The inferential and equational models from ancient times to the postmodern

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Abstract

The basic idea that makes John Deely's Four ages of understanding *an innovative one is that the notion of the sign is at the center of philosophical development from the start, and proves basic to a postmodern development of thought as well. A full awareness of this notion of sign can be traced way back to the beginning of the fifth century AD, in the works of Augustine, where the two different theories of signs present in the Greek period — the semantic theory of the linguistic sign (following an ''equational'' model) and the logical-epistemological theory of non-linguistic signs (following an ''inferential'' model) — are amalgamated. The aim of this paper is to show that Augustine makes a move that is both symmetrical with and a mirror image of what Saussure does: the latter unites the two theories and two classes of sign, setting up the linguistic sign as the guiding principle, while Augustine subsumes all types of sign within the class of non-linguistic signs. But it is the Augustine's move that opens, as Deely also says, a link with the postmodern era, proposing a semiotic model that is homogenous with that of Peirce.*

Keywords: *sign; inference; Aristotle; Stoics; Philodemus; Augustine.*

1. Introduction

The basic idea that makes John Deely's new book an innovative one is that it puts the notion of the sign at the center of philosophical development providing an ''alternative'' history of philosophy. Every history is a history of the present and is written for the present time. The notion of the sign becoming central to the philosophy of the current era provides a red thread that runs through the whole of the history of philosophy and

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allows us to find more than one trace of the present in each of the preceding eras. Deely states: "If there is one notion that is central to the emerging postmodern consciousness, that notion is the notion of sign. And for understanding this notion, nothing is more essential than a new history of philosophy" (Deely 2001: xxx).

This notion of the sign is basic to a postmodern development of thought but it has certainly not been sufficiently valued in the era preceding ours, the modern age, and it seemed to matter little that a full awareness of the notion of the sign can be traced way back to the beginnings of the fifth century AD, elaborating on ideas developed in Greek culture from its origins. And it is that particular relationship with the notion of the sign that provides a key to the four phases in philosophical thought to which the title of Deely's work refers: "Preliminaries to the notion of sign; the development of the notion itself; forgetfulness of the notion; recovery and advance of the notion" (Deely 2001: xxx).

The first phase coincides mainly with the ancient era, from the pre-Socratic to the neo-Platonists. The second phase, the Latin age, goes from Augustine (354–430 AD) to John Poinsot (1589–1644). The third phase, the modern age, from Descartes (1596–1650) to Saussure (1857–1913) and to Wittgenstein (1889–1950). The fourth phase, the postmodern age, begins with C. S. Peirce (1838–1914; cf. Deely 2001: 738).

The main defect that Deely attributes to traditional histories of philosophy can be outlined, which will allow us also to capture the advantage of this new arrangement. For Deely:

> Every modern history of philosophy has been essentially preoccupied with the separating off from philosophy of science in the modern sense, especially in and after the seventeenth century. From this point of view, many of the continuing philosophical developments of the later Latin centuries tend to drop out of the sight. It has become the custom to present modern philosophy, conventionally beginning with Descartes (seventeenth century), simply as part and parcel of the scientific break with the authors of Latin tradition, and to treat the bringing of nominalism into the foreground of Latin thought by William of Ockam (fourteenth century) as if that were the *finale* of Latin development. (Deely 2001: xxxi)

The consequence of such a custom, according to Deely, was that inevitably a two and a half century hiatus was thus created in the continuity of philosophical development. Instead, if the notion of the sign is taken as a guide, this hiatus disappears because we can see that from the height of the medieval era to Descartes, there has been a continuous and lively discussion on this topic, considered central to a number of aspects of philosophical debate, from the more properly gnoseological to the ontological. What is more, the notion of the sign, in the thirteenth century in particu-

lar, was at the center of a great controversy, that between nominalism and realism. For the nominalists, signs, and with them the whole of language, are a kind of *flatus vocis* with respect to the objects they refer to, a relationship of reason purely, an *ens rationis*, with no basis to be found (or looked for) in reality. For the realists, on the other hand, the notion of the sign is based on a super-subjective mode of being that modulates its ontology from case to case and according to circumstances, sometimes an *ens rationis*, at others an *ens realis*.

For Deely, the modern age, (the third in his classification, which starts with Descartes) is essentially an exploration of the nominalist alternative, which leads to what the author defines as a bankruptcy. So, it is the fourth phase, towered over by the figure of the pioneering C. S. Peirce, in which the alternative is explored. Peirce's research into the premodern era, as well as into the ancient and, above all, the medieval era, for Deely, managed to produce "a number of immediately dramatic and surprising results (beginning with the cure for the pathology dividing our intellectual culture between the *personae* of Dr. Jekyll and Mr. Hyde)" (Deely 2001: xxxi).

2. The sign as "equivalence" and as "inference"

The term used in the contemporary era to refer to the study of signs, is labeled in the English-speaking philosophical world as *semiotics* and in the French-speaking linguistic world as *semiologie*, before the first conference of the International Association of Semiotic Studies defined the two terms to be equivalent. Deely sees this as not a mere terminological problem but an essential question. Indeed for Deely, Saussure who had proposed the name *semiologie* for the doctrine of signs in his *Cours de Linguistique générale*, is the most extreme representative of the third age, the modern age, which to some extent ends with him:

> In the matter of signs, by the time Saussure developed his *Cours*, thinking had come full-circle not from Augustine, but from ancient Greece. Remember that in the Hellenic world, there were only natural signs. Augustine proposed that the sign is higher than that, superior to the divide between nature and culture, and Latinity exhausted itself by the time it was able to establish the ground for such a notion. Modernity began by trying to forget Latinity, and in the matter of the sign, it succeeded almost completely. Even the ancient thesis that signs are natural phenomena was retained only as an antithesis. For by the time of the maturation of Saussure's influence, the most credible thesis was rather that there are only conventional signs — signs wholly of the mind's own making. And this was the thesis that Saussure took upon himself to propound under the banner of "semiology." (Deely 2001: 669–670)

Saussure's proposal was for a new discipline, one which, like that conceived of by Locke in 1690, would take its name from the word *semeion*, which means natural sign in Greek, but that would be used to refer to linguistic signs. As we know, Saussure sets out his project for a new discipline in a few paragraphs in two different parts of the *Cours*: the first and longest description can be found in paragraph three of the third chapter of the "Introduction" in which he says that language is a system of signs that "express ideas." It is such a well-known passage that I will not go into detail regarding its interpretation. I only wish to highlight the problematic nature of the first part, in which Saussure identifies the sign in such a generic fashion that the distinctions between the examples are left undefined; distinctions that emerge on more careful analysis. Saussure describes the linguistic sign as an entity with the property of expressing ideas, adding that, thanks to this characteristic, it is comparable (in the sense that it is subject to the same mechanisms) to signs that we encounter in other areas of human experience. The fact that Saussure uses the expression "idea" in this extract rather than the more usual "concept," "meaning" or "mental image" is a linguistic indicator which reminds us of the famous extract in Locke's *Essay concerning human understanding*:

> Thus we may conceive how *words*, which were by nature so well adapted to that purpose, came to be made use of by men as the signs of their ideas; not by any natural connexion that there is between particular articulate sounds and certain ideas, for then there would be but one language amongst all men; but by a voluntary imposition, whereby such a word is made arbitrarily the mark of such an idea. The use, then, of words, is to be sensible marks of ideas; and the ideas they stand for are their proper and immediate signification. (Locke 1690: III, II, 1)

As we can see Locke clearly expresses the notion of the sign as a sign of an idea. It is also clear that the whole of Locke's treatise deals exclusively with linguistic signs. Similarly, the definition of sign that Saussure proposes, as part of that same tradition, according to which the most well-developed and thoroughly studied signs are words, ends up by being essentially a definition of the linguistic sign.[1]

Saussure's second description of semiology is found in paragraph two of the first chapter of the "General principles" and I will quote it here in full:

> One remark in passing: when semiology becomes organized as a science, the question will arise whether or not it properly includes a mode of expression based on completely natural signs, such as pantomime. Supposing that the new science welcomes them, its main concern will still be the whole group of systems grounded on the arbitrariness of the sign. In fact, every means of expression used in society is based, in principle, on collective behavior or — what amounts to the same thing

— on convention. Polite formulas, for instance (as the case of a Chinese who greets his emperor by bowing down to the ground nine times), are nonetheless fixed by rule; it is this rule and not the intrinsic value of the gestures that obliges one to use them. Signs that are wholly arbitrary realize better than the others the ideal of the semiological process; that is why language, the most complex and universal of all systems of expression, is also the most characteristic; in this sense linguistics can become the master-pattern [*le patron général*] for all branches of semiology although language is only one particular semiological system. (Saussure 1959: 68)[2]

The fact is that Saussure, thinking essentially of linguistic signs, presents all signs in general as two-sided entities, each side connected by a relationship of equivalence: a = b,[3] a signifier that equals a signified, a certain "acoustic image" to use Saussure's expression, with a two-way correspondence with a "mental image," like for example the sequence *arbor* in Latin and the concept "tree," or like the sequence *man* and the corresponding meaning as a synonym "rational animal," in which the same logical extension is found on both sides of the equation. From this we get the later structuralist and computational interpretations of language as a code which pairs units from two different systems.

This does not work, though, when we take into consideration non-linguistic signs. Saussure gives two examples, that of the natural signs in pantomime and that of signs of politeness. The former seem to be more rooted in their meanings (or referents) by a non-conventional or non-arbitrary relationship: the smile, a facial expression, does not stand for "joy" in any conventional way,[4] but in a natural way. An arbitrary component is involved as Saussure himself observes in the case of politeness indicators: for example, bowing down nine times in front of the emperor is, for the Chinese, in Saussure's example, a natural sign of respect but "nonetheless fixed by rule." It is possible to provide more radically natural examples alongside those chosen by Saussure, for example, smoke as a sign of fire, or a scar as the sign of a wound. For these cases the more appropriate model would be that of *inference*, in particular, the implication that holds between the two propositions that translate in linguistic terms both the sign and what it is a sign of, which can be expressed as follows: "If *p*, then *q*." Thus we do not say that smoke equals fire or that the scar equals the wound but we make inferences of the type: "If there is smoke then there is fire" and "If there is a scar then there has been a wound." It is clear that there is a difficulty in treating this kind of sign in a unified model of equivalence, required by Saussure's paradigm.

The radical epistemological difference between the model to be applied to linguistic signs and that to be applied to non-linguistic signs was very clear in antiquity in which the two models were the result of two different

theories: a semantic theory of the linguistic sign and the logical epistemological theory of non-linguistic signs. The two theories, which proceeded in parallel, without being connected, and used two different sets of terminology (cf. Manetti 1993: 71): in Aristotle, for example, the expression *symbolon* (*De int*. 16a, 3–8) indicated linguistic signs that were linked in non-inferential fashion to their meanings, which are, in Aristotelic terms, the mental states), while the expressions *semeion* and *tekmerion* (*An. Pr.* II, 70a; *Rhet*. 1357a) indicated two types of non-linguistic sign (linked to their meanings in inferential fashion). The same distinction can be found in Stoic semiotics for the pairs *semainon/semainomenon* (Sext. Emp., *Adv. Math.*, VIII, 11–12), which apply to linguistic signs, and *semeion/semeioton* (Sext. Emp. *Pyrrh. Hyp.*, II, 104–106; *Adv. Math.*, VIII, 245–257), for the non-linguistic.

I would like to illustrate this double aspect taking each of the theories, the Aristotelic and the Stoic one, separately.

3. Aristotle: A theory of language and a theory of non-linguistic signs

As is well-known, Aristotle set out his theory of language in his *De Interpretatione* (16a, 3–8) claiming that vocal expressions (*ta en tei phonei*) are *symbola* of mental states (*ton en tei psychei pathematon*), with which they have a conventional relation, while the latter have a non-conventional, natural, relationship in their turn with the objects to be found in the world (*ta pragmata*), of which they are a copy (*homoiomata*).[5] The same word chosen to indicate the relation between vocal expression and mental states, *symbolon*, sends us back to a fully equational model. Indeed the term *symbolon* in Greek culture indicates the two halves into which an object can be divided, each of which is interchangeable with the other. We might even say that it is in this extract from Aristotle that we can trace the roots of an equational model within which linguistic signs can be thought of and dealt with theoretically.

Without further discussion we can now look at how Aristotle dealt with non-linguistic signs (see Burnyeat 1982; also Weidemann 1989; Manetti 1993). When he considers non-linguistic signs (*semeion*), Aristotle is faced with the fact that in everyday parlance this word covers a whole series of concepts, from empirical phenomena that signal the existence of something else, to abstract reasoning which lead to a conclusion. The theoretical move he makes in *Prior analytics* (II, 70a) is that of assigning to the notion of the sign an inferential scheme, as in the following examples: "if a woman has milk, then she is pregnant," "If Pittacus is good, then wise men are good," "If a woman is pale, then she is pregnant." Each of

these examples is connected to an element of truth but Aristotle's attention is caught by two questions: (1) What is the logical form that a semiotic inference must take in order to lead invariably to a true fact? (2) What strength of proof or supporting evidence can be assigned to the various logical forms which can be reconstructed in relation to the various kinds of semiotic inference?

As far as the first question is concerned, for Aristotle "logical form" always means "syllogistic form," and his analysis goes on to reconstruct an underlying syllogistic form for all types of semiotic inference. Thus, he divides his examples into two categories: those that allow for formally valid syllogistic reconstruction and those that do not. In the first example, the reconstruction goes as follows: "All women who have milk are pregnant, this woman has milk and so she is pregnant." We get a valid first figure syllogism and Aristotle calls this kind of sign *tekmerion*. Proceeding in the same way the Pittacus example can be reconstructed as: "Pittacus is good; Pittacus is wise; so all wise men are good." For Aristotle this is an invalid third figure syllologism. The third example is reconstructed as "All women who are pregnant are pale; this woman is pale and thus this woman is pregnant" and has the form of an invalid second figure.

The last two are examples of what are called *semeia*: though they have a syllogistic reconstruction that is not formally valid they can still be true even if this truth does not follow from the premises established in the reconstruction.

This last observation leads us to the second question relative to the different degrees of epistemic strength. It must be said that for Aristotle formal validity is not the only criterion for the evaluation of a semiotic inference and he does not reject entirely all those arguments that do not permit a valid syllogistic reconstruction. He reserves for them a place in a less elevated dimension of knowledge such as that of rhetoric or of everyday reasoning.

We thus get a theory that involves various degrees of supporting evidence:

1. The *tekmerion*, which is the most respected (*endoxotaton*) sign and produces the highest degree of proof (*malista alethes*);
2. The *semeion*, which has the characteristics of the former in terms of respectability and conclusivity, but to a lesser extent. Furthermore, it cannot be considered a proof.

The certain knowledge provided by the *tekmerion* comes from the fact that one can make true universal statements in correspondence with this kind of sign (Burnyeat 1982: 199).

In the *Rhetoric* (1357b: 5–6), a necessary sign is defined as one on which one can construct a syllogism whose conclusion will necessarily follow from the proposition that expresses the sign with the true generalization provided by the reconstruction. If, on the other hand, as for *semeia*, it is not possible to provide a premise that is a true generalization in the reconstruction, then the conclusion will merely be something that it is respectable to believe, an *endoxon*.

As Burnyeat (1982: 201–202) points out, if, on the one hand, Aristotle thinks that syllogistics is a universal test for verifying deductive validity, on the other, he does not believe that this is the only way of verifying that an argument is intellectually valid, or that it might take hold of a rational mind. There are, in fact, a large number of forms of inference that can be classified, reconstructed in syllogistic form, and checked from the point of view of formal validity. We can then see how much their strength depends on strictly formal factors and how much depends on likelihood or probability, as we find in political and legal debates. We then do find arguments that are not valid from a formal point of view but that are all the same good arguments.

So this fact of being able to separate formal validity from respectability of inference opens up a more specific area for a cognitive semiotic theory as such. Peirce's abduction theory finds a logical space in a form of reasoning that corresponds to that underlying Aristotle's *semeia* (*CP* 2.626, 7.249; Proni 1988).

4. Theory of language and semiotic inference in the Stoic school

Let us now see how the Stoics, one of the most important of the ancient post-Aristotelian schools of thought, deal with the dual aspect of signs (cf. Melazzo 1975; Verbeke 1974, 1978, 1996; Ebert 1987; Manetti 1993: 93; Long 1996).

Stoic theory of language can also be illustrated by a triadic pattern though a very different one from the Aristotelian one. We will summarize it here briefly. The signifying expression is called a *semainon* or signifier; what corresponds to it semantically is defined as a *semainomenon* or signified, or a *lekton*, that which is said or what is said through words, which are signifiers; the external reality outside language to which words refer is called *tynchanon*, that which exists. In this case as well, as with Aristotle and as we saw above, there is an equational model that links signifier to signified. It should be noted though that there is a radical difference between the Aristotelian model and the Stoic model as far as the position of the signified is concerned: for Aristotle that position is taken up by psy-

chic content or a *pathema*, which has the characteristic of being the same for all, for Greeks and for barbarians, an entity that is a kind of psychological universal. In the Stoic model, this position is held by a non-corporeal entity, which is not in the mind of the users of the language, but in the language itself, and for this reason barbarians can hear the sound sequence while they can not understand the meaning.

I do not want to go into this in detail but we will go on to examine how the theory of the non-linguistic sign is set out in the Stoic school of thought. We get an outline in Sextus Empiricus (*Adv. Math.*, VIII 245–253; *Pirrh. Hyp.*, II 104–106), who maintains that for the Stoics the sign or *semeion* can be defined as a proposition that constitutes a true antecedent in a valid or sound conditional and that has the characteristic of being revelatory of the consequent: the relationship between sign and what it means is expressed by a conditional sentence "If *p*, then *q*." The proposition expressing the sign is "p":

> The Stoics, in attempting to establish the conception of the sign, state that a sign is a proposition (*axioma*) that is the antecedent (*prokathegoumenon*) in a sound conditional (*en hygiei synemmenoi*), which serves to reveal the consequent (*ekkalyptikon tou legontos*). And they define the proposition as a complete *lekton* that is *assertoric* (i.e., true or false) in itself; a sound conditional is one which does not begin with truth and end with a false consequent [...] The antecedent, they say, is the precedent clause in a conditional which begins in truth and ends in truth. And it serves to reveal the consequent, since in the conditional "If this woman has milk in her breasts, she has conceived," the clause "If this woman has milk in her breasts" seems to be evidential (*delotikon*) of the clause "she has conceived." (*Pirrh. Hyp.*, II, 104–106)

This is not the only way of presenting the logical relationship between sign and meaning. There was another slightly different elaboration in the ancient world that was attributed to the Stoics. This is the para-conditional form of the proposition "Since *p*, then *q*," which can be found in Philodemus's *De signis* and which represents an improvement on the earlier formulation, in that it has a double order of truth conditions: (1) that *p* is true and (2) that it is true that "If *p*, then *q*" thus guaranteeing that the proposition that expresses the sign in a conditional is true, as it indeed should be (Burnyeat 1982: 218–224).

In *De signis* we can find another discrepancy with respect to the Stoic semiotic view as handed down from Diogenes and Sextus: in this text the sign and that which it expresses are not always represented as propositions but sometimes presented directly as things, one which is manifest, the other not manifest; for example, "smoke" and "fire," and not the proposition "there is smoke" as a sign of the proposition "there is fire."

The thing in question is such that its existence is asserted by the corresponding proposition; the inference from *x* to *y* and that from "there is x" to "there is y" are treated as interchangeable (Sedley 1982: 243; Burnyeat 1982: 211–214).

The Stoics devoted a great deal of discussion to the form that the conditional from which one could derive the sign inference needed to have, and in Sextus a number of alternative types of conditional were proposed. (Sext. Emp., *Pyrrh. Hyp.*, II, 110–112): (1) the conditional attributed to Philon (which corresponds to the modern material implication); (2) the conditional attributed to Diodorus Chronus; (3) the conditional attributed to Crysippus, or *synartesis* ("cohesion," which has been related to the modern strict implication); in ancient terms it was defined as the conditional in which the contradictory proposition (*antikeimenon*) of the consequent is incompatible with the antecedent (*machetai*) as for example in "if it is daytime there is light" (Diog. Laërt., *Vitae*, VII, 73). In Diogenes' example, the contradictory proposition of that which functions as the consequent in the conditional, that is to say "there is not light," is incompatible with the proposition that forms the antecedent in the conditional itself, i.e. "it is day." This restriction on the form of the conditional is not present in the other two types under discussion and it could be that the Stoics came to accept only this latter form as valid.

5. Indicative signs and commemorative signs

In the post-Aristotelian schools, a distinction began to be made between two kinds of sign: the commemorative and the indicative. Sextus describes them as follows

> Of the signs ... according to (the dogmatists), some are commemorative (*hypomnestika*), some are indicative (*endeiktika*). They term a sign "commemorative" when, being mentally associated with the thing signified, it by its clearness at the time of its perception, though the thing signified remains non-evident, suggests to us the thing associated with it, which is not clearly perceived at the moment — as for instance in the case of smoke and fire. An "indicative" sign, they say, is that which is not clearly associated with the thing signified, but signifies that whereof it is a sign by its own particular nature and constitution, just as, for instance, the bodily motions are signs of the soul. (*Adv. Math.*, VIII, 151–155)

The fundamental character of the sign comes from the fact that it is presented as the fruit of an association, constantly observed in an empirical link or conjunction. Sextus Empiricus gives us examples with a tripartite temporal form. "If there is smoke, there is fire" is a contemporaneous re-

lationship whereas "If there is a scar, there has been a wound" is an example of a relationship where the sign comes after the fact it signifies. "If there is a wound to the heart, then death will follow" is an example in which the sign comes before the fact signified.

The indicative sign on the other hand is where the sign and that which is signified have never been observed in an empirical relationship but their relationship is a purely rational one. The relationship is in nature itself and in the constitution of things. Sextus gives another example "If sweat passes through the skin then there are pores." From the last two examples, we can see that the indicative sign allows us to understand a reality that we do not have access to via the senses.

6. Fusion of the theory of language with the theory of the sign

It was the commemorative signs that joined the theory of language with the theory of the non-linguistic sign and opened up the path that led from the first to the second phase of Deely's classification with the semiological reflections of St. Augustine. They became amalgamated when he proposed a category "signum," which could cover both non-linguistic and linguistic signs, as two types belonging to the same species, but we need to examine how this became possible. There are two conditions that concern the format of the sign unit and the kind of logical relation set up by the sign.

6.1. *The format of the sign unit*

The first condition is derived from a return to the Stoic problematic in which the *semeion* sends one back to the *semeioton*, that is, to something that is indicated by it, thus establishing a relationship of conjunction between something that signifies and that which is signified. We have seen that the notion of the *semeion* in Stoic philosophy corresponds to the format of an entire proposition: a sign was — or was translatable as — a linguistic unit that had a propositional shape. It was only on the level of the proposition that the signifier and signified were joined. The single word had no semantic space: the signifying unit was the proposition, while the single word, for example a verb, was considered to be a deficient *lekton* that needed to be completed to have any meaning.

In order to be able to understand why Augustine can define a single word as a *signum*, it is necessary to highlight out the influence that Alexandrian grammatical theories had had on what we call philosophy of

language, as practiced by the Stoics (Baratin 1981: 263). The Alexandrian grammars had made great use of Stoic classification systems, often without paying much attention to the context of use in which the systems had been set up, and often bending them to suit their own perspectives. For the Alexandrians, the word rather than the proposition played a central part. It took on a function that had first, with the Stoics, been assigned to the proposition: that of being a carrier of meaning. So there was a clear shift of focus of analysis once linguistic theory had gone through the filter of Alexandrian grammar, and the center of analysis passed from the proposition to the word. In this way, the word itself could become a complete and not a deficient sign. For Augustine, it is in the word that signifier and signified are joined together,

Thus Augustine, in *De dialectica* (386–387), decided first of all to study individual words. He started by distinguishing the *vox* or *sonum* of the word from the notion of the *dicibile*. The *vox* is that which is perceived by the ear, or the material features of a word, that which we would call the signifier. The sayable is that which is perceived not by the ear but by the soul, and to some extent the terminology resembles that of the Stoics' *lekton*, which indicated the sayable, or what is said, which makes up the semantic component of an utterance. There is a third element, the *res*, or the referent, which Augustine defines as an object of any sort which is perceived by the senses, or by the soul or that escapes perception.

Augustine then goes on to make a distinction between two notions that today would be called *mention* and *use*. He states that when a word, in terms of the union between signifier and signified, has itself as referent, as happens, for example, in a grammar context when there is a case of mention, then it takes the name of *verbum* (an expression that means both a word in general and a word in this particular technical sense). When a word as the union between signifier and signified is used to refer to something else, it is called *dictio*.

The Latin expression *dictio* is a kind of borrowing of the Greek expression *lexis*, which, in the Stoic classification set out by Diogenes (*Vitae*, VII, 55–57), indicated a sound sequence that had the properties of being articulated and transposable into letters, but without having any meaning in itself, so that the sound sequence *blityri*, which does not exist as a word in Greek, but sounds Greek, could be considered a *lexis*. It was only the *logos*, which corresponds to the utterance, which would be considered a *lexis*; Alexandrian grammar took up the notion of *lexis* but reinterpreted it in a radically different way. In the *Techne grammatiké*, which has come down to us under the name of Dionysius the Thrax, the *lexis* is defined as the smallest part of an utterance and is situated between letters and syllables on the one hand, and the utterance on the other. In

comparison with letters and syllables it is seen as carrying meaning, which they do not, and with respect to the utterance a *lexis* was considered to be carrying an incomplete meaning, though still a place where signifier joined signified (cf. *Grammatici Graeci*, I, 1, 22, 4).

At this point, Augustine takes up the problematic in *De dialectica*, substituting for the Stoic pair *logos/lekton*, that is, utterance/meaning of the utterance, the pair *dictio-dicibile* or word and meaning of the word (cf. Baratin 1981: 264). So, it is in the word as *dictio* that the joining of signifier and signified takes place. The implications are fundamental. The word can thus be defined *signum* as it is at the beginning of Augustine's *De dialectica*: "*Verbum est uniuscuiusque rei signum, quod ab audiente possit intelligi, a loquente prolatum*" (V, 29–30).

This definition sets out and illustrates the extent of the revolution in the philosophy of language, inherited in part by Augustine and in part created. His specific contribution consists in this definition of the word as a *signum*, which is a totally new departure from that of the ancient world. As we have seen in Aristotle and for the Stoics the expression *semeion* referred to non-linguistic signs exclusively.

6.2. *The logical relation set up by the sign*

In the linguistic philosophy of the Stoics, the sign was involved in a process whereby the knowledge of the sign as an antecedent allowed for knowledge of the consequent by implication, Augustine's *signum*, though reduced from proposition to single word, inherited this implicational character. The word, as a union of signifier and signified, became the sign of some thing. This state of affairs has been well defined by Marc Baratin (1981: 266), who assigns to this conception of the word as sign considerable and hitherto unknown perspectives. Previously, in linguistic analyses in which the problem of the relationship between word and its meaning was considered, the relationship was treated according to a model of substitution, what we have called an equational model, following Eco, in which the word was a substitute for the meaning and justified in its existence by this characteristic of substitutability. Once the word was conceived of as a sign, on the other hand, the relationship with its meaning became to be seen no longer as a substitution but rather as a relationship of implication. In the same way as smoke was seen to be a sign of fire and in as much as knowledge of smoke implied knowledge of the fire, thus the word as a sign of a thing implies that knowing the word one becomes familiar with the thing of which it is a sign. In the *De doctrina christiana*, linguistic and non-linguistic signs are put on the same level,

one described as natural, *signa naturalia*, as, for example, smoke which indicates fire, and the other as dependent on an intention and on a convention, the *signa data* (cf. *De doctrina christiana*, I, 2–II, 3), as, for example, in the case of words.

At this point, however, we are confronted with a problem: once it has been decided that a word is a sign of something and therefore the knowledge of that word is supposed to allow by implication the knowledge of the thing of which it is a sign, given that language is made up of signs, we then have to ask, as Augustine does in *De Magistro* (written in 389), how that system of implication gives access to what is implied (cf. Baratin 1981: 267). The text, in the form of a dialogue, investigates the problem of determining what signs are signs of, since we speak through signs and when we speak our aim is that of communication,[6] or rather, to use the terms used on the dialogue, to give information. The argument is developed in two distinct steps. First, Augustine proposes a view of language as the only means of transmitting knowledge, in that language is made up of signs and signs can provide knowledge of things. Then the argument is turned upside down and the characteristic argumentation of the skeptics is used (cf. Sextus Empiricus, *Adv. Math.*, VIII, 145–171). When we pronounce a word, there are two possibilities; either the thing the word is a sign of is known or it is not known. In the former case, the word gives no information because it adds nothing to what the person already knows, but even in the latter case no information is given, in that if the person does not know the thing then they will not learn it from linguistic signs (*De Magistro*, X, 33).

So, for Augustine we have to overturn the relationship between sign and things: it is not the knowledge of the sign that informs us about things but our knowledge of things that informs us that there is a sign (*De Magistro*, X, 33–34). Knowledge of things is therefore a preliminary and Augustine bends his linguistic concept in a teleological direction: it is our interior Master who reveals how things are.

We do not, however, need to follow him in this line of reasoning to be able to appreciate a very important observation: that words as signs have the power of reminding us of things that we have come to know about through other means. In other words, linguistic signs are commemorative as the two following extracts show us:

> Thus with words we do nothing but call attention while the memory which is attached to the words being called to mind remind us of the very things of which the words are a sign. (*De Magistro*, I, 2)

> Once one is familiar with the thing then knowledge of the words becomes perfectly possible; but if only the words are heard then not even they will be learnt.

So the words we know we do not learn, or those which we do not know we cannot say that we have learned them, unless we have perceived their meaning; this happens not from hearing the sounds uttered but with the knowledge of the things which are meant. When people say words it is perfectly right to talk about knowing or not knowing what they mean; if we know the thing words rather than teach us what it is they remind us of it (*commemorari potius quam discere*); if we do not know it, they do not even remind us but perhaps they cause us to search (*ad quaerendum admoneri*). (*De Magistro*, XI, 36).

And with this we can consider the circle to have been completed, which allows Augustine to unite in one category both linguistic and non-linguistic signs. Both have in common the fact that they are commemorative signs and, as signs, the appropriate model that can be applied to them is that of inference. Augustine also claimed that words as signs get us to look for meaning; they do not simply supply it as the fruit of a given equational match.

7. Augustine and Saussure

At this point, it is possible to compare Augustine's process with that of Saussure. First, however, it must be noted that this comparison does not mean we are implying some kind of dependence of the latter on the former or historical continuity between the two since too many centuries separate their work and the relative starting points are radically different. However it is striking that, although in radically different ways, both tend to propose a general category of the sign that gathers together all the various types. Augustine makes a move that is both symmetrical and a mirror image of what Saussure does: the latter united the two theories and two classes of sign, setting up the linguistic sign as the guiding principle while Augustine subsumes all types of sign within the class of non-linguistic signs.

Augustine unites non-linguistic and linguistic signs under the category *signum*, a Latin expression that corresponds to the Greek term *semeion*, which we saw used by Aristotle and by the post-Aristotelian schools to indicate non-linguistic signs. Saussure, on the other hand, defines the characteristics of the linguistic sign and claims that linguistics can become the general model for semiology even though language represents just one particular system: "even though it will have to include in the system other kinds of signs."[7]

At this point, one issue is to decide which of the two operations, Augustine's or Saussure's, is the most productive.

A useful contribution on this point is that of Umberto Eco's *Signs*, part of his book *Semiotics and the philosophy of language* (1986), in which he organizes his argument in two stages; first, he expresses his doubts about the way Augustine united linguistic signs under the model of the non-linguistic signs:

> From the moment in which Augustine introduces verbal language among signs, language starts to appear in an awkward position. Being too strong, too finely articulated and therefore scientifically analyzable (and the work of the Hellenistic grammarians must be kept in mind in this respect), language could hardly be the object of a theory of signs born in order to describe the relationship between natural events, so elusive and generic (and we will see how much the Stoics' inference was epistemologically open to a continuum of relationships of necessity and weakness). Since language was increasingly believed to be the semiotic system which could be analyzed with the most profit (a careful study of this aspect of the history of semiotics would be very worthwhile) and the system which could serve as a model for all other systems (translating every other semiotic onto the plane of its content), the model of the linguistic sign gradually came to be seen as the semiotic model par excellence. (Eco 1986: 34)

But Eco comes to the conclusion that Saussure's model has even more serious defects, due to the fact that he proposes a relationship between signifier and signified that has crystallized into a form of flat equivalence:

> By the time this conclusion was reached (the definitive sanction took place with Saussure), the linguistic model was crystallized into its "flattest" form, the one encouraged by the dictionaries and unfortunately, by a lot of formal logic which had to fill its empty symbols only for the sake of exemplification as well. As a consequence, the notion of *meaning as synonymy* and as essential definition began to develop. (Eco 1986: 34)

Eco then concludes that the general model within which one should think of the sign is essentially an inferential model based on the concept of sign as an encyclopaedia rather than as a dictionary, since there is no such thing as mere equivalence but there are always implications: the cases where there is an equational layout (as in real dictionaries) this comes from a catacresisization of the inferential model in its flattest form. The inferential model forms a bridge in the direction of Peirce's semiotic concept of the centrality of abduction: "I shall maintain that inferential processes (mainly under the form of Percean *abduction*) stand at the basis of every semiotic phenomenon" (Eco 1986: 8).

The inferential model allows one to subsume under it superficially inhomogeneous entities, such as linguistic and non-linguistic signs more

easily than the model does. Its compatibility with Peirce's model comes from the fact that Peirce calls it a sign only when a particular expression is in a triadic relationship, in which the third term, the interpretant, generates a new interpretation and so on in a process of unlimited semiosis. From this point of view, a sign will always stand for something else but in such a way that the relationship does not exhaust the meaning potential of the sign in that a sign will always lead us to find out something new (*CP* 8.332).

8. Conclusion

It seems to be accepted then that the semiotic model found in Augustine at the beginning of what Deely defines as the Latin era is represented as a model that is valid in the postmodern era. I would, however, like to highlight the fact that within structuralism, which Deely assigns to the modern era, there was an identifiable intellectual voice coming from within that movement but that at the same time represented a critical conscience and that caused a revolution from the inside: that of Emile Benveniste. His conception of the linguistic sign moves radically away from the equational model. Benveniste on various occasions highlights the fact that the word as a sign opens up a plurality of meanings that become defined close down only when they become part of an utterance: "Nous posons pour principe que le sens d'une phrase est autre chose que le sens des mots qui la composent" (Benveniste 1974: 226). The same concept is repeated a few pages later: "Sur ce fondement sémiotique, la langue-discours construit une sémantique propre, une signification de l'intenté produite par syntagmation de mots où chaque mot ne retient qu'une partie de la valeur qu'il a en tant que signe" (Benveniste 1974: 229). And again: "Or le message ne se réduit pas à une succession d'unités à identifier séparément; ce n'est pas une addition de signes qui produit le sens, c'est au contraire le sens (l' "intenté"), conçu globalement, qui se réalise et se divise en "signes" particuliers, qui sont les mots" (Benveniste 1974: 64).

The closing down of meaning happens only through the discourse situation or in the act of utterance, which is new each time it is realized according to new space-time coordinates. And so the utterance too, as a closing down of meaning is presented as extremely mobile in that, in its turn, it is open to infinite realizations, each different from the other, because of the different situations in which they are realized. What is more, Benveniste's reference to *intenté*, which we could translate as the fruit of the communicative intentions of the speaker, directs the sense of the utterance towards the other interlocutor in the discourse situation.

In this sense, in Benveniste we can find a notion of sign that is different from that to be found in Saussure, as the *clôture* of the linguistic system is broken by the utterance dimension that allows us to see an opening up of the relationship between sign and its various potential meanings in the infinity of utterance situations. For this reason, semiolinguistic concepts like that of Benveniste, though they have sprung from the ribs of structuralism, could rightfully appear under the heading of what Deely defines as postmodern.

Notes

1. Deely also (2001: 673), notes that the decisive trait in Saussure's proposal can be traced back to the perspective of founding a new discipline, that of "semiology," as a systematic treatment of arbitrary signs, which correspond for the most part with linguistic signs; Saussure's aim was to include within that discipline also non-arbitrary and non-linguistic signs even though it was emphasised that linguistic and arbitrary signs "realize better than others the ideal of the semiological process."
2. The English translation of the *Cours* is that used by Deely.
3. It was Eco (1986: 34) who proposed an opposition of two theoretical models emerging from the history of theoretical treatments of the sign: an equational and an inferential model.
4. The fact that the link is a natural one does not mean that the expression cannot be used to lie, as often happens in entertainment and as happens in everyday life contexts. The natural character is demonstrated by a certain universality of the link that is found constantly in different cultures as Ekman and Friesen (1969) have shown in their work on expressive body language known as "affect displays."
5. See other, sometimes different, treatments on the same subject: Pépin (1985); Chiesa (1986); Manetti (1993); Sedley (1996); Lo Piparo (2003).
6. Cf. Simone (1969), who defines Augustine's semiology as being centered on the concept of communication, unlike the previous linguistic theories, which were mainly centered on the concept of "signification."
7. It is thus not a case of "reduc(ing) the Latin landscape to a flat extension of modern idealism, and incorporate(ing) Augustine into the present accordingly," as Deely (2001: 670 note 2, 418, note 21) claims I did (Manetti 1993: 160). Then, as now, the comparison was meant to be between two authors who are profoundly different who are performing an operation that is to some extent similar (unifying the two theories, that of non-linguistic signs and that of language) but in radically different ways — Augustine using the inferential model of the non-linguistic sign and Saussure in the equational model of the linguistic sign.

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