functions

either this or that, one excludes the other	constant ↓ constant	complementarity
either this or that, it makes no difference	variable ↑ variable	autonomy
either this, or more specifically that	constant –  variable	specification

For example, in French, the masculine and feminine are two constants (of content) with respect to animate beings. Conversely, with respect to inanimate elements, they are regarded as variables. In French we refer to cities, which have no designated grammatical gender, sometimes as feminine and sometimes as masculine. And finally, with respect to the class 'sex' itself, each one has a variable, since sex has been selected as the constant of content.

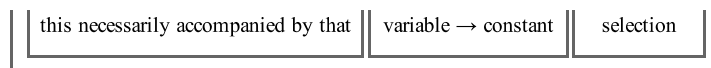
Naturally, linguistics aims first to establish constants, in either a relation of complementarity or of specification. From a paradigmatic standpoint, the expression plane and the content plane are complementary in semiotics (e.g., in a verbal language), whereas in a symbolic system (e.g., in a computer programming language) they are autonomous.

## 2.2.3 SYNTAGMATIC FUNCTIONS

Another aspect of semiotic analysis identifies relations between elements. A syntagmatic function can be expressed as two elements in a *both... and...* relation: "both this and that". Once again, three kinds of syntagmatic functions may be identified: (1) if one element is present, the other must also be present, and vice versa; (2) one element does not have to be present for the other to be present; (3) one element is required for the other to be present, but not the reverse.

#### The three kinds of syntagmatic functions

both this and that, by necessity	constant ↔ constant	solidarity
both this and that, by contingency	variable – variable	combination



A verbal sentence is the necessary association of a noun phrase and a verb phrase; they are the two syntagmatic constants of the sentence. Conversely, there is no consistent relation between the categories of verb and adverb: the verb can be present without the adverb, and the adverb can modify something other than a verb (an adjective, such as *pretty*, in *very pretty*). The verb and the adverb are variables relative to one another. On the other hand, an article requires a noun, but the reverse is not true; in this relation, the noun is the constant and the article is the variable.

From a syntagmatic perspective, there is always solidarity between expression and content. If the analysis identifies an expression plane for a given object, then it must also identify a content plane, and vice versa; otherwise, the object in question would not be a semiotic object (something we are not supposed to know before we begin our analysis).

#### NOTE ON LINGUISTIC LAWS

**Necessity in syntagmatic functions is quite relative; it depends on the corpus under study. Caution would prompt us to speak of consistency rather than necessity, as language is replete with exceptions, and its rules are subject to rhetorical non-compliance. We are keeping this term nevertheless, if only to emphasize the predictive intent of linguistic analysis: whatever consistencies have been recorded in attested texts must still be valid for future texts.**

### 2.3 DENOTATIVE SEMIOTICS AND NON-DENOTATIVE SEMIOTICS

Natural languages are the first object of semiotic analysis. Their systems are identified through the paradigmatic functions, and their processes through the syntagmatic functions on both planes, expression and content. When analyzed, texts are equivalent to processes, since they constitute chains of semiotic elements that are put into relation with one another.

Semiotic analysis can be applied secondly to other kinds of language, with no theoretical adjuncts, and it is from this extension that it has earned the name *semiotics*.

But in addition, semiotic analysis can be applied to a third kind of target: forms of language that cannot be reduced to two planes (their components are not even in number). These languages [*langages*] are termed *non-denotative*. There are two kinds: the metasemiotics and the connotative semiotics.

#### 2.4. THE METASEMIOTICS

A metasemiotic is rooted in a semiotic equipped with a control plane, so to speak. Through this plane, each element of content takes on an expression in a denominative capacity.

This is what we are doing when we say that in a certain advertisement for French pasta (to take a famous example used by Roland Barthes), the yellow and green colours on a red background (the colours of the Italian flag) signify "Italianicity" (Barthes, 1985, p. 23). *Italianicity* is a metasemiotic expression used to designate the signification of visual elements (colours).

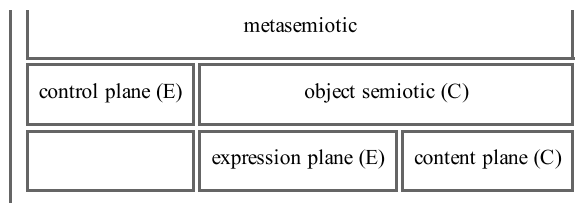
The same function is in operation when we say that the expression *arbor* signifies "tree" (Saussure, 1959, p. 67), except that in this case, both expression and content take on metasemiotic expressions through the use of distinct typographical markers (italics and quotation marks) and different languages (Latin and English). In this case they are called *autonyms*. Metasemiotic control helps us to avoid any equivocation between expression and content in our analysis.

Finally, metasemiotic expression also has a power of generalization, by allowing categories to be designated. When we talk about the *verb*, as we do in linguistics, we are attributing a name to several syntagmatic functions grouped under this common denominator. To put it another way, the metasemiotic expression *verb* can be used to describe a syntagmatic function that is analyzed in each particular verb (Badir, 2000, pp. 122-123).

It can be helpful to include this control plane in a specific semiotic, for the human mind seems to be adept at juggling metasemiotic expressions (writing being the prime evidence of this, and so very complex). This is how a metasemiotic is formed: one of the planes is the control plane, and the other is the object semiotic. By doing this, the metasemiotic once again becomes a binary structure, but with two tiers (in the table below, E stands for expression, C for content).

#### Metasemiotic structure



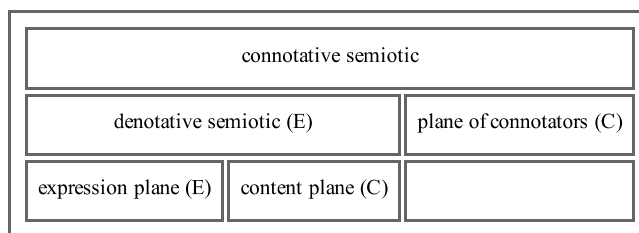


### 2.5 CONNOTATIVE SEMIOTICS

The plane that is affixed to a semiotic does not always perform a control function, however. In fact, we can always affix a third plane to a semiotic in order to account for anything that has been missed by the analysis, anything that is considered to be a special case or exception.

Variants are the evidence of this analytical shortcoming. If we wish to account for them in some way nonetheless, then we define them as invariants within special or narrowed parameters that Hjelmslev calls *connotators*. The third plane, then, is formed by considerations that were not selected in the first-tier analysis (called *denotative*). This plane is ordinarily held to be a content plane, since it is assumed that semiotic objects cannot be intrinsically modified by these considerations. (One senses a delicate point here, that is admissible only at the discretion of the analyst).

#### Connotative structure



For example, Hjelmslev maintains that any given language may be analyzed equally well through its written texts or its oral utterances; in other words, that its rules of syntax, its morphological formations and vocabulary are common to oral as well as written productions. Certainly anyone can see that this assessment is not ill founded. Nevertheless, there are distinctions, which have inevitably been left as variants in the linguistic analysis. Ensuring compatibility between the analysis of these variants and the first-tier analysis is a matter of establishing a plane in which orality and writing can be included as two paradigmatic invariants of content of a particular type: orality and writing are set up as connotators. In this way, the first-tier analysis remains valid, although it can always be customized with respect to the newly established paradigmatic function (Hjelmslev, 1963, pp. 116-119).

From a broader perspective, we can use connotative semiotics to specify which tier of specialization to use for a particular semiotic analysis, as semiotic analysis is not apt to be applied indiscriminately to any element of language (this is only true of its theoretical components, in particular, the ones presented here). In linguistics we begin by recognizing the plurality of verbal languages, basing our analyses on distinct corpora for each language. It is the role of connotative semiotics to establish each language as a connotator. So when we speak of the "linguistic analysis of French", *French* is a connotator, as it determines in which particular case the analysis is valid.

### 3. APPLICATION

At this time, the theory of semiotic hierarchy has been developed extensively only in the application for which Hjelmslev initially intended it: the metasemiotic hierarchy of verbal languages (as illustrated in Whitfield's tree diagram, reproduced in section 2.1).

#### Metasemiotic hierarchy with languages [*langues*] as the object semiotics

		<i>expression plane analysis</i>	<i>content plane analysis</i>
<i>internal semiotics</i>	<i>paradigmatic perspective</i>	phonology	lexicology
	<i>syntagmatic perspective</i>	"morphology"	grammar

<i>external semiologies</i>	<i>paradigm of historical and geographic connotators</i>	historical and dialectal phonology	historical lexicology and dialectology
		comparative and historical grammar	
	<i>paradigm of social connotators</i>	sociolinguistics, linguistics of written language	
	<i>paradigm of psychic connotators</i>	pedolinguistics, psycholinguistics, study of language disabilities	
	<i>paradigm of cultural connotators</i>	rhetoric, stylistics, narratology	
	<i>internal metasemiologies</i>	phonetics	semantics
	<i>external metasemiologies</i>	physics and physiology of sound	extrinsic interpretations

We will start by discussing the table entries. In the hierarchy there are two columns dividing the analysis into two components, labelled *expression plane* and the *content plane*. However, this subdivision does not hold throughout (as in the case of comparative grammar), either because two different semiotic analyses bear the same name in practice, or because the analysis is non-semiotic, as it turns out. The hierarchy is divided into rows representing the object semiotics. First they are divided by their rank in the hierarchy (semiotic or metasemiotic), next by distinguishing the denotative semiotics (addressed by the internal semiologies) from the connotative semiotics (described by the external semiologies). Lastly, the denotative semiotics are divided into paradigmatic and syntagmatic functions. It should be noted that the hierarchical structure shown here is reversed in actual practice, where one always proceeds by progressive expansion, beginning with denotative analysis, or more specifically, paradigmatic analysis.

In this table, languages are denotative semiotics from the standpoint of the *internal* semiologies and metasemiologies; however, they are treated as connotators from the standpoint of the *external* semiologies and metasemiologies. The operation of the latter is dependent on the former.

In addition, the metasemiologies regulate the semiologies by allowing us to verify whether they are adequate to account for the facts of language [*langage*]; however, there is no one-on-one correlation between internal semiology and internal metasemiology, nor between external semiology and external metasemiology. For example, a semantic analysis can provide the basis for a lexical derivation or for a narrative schema. And the physiological analysis of sound can be used as a descriptor for a phonological invariant (e.g., using the physiological feature *palatal* to designate an invariant) or as a means to describe child language (e.g., the term "labial click", which describes the onomatopoeia produced by babies 12 months old, also known as the "kissing sound" – this example is cited in Jakobson, 1968, pp. 25-26, footnote).

*Morphology* should be understood in a specific sense, not entirely removed from the common meaning, but in a narrower sense. Morphology deals with what Hjelmslev calls the functions between *grammatical forms* in his *Principes de grammaire générale* (1928, pp. 112-127).

Finally, note that while linguistics can be considered as one metasemiotic among others, there can be no objection to adopting the point of view that semiotics provides cultural connotators for a comprehensive linguistic analysis. These two perspectives are compatible in glossematics (Hjelmslev's theory of language) and are even seen to be complementary, to the benefit of semiotics.

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## 5. EXERCISES

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Based on the following corpus from Swahili (a Bantu language spoken in Kenya and Tanzania):

EXPRESSION	CONTENT
atanipenda	he will like me
atapenda	he will like
ninapenda	I like
kupenda	to like
tutampenda	we will like him/her
kupendana	to like one another

**A. Make an inventory of the complementarity (constant ↓ constant) and specification (class –| member of a class) functions on the content plane.**

**B. Identify two selection functions (variable → constant) on the content plane.**

**C. Identify one solidarity function (constant ↔ constant) and two selection functions between graphemes (in this case, the letters of the Roman alphabet).**