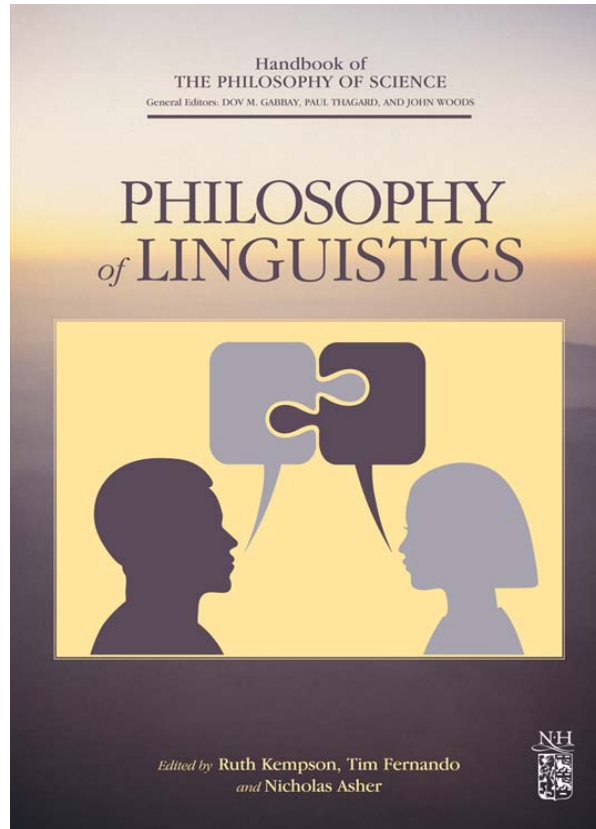


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LINGUISTICS AND PHILOSOPHY

Jaroslav Peregrin

1 THE INTERACTION BETWEEN LINGUISTICS & PHILOSOPHY

Like so many sciences, linguistics originated from philosophy's rib. It reached maturity and attained full independence only in the twentieth century (for example, it is a well-known fact that the first linguistics department in the UK was founded in 1944); though research which we would now classify as *linguistic* (especially leading to generalizations from comparing different languages) was certainly carried out much earlier. The relationship between philosophy and linguistics is perhaps reminiscent of that between an old-fashioned mother and her emancipated daughter, and is certainly *asymmetric*. And though from philosophy's rib, empirical investigation methods have ensured that linguistics has evolved (just as in the case of the more famous rib) into something far from resembling the original piece of bone.

Another side of the same asymmetry is that while linguistics focuses *exclusively* on language (or languages), for philosophy language seems less pervasive — philosophy of language being merely one branch among many. However, during the twentieth century this asymmetry was substantially diminished by the so called *linguistic turn*¹, undergone by numerous philosophers — this turn was due to the realization that as language is the universal medium for our grasping and coping with the world, its study may provide the very key for all other philosophical disciplines.

As for the working methods, we could perhaps picture the difference between a philosopher of language and a linguist by means of the following simile. Imagine two researchers both asked to investigate an unknown landscape. One hires a helicopter, acquires a birds-eye view of the whole landscape and draws a rough, but comprehensive map. The other takes a camera, a writing pad and various instruments, and walks around, taking pictures and making notes of the kinds of rocks, plants and animals which he finds. Whose way is the more reasonable? Well, one wants to say, neither, for they seem to be complementary. And likewise, contemporary research within philosophy of language and linguistics are similarly complementary: whereas the philosopher resembles the airman (trying to figure out language's most general principles of functioning, not paying much attention to details), the linguist resembles the walker (paying predominant attention to

¹See [Rorty, 1967]. See also [Hacking, 1975] for a broader philosophical perspective.

details and working a slow and painstaking path towards generalizations). And just as the efforts of the two researchers may eventually converge (if the flyer refines his maps enough and the walker elevates his inquiries to a certain level of generalization), so the linguist and the philosopher may find their respective studies meeting within the realm of empirical, but very general principles of the functioning of language.

Unfortunately though, such meetings are often fraught with mutual misunderstandings. The philosopher is convinced that what is important are *principles*, not contingent idiosyncrasies of individual languages, and ridicules the linguist for trying to answer such questions as *what is a language?* with empirical generalizations. The linguist, on the other hand, ridicules the philosopher for sitting in an ivory tower and trying to tell us something about languages, the empirical phenomena, without paying due attention to their real natures.

2 LINGUISTIC CONCEPTIONS OF THE NATURE OF LANGUAGE

In the nineteenth century, the young science of linguistics was initially preoccupied with comparative studies of various languages. But concurrently it started to seek a subject which it could see as *its own*: is linguistics really to study the multiplicity of languages, or is it to be after something that is invariant across them? And if so, what is it? Similar unclarities arose w.r.t. a single language. What, in fact, *is* a language? Some chunk of mental stuff inside its speakers? Some repertoire of physiological dispositions of the speakers? Some social institution? These questions have subsequently led to fully-fledged conceptions of the nature of language; the most influential of which were tabled by Ferdinand de Saussure (in the end of the nineteenth century) and much later, in the second half of the twentieth century, by Noam Chomsky.

2.1 *De Saussure*

The Swiss linguist Ferdinand de Saussure, in his posthumously edited lectures published as the *Course of general linguistics* [1916], was the first to provide for linguistics' standing on its own feet in that he offered an answer to all the above mentioned questions: it is, he argued, a peculiar kind of *structure* that is the essence of each and every language, and the peculiar and exclusive subject matter of linguistics is this very structure. Therefore linguistics basically differs from natural sciences: it does not study the overt order of the tangible world, but a much more abstract and much less overt structure of the most peculiar of human products — language. Studying the psychology, the physiology or the sociology of speakers may be instrumental to linguistics, it is, however, not yet linguistics.

In fact, the conclusion that language is a matter of structure comes quite naturally — in view of the wildness with which the lexical material of different languages often differs. Far more uniformity is displayed by the ways in which the respective materials are sewn together and the traces left by these ways on their

products — complex expressions. But de Saussure claimed not only that grammatical rules and the consequent grammatical structures of complex expressions are more important than the stuff they are applied to; his claim ran much deeper. His claim was that everything which we perceive as “linguistic reality” is a structural matter which is a product of certain binary oppositions. According to him, language is a “system of pure values” which are the result of arrangements of linguistic terms; and hence that language is, through and through, a matter of *relations* and of the structure these relations add up to.

What exactly is this supposed to mean? What does de Saussure’s term “value” amount to? How is the value of an expression produced by relations among expressions? De Saussure claims that all relevant linguistic relations are induced by what he calls “identities” and what would be, given modern terminology, more adequately called *equivalences*, which can also be seen as a matter of *oppositions* (which are, in the prototypical cases, complementary to equivalences). Moreover, he claims, in effect, that values are mere ‘materializations’ of these equivalences resp. oppositions: saying that two elements are equivalent *is* saying that they have the same value. To use de Saussure’s own example, today’s train going from Geneva to Paris at 8:25 is probably a physical object which is quite different from yesterday’s train from Geneva to Paris at 8:25 — however, the two objects are equivalent in that both are *the same* 8:25 Geneva-to-Paris train. The abstract object *the 8:25 Geneva-to-Paris train* is, in this sense, *constituted purely by the (functional) equivalence between certain tangible objects*; and in the same sense the values of expressions are constituted *purely by (functional) equivalences between the expressions*.

Moreover, De Saussure saw the equivalences constitutive of ‘linguistic reality’ as resting upon some very simple, *binary* ones (i.e. such which instigate division into merely two equivalence classes). And these are more instructively seen in terms of the corresponding oppositions — elementary distinctions capable of founding all the distinctions relevant for any system of language whatsoever. (Just as we now know complicated structures can be implemented in terms of bits of information and hence in terms of a single 0-1 opposition.) Hence de Saussure saw the complicated structure of language as entirely emerging from an interaction of various kinds of simple oppositions, like the opposition between a *voiced* and an *unvoiced* sound.

De Saussure’s structuralism thus consists first and foremost in seeing language as a system of values induced by elementary oppositions. Moreover, there is no ‘substance’ predating and upholding the oppositions — *all* items of language, including the most basic ones (“units”), are *produced* by them. According to de Saussure, language does not come as a set of predelimited signs; it is primarily an amorphous mass, the “units” and other “elements” of which acquire a firm shape only via our creative reflections. It is very misleading, claims de Saussure, to see an expression as the union of a certain sound with a certain concept. Such a view would isolate the expression from the system of its language; it would lead to an unacceptably atomist view that we can start from individual terms and construct

language by putting them together. The contrary is the case: we start from the system and obtain its elements only through analysis.

Hence Saussurean structuralism does not consist merely in the reduction of ‘abstract’ entities to some ‘concrete’ ones (“units”) and their oppositions — it proceeds to reduce also those entities which appear to us, from the viewpoint of the more abstract ones, as ‘concrete units’ or ‘basic building blocks’, to oppositions. “[T]he characteristics of the unit blend with the unit itself,” (*ibid.*, p. 168) as de Saussure himself puts it. This means that language is a matter of oppositions alone — “*language is a form and not a substance*” (*ibid.*, p. 169).

Language, according to de Saussure, has the “striking characteristic” that none of its elements are given to us at the outset; and yet we do not doubt that they exist and that they underlie the functioning of language. This means that although language is primarily an incomprehensible mess or multiplicity, we must take it as a ‘part-whole system’ in order to grasp and understand it. Language thus does not originate from naming ready-made objects — associating potential ‘signifiers’ with potential ‘signifieds’ — for both the signifiers and the signifieds are, in an important sense, constituted only together with the constitution of language as a whole.

All in all, de Saussure’s claim is that besides the ‘natural order’ of things, as studied by natural sciences, there is a different kind of order which is displayed by the products of human activities, especially language, and which is irreducible to the former one. Thus linguistics has its peculiar subject matter — the structure of language.²

De Saussure’s insistence that the subject matter of linguistics is essentially ‘unnaturalizable’ — that the structures in question constitute, as it were, an independent *stratum* of reality, soon became influential not only within linguistics, but across all the humanities. Many partisans of philosophy, anthropology, cultural studies etc. saw this view as a basic weapon for emancipating the humanities from natural science. The resulting movement is now known as *structuralism* (see [Kurzweil, 1980; Caws, 1988]).

2.2 Chomsky

The other towering figure of linguistics, who has produced a fully-fledged conception of the nature of language which gained a broad influence, is the American linguist Noam Chomsky. His 1957 book *Syntactic Structures* was unprecedented particularly by the extent to which the author proposed supporting linguistics by mathematics. This was unusual: for although the Saussurean picture may — from today’s perspective — have already seemed to invite mathematical means (especially the means of universal algebra, which has come to be understood as the general theory of abstract structures), the invitation was actively suppressed by many of his followers. (Thus Roman Jakobson, an extremely influential post-

²For more information about de Saussure’s approach, see [Culler, 1986; Holdcroft, 1991; Harris, 2001].

Saussurean linguistic structuralist, found precisely this aspect of de Saussure's teaching untenable.) Chomsky based his account of language on the apparatus of *generative and transformational grammars*: of precisely delimited systems of rules capable of producing all and only well-formed sentences of the language in question. These grammars may be, and have been, studied purely mathematically,³ but their *raison d'être* was that they were intended to be used for the purpose of reconstructing real languages, thus bringing to light their 'essential structure'. In later years Chomsky upgraded this picture in a number of ways (see [Hinzen, this volume]).

What is important from the viewpoint addressed here, however, is the fact that he turned his attention to the very *nature* of the covert structure he revealed behind the overt surface of language (see esp. [Chomsky, 1986; 1993; 1995]). And while de Saussure was apparently happy to see the structure as a *sui generis* matter (a matter, that is, of neither the physical world, nor a mental reality — whereby he lay the foundations of structuralism with its own peculiar subject matter), Chomsky takes the order of the day to be naturalism (see 5.2) in the sense of accomodability of any respectable entity within the conceptual framework of natural sciences. Thus he sees no way save to locate the structure of language firmly in the minds of its speakers (while naturalism tells us further that *mind* and *brain* cannot but be two sides of the same coin).

Strong empirical support for many of Chomsky's views came from research into language acquisition. Chomsky noticed that the data an infant adept of language normally has are so sparse that it is almost unbelievable that he/she is able to learn the language, and usually does so rather quickly and effortlessly. Chomsky's solution is that a great part of language — mostly the structure — is *inborn*. What the infant must truly acquire thus reduces to the vocabulary plus a few parameters of the grammar — everything else is pre-wired up within his/her brain. In this way Chomsky kills two birds with one stone: he solves the problem of the "poverty of the stimulus" concerning language acquisition, and provides a naturalistic explanation of the nature of the structure he reveals within the depths of language.

Chomsky stresses that it is essential to distinguish between that which he calls the E-language and that which he dubs I-language (the letters 'E' and 'I' standing for 'external' and 'internal', respectively). Whereas the former consists of all the intersubjective manifestations of language, linguistics is to concentrate on the I-language, which underlies the E-language and which is essentially a matter of the *language faculty*, a specific part of the module of human mind/brain devoted to linguistic skills. Hence there is a sense in which linguistics is, eventually, reducible to a branch of psychology (or even neurophysiology). And the structures envisaged by Chomskyan transformational grammars are ultimately structures founded within this faculty.⁴

³See [Hopcroft and Ullman, 1979] or [Révész, 1991].

⁴For more about Chomsky and his school see [Pinker, 1994; Cook *et al.*, 1996].

3 PHILOSOPHICAL CONCEPTIONS OF THE NATURE OF LANGUAGE

Philosophers, of course, were interested in language since the dawn of their discipline (probably the first systematic treatise on language was Plato's dialogue *Cratylus* from around 370 b.c.e.). However, though they took language as an *important* subject matter, they did not take it as a *prominent* one. In particular, although studying language was usually regarded as a philosophically important enterprise, it was considered to be secondary to studying thought or the world — for language was usually assumed to be merely an instrument for externalizing thoughts or representing the world.

Some of the modern philosophers having undergone the linguistic turn would claim that the study of language was *always* totally prominent for philosophy — though the earlier philosophers did not realize this, for they mistook the study of linguistic structures for the study of the structure of thought or the world. Thus Benveniste [1966] famously argued that the categories of Aristotle's metaphysics are in fact nothing else than the categories of Greek grammar; and Carnap's [1934] conviction was that the only genuine philosophical problems that make any sense are linguistic ones in disguise.

Some of the pre-modern philosophers were interested in language not only *qua* philosophers, but also *qua* rudimentary scientists. Thus, for example the influential *Port-Royal Grammar*, compiled in 1660 by A. Arnauld and C. Lancelot, was a fairly systematic (though by our current standards rather too speculative) attempt at a general theory of language (though again, it treated language as an entity wholly instrumental to thought). However, it was not until linguistics reached the stage of a fully-fledged science that philosophy could truly be seen as addressing its foundational issues; it was in the twentieth century that philosophers began to pay systematic attention to concepts such as *meaning*, *grammar*, *reference* etc.; and indeed to the very concept of *language*.

3.1 *Language as a code*

The naive view has it that language is a matter of the interconnection of expressions (sounds/inscriptions) with meanings. Those philosophical conceptions of language which build directly on this intuition attempt to reveal the nature of language by revealing the natures both of the interconnection and of the entities so interconnected with expressions.

Seeking for a paradigmatic example of this kind of interconnection, we are likely to hit upon the interconnection of a proper name and the bearer of this name. This connection appears to be relatively perspicuous: both in how it comes into being (*viz.*, in the typical case, a kind of christening) and in how it is maintained (people forming an association between the name and its bearer, calling the bearer by the name ...). Taking it as the paradigm for semantics, we arrive at what can be called the *code conception of language* (see, e.g., [Dummett, 1993]) or the *semiotic conception of language* [Peregrin, 2001]. According to it, expressions generally

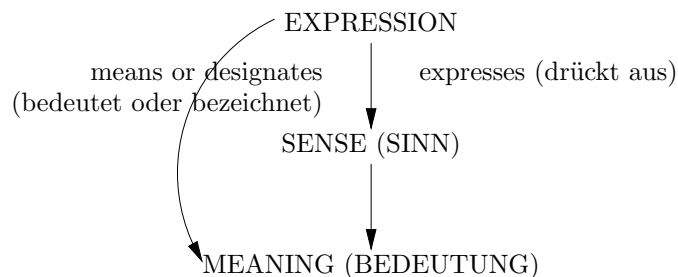
stand for (or *name* or *encode* or ...) some extralinguistic entities. The basic idea behind this conception is clearly articulated by Bertrand Russell [1912, Chapter V] — words may get meaning only by coming to represent some entities already encountered by us:

We must attach some meaning to the words we use, if we are to speak significantly and not utter mere noise; and the meaning we attach to our words must be something with which we are acquainted.

However, to make the name-bearer relation into a true paradigm of the expression-meaning relationship, we must indicate how it can be generalized to expressions of categories other than proper names. What could be thought of as named by a common noun, or a sentence (not to mention such grammatical categories as adverbials or prepositions)?

Gottlob Frege [1892a; 1892b] argued that if we take names as generally naming individuals, then there are sound reasons to take (indicative) sentences as naming their truth values (construed as abstract objects — *truth* and *false*); and he also argued that predicative expressions should be seen as expressing a kind of function (in the mathematical sense of the word), a function assigning the truth value *true* to those individuals which fall under them and *false* to those which do not. Equipped with the modern concept of *set*, we might want to say that predicative expressions (including common nouns) name the *sets* of objects falling under them.

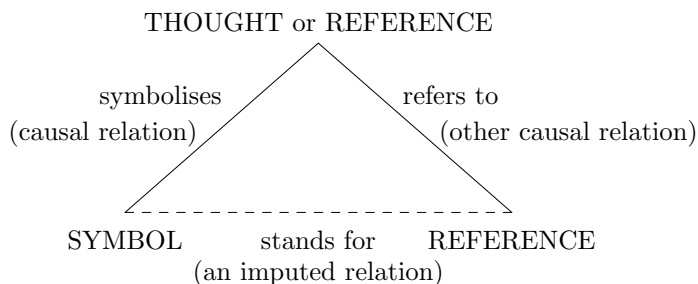
However Frege (1892) also stressed that these objects cannot be sensibly conceived of as *meanings* of the words in the intuitive sense (which did not prevent him from calling them, perversely, *Bedeutungen*, i.e. *meanings*⁵). They form only one level of semantics, which must be supplemented by another, which Frege called that of *Sinnen*, i.e. *senses*:



Though Frege's terminology was not found satisfactory, as what is intuitively the meaning of an expression is what he calls its "sense" and what he calls "meaning" was later usually called "referent", his two-level outline of semantics was to reappear, in various guises, within most of the twentieth century theories of meaning.

⁵Whether German "Bedeutung" is an *exact* equivalent of English "meaning" is, of course, open to discussion — but that it is closer to "meaning" than to something like "reference" is beyond doubt.

Here, for example, is the popular semantic triangle from an influential book by Ogden and Richards (1923):



Another elaboration of Frege’s ideas was offered by Carnap [1947], who replaced Frege’s terms “sense” and “meaning” by the more technical “intension” and “extension”, concentrating, in contrast to Frege, on the former (for it is intension, he concluded, which is the counterpart of the intuitive content of meaning) and thus paving the way for ‘intensional semantics’ (see 5.3).

From the viewpoint of this two-level semantics, the general idea of meaning as a thing stood for can be developed along at least two very different lines. Namely, we may either claim that it is the relationship expression-*referent* which constitutes the backbone of semantics, or we may claim that it is rather the relation expression-*meaning*. Let us deal with the two cases in turn.

3.1.1 Naming things and the relation of reference

According to the one view, the basic task of language is to provide us with tools (and perhaps a ‘framework’) for giving names to things which surround us. The meaning of a name, if any, is in this way parasitic on its referent (cf. Frege’s *Sinn* as the “way of givenness” of a *Bedeutung*). Whatever non-name-like expressions and whatever other means a language may possess, they are to be seen as an ‘infrastructure’ for the crucial enterprise of naming (see, e.g., [Devitt, 1981].)

It is clear that naming objects is one of the things we indeed use our language for. Moreover, it seems that something like naming, based on ostension, plays a central role within language learning. However, we have already noted that in its most straightforward form it is restricted to proper names, which do not appear to form a truly essential part of our language. The importance of the relation may be enhanced by taking not only proper names, but *all* nominal phrases, as vehicles of reference — the ‘improper’ names are usually considered as referring in a ‘non-rigid’ way, namely in dependence on some empirical fact. Thus the phrase “the president of the USA” refers to a person determined by the empirical event of the last presidential election in the USA.

Considerations of these *definite descriptions* (as they are called since [Russell, 1905]) caused many authors to conclude that most if not all of the names and singular phrases we use are of this kind; and they stimulated various elaborations

of the logical means of analyzing descriptions (see [Neale, 1990; Bezuidenhout & Reimer, 2003]). Russell's celebrated analysis led him to assert that, from a logical viewpoint, definite descriptions not only fail to qualify as names, but are not even self-contained phrases; in themselves they refer to nothing, for from the logical viewpoint, they are essentially incomplete. Thus, what a sentence such as *The present king of France is bald* in fact conveys, according to Russell, is not the ascription of baldness to an individual, but the conjunction of the following three propositions: (i) there is an individual which is a king of France; (ii) any individual which is a king of France is identical with this one; and (iii) this individual is bald. Analyzed in this way, the sentence contains no name of a king, but only a predicate expressing the property of being a king of France.

However, it is not difficult to modify the Russellian view in such a way that definite descriptions become self-contained: any description *the P* becomes the name of the single individual falling under *P*, if there is such a single individual; if not, the description names nothing. This would require us to admit nominal phrases without reference, which was impossible within the logic Russell favored, but which appears to be desirable independently; for it seems reasonable to distinguish between saying something false about an existing entity and talking about no entity at all. This became especially urgent within the framework put forward by Strawson [1950] and devised to distinguish between the reference of a nominal phrase in itself and the reference of a specific utterance of the phrase in a context.

The Russellian analysis, moreover, is clearly not applicable to most cases of the usage of the definite article encountered within normal discourse — for it would permit the correct usage of such phrases as “the table” only if there is one and only one table within the whole world. However, the fact seems to be that we very often use the definite article for the purposes of *anaphoric reference* — for the purpose of referring not to the only relevant thing within the universe, but rather to the only relevant thing among those which are salient within the current context. This led to a semantic analysis of anaphoric uses of the definite article as well as of pronouns and other anaphoric elements based on the assumption that these elements pick up specific elements of the context; and their reference is thus essentially context-dependent [von Heusinger & Egli, 2000; Kamp & Partee, 2004].

These developments fit well with the Fregean two-level notion of semantics: both definite descriptions and anaphoric items have a certain content, and the interplay of this content with some contingent facts (state of the world, context) produces (or fails to produce) their (contemporaneous) referent. However, over recent decades, some philosophers (especially [Kripke, 1972; Putnam, 1975]) have argued vigorously that in many important cases reference can be mediated neither by a description, nor by a Fregean sense or a Carnapian intension. Their claim was that not only proper names, but also terms for the natural kinds (‘water’, ‘gold’, ‘tiger’, ...) obtain their reference through a non-mediated contact with the world. According to this view, the reference of these terms is not derivative to, but rather constitutive of, their content. These considerations initiated what is

sometimes called a *new theory of reference* (see [Humphreys & Fetzer, 1998]).

Can the relation of reference be extended also beyond nominal phrases? Can we see, e.g., the common nouns, such as ‘pig’ or ‘philosopher’, as referring to definite entities in a way analogous to that in which ‘Snowball’ refers to a particular pig and ‘Aristotle’ to a particular philosopher? We have already seen that a candidate might be the sets of items falling under the relevant predicates — the set of pigs for ‘pig’ and the set of philosophers for ‘philosopher’. However, we can hardly coin the word ‘pig’ by christening the set of pigs in a way analogous to coining a proper name by christening an individual (if only for the reason that some pigs die and new ones are born every moment and hence the set we would christen would cease to exist almost immediately, leaving the word reference-less again).

Therefore, it might be more plausible to assume that common nouns refer to something like ‘pighood’ or ‘the property of being a pig’. But then it is again unclear how we manage to refer to such entities and what kind of entities they are. (A survey of attempts at formulating systematic theories of properties is given by Bealer and Mönlich, [1989].) Kripke and Putnam tried to force a parallel between proper names and some common nouns (natural kind terms) by claiming that what we christen are *essences* of natural kinds — thus when I point at water and say ‘water!’ I am christening the essence of water and hence making the noun correctly applicable to all and only chunks of water (see [Soames, 2002], for a discussion).

There is perhaps also another option: we might assume that a common noun is a tool of opportunistic referring to this or that individual item falling under it: that we use the noun ‘pig’ to refer to this or another pig, depending on the context. However, this fails to explain the entire role of ‘pig’ — *viz.* such locutions as ‘There is no pig here’.

Hence, although there are ways of extending the concept of reference to expressions other than proper names, they often rob the concept of most of its original appeal: the attraction of grounding language on the reference relation was so attractive especially because reference links a word with a tangible object, which can be pointed at. Moreover, even if we manage to extend reference to names other than proper ones, or perhaps also to sentences or verbs, there will still be a number of grammatical categories whose words cannot be treated as directly vehicles of reference — prepositions, connectives etc. If we want to delimit their roles within the notion of language as basically a means of referring to things, we would have to specify ways in which they aid the other, referring expressions to accomplish their tasks.

3.1.2 *The semiotic conception of language*

Let us now turn to the second way of elaborating the notion of language as a code. Here it is claimed that, just as a proper name *means* its bearer by representing it, so all other expressions, in order to have any meaning, must also represent *some* kind of entity — expressions of kinds different from names perhaps representing objects very different from ‘individuals’. The fact of meaning is necessarily grounded in

a *semiosis* — in the constitution of a *sign* which interconnects a *signifier* with a *signified* and makes it possible for the signifier to act as a proxy for the signified. As Reichenbach [1947, p. 4] puts it:

Language consists of *signs*. ... What makes them signs is the intermediary position they occupy between an object and a sign user, i.e., a person. The person, in the presence of a sign, takes account of an object; the sign therefore appears as the substitute for the object with respect to the sign user.

This way of viewing language leads to the subordination of the category of word under the more general category of *sign*. The general theory of signs was first developed by Charles S. Peirce (see [Hoopes, 1991]). Peirce's [1932, p. 135] definition of the concept of sign was:

A sign, or representamen, is something which stands to somebody for something in some respect or capacity. It addresses somebody, that is, it creates in the mind of that person an equivalent sign, or perhaps a more developed sign. That sign which it creates I call the *interpretant* of the first sign. The sign stands for something, its *object*. It stands for that object, not in all respects, but in reference to a sort of idea, which I have sometimes called the *ground* of the representamen.

Peirce classified signs into three categories. The first kind of sign is an *icon*; this is a sign which, in Peirce's own words, "partakes in the characters of the object", or, in a more mundane wording, is characterized by a perceptible similarity between the signifier and the signified (thus, a map is an icon of a landscape). The second kind is an *index*, which "is really and in its individual existence connected with the individual object", i.e. is based on a causal relationship (smoke is an index of fire). The third kind is a *symbol*, which is characterized by "more or less approximate certainty that it will be interpreted as denoting the object, in consequence of a habit", i.e. by the signifier and the signified being tied together by convention (five circles are the symbol of the Olympic Games). Language is then taken to be simply a collection of symbols.

Charles Morris [1938, p. 3], characterized the process of *semiosis*, in which the two parts of a sign get collated and become the signifier (a *sign vehicle*, in Morris' term) and the signified (a *designatum* or *denotatum*) as follows:

something takes account of something else mediately, i.e. by means of a third something. Semiosis is accordingly a mediated-taking-account-of. The mediators are *sign vehicles*; the takings-account-of are *interpretants*; ...what is taken account of are *designata*.

An outstanding later representative of the semiotic approach to language is Eco [1979; 1986]. According to him, the crucial achievement was "to recognize the *genus* of sign, of which linguistic signs are *species*". Moreover, as "language was increasingly believed to be the semiotic system which could be analyzed with the

most profit (...) and the system which could serve as a model for all other systems (...), the model of the linguistic sign gradually came to be seen as the semiotic system par excellence" [Eco, 1986, 33]. Hence a certain shift: from presenting and exploiting linguistic sign as subordinate to sign in general, to presenting it as a generally paradigmatic kind of sign. (For more about this kind of semiotic approach to language *viz.* [Sebeok, 1989].)

The semiotic conception appears to tally with the Saussurean approach; indeed Saussure called his own theory of linguistic signs *semiology* (though he rejected seeing language as a kind of *nomenclature* — as a matter of links between ready-made words and meanings.) For this reason it was readily embraced by many partisans of post-Saussurean structuralism; until it was challenged by what has become known as *poststructuralism* (see 3.3.2).

3.2 Language as a toolbox

Meanwhile, other twentieth century philosophers concluded that it was misleading to see language as a system of names. In its stead they proposed seeing it rather as a kind of 'toolbox', a kit of tools which we employ as means to various ends. From this viewpoint, the meaning of an expression does not appear to be a thing named by the expression, but rather the capability of the expression to promote particular kinds of ends.

The later Wittgenstein [1969, 67] expresses this view of language in the following way:

In the tool box there is a hammer, a saw, a rule, a lead, a glue pot and glue. Many of the tools are akin to each other in form and use, and the tools can be roughly divided into groups according to their relationships; but the boundaries between these groups will often be more or less arbitrary and there are various types of relationship that cut across one another.

But already long before this, the American pragmatists, taking language primarily as human activity, had seen linguistic meaning as "primarily a property of behavior" [Dewey, 1925, 179] rather than a represented entity. And recent 'pragmatist turn' [Eddington & Sandbothe, 2004], which has rediscovered many of the ideas of classical pragmatism, has resulted in seeing language as not primarily a code, but rather as a means of interaction; and hence in seeing meaning as primarily a matter of the aptitude of an expression to serve a specific purpose, rather than its representing an object.

3.2.1 Speech act theories

In reaction to the theories of language drawn up by those philosophers who, like Russell or Carnap, concentrated especially on language in its capacity of articulating and preserving *knowledge*, different philosophical theories arose which concentrated instead on language as a means of everyday communication. Activities

in this direction were pioneered in particular by the Oxford scholars J. L. Austin, G. Ryle and H. P. Grice, who earned the label of *ordinary language philosophers*.

Austin [1961] initiated what has subsequently been called the *speech act theory*. He concentrated not on categories of expressions or sentences, but rather on categories of utterances. His program was to undertake a large-scale ‘catalogization’ of these categories:

Certainly there are a great many uses of language. It’s rather a pity that people are apt to invoke a new use of language whenever they feel so inclined, to help them out of this, that, or the other well-known philosophical tangle; we need more of a framework in which to discuss these uses of language; and also I think we should not despair too easily and talk, as people are apt to do, about the infinite uses of language. Philosophers will do this when they have listed as many, let us say, as seventeen; but even if there were something like ten thousand uses of language, surely we could list them all in time. This, after all, is no larger than the number of species of beetle that entomologists have taken the pains to list.

Austin [1964] distinguished between three kinds of acts which may get superimposed in an act of utterance: the *locutionary act* is “roughly equivalent to uttering a certain sentence with a certain sense and reference”, the *illocutionary act* “such as informing, ordering, warning, undertaking, &c., i.e. utterances which have a certain (conventional) force” and the *perlocutionary act*, which amounts to “what we bring about or achieve by saying something, such as convincing, persuading, deterring, and even, say, surprising or misleading” (109).

Grice [1989] maintained that, over and above the rules of language dealt with by Carnap and others, there are also certain ‘rules of communication’, which he called *conversational maxims*. These are the conventions stating that one usually says things which are not only true, but relevant, substantiated etc. (And these rules are, according to Grice, part and parcel of human rationality just as the rules of logic are.) These rules facilitate that saying something can effect conveying something else: if I ask “Where can I get some petrol here?” and get the answer “There is a garage around the corner”, I assume that the answer is relevant to the question and infer that the message is that the garage sells petrol. The pieces of information a participant of conversation infers like this were called by Grice *conversation implicatures*.

Some recent theoreticians, taking up the thread of addressing language via concentrating on the analysis of discourse and communication [Carston, 2002; Recanati, 2004], deviate from Grice in that they concentrate more on pragmatic than on semantic factors of communication (see 5.1). The notion of what is conveyed by an utterance despite not being explicitly said, is no longer identified with Gricean implicatures: instead a distinction is drawn between an implicature and an *expliciture* [Sperber and Wilson, 1986], where the *expliciture* amounts to the parts of the message that the hearer gets non-inferentially, despite the fact that they

are not part of the literal meaning of the utterance (a typical example is the information extracted from the context such as the unpacking of the “around the corner” into a pointer to the specific corner determined by the particular situation of utterance).

3.2.2 *Pragmatist and neopragmatist approaches to language*

The ‘end-oriented’ view of language and meaning suggested itself quite naturally to all kinds of pragmatists, who tend to consider *everything* as means to human ends. The classical American pragmatists maintained, in Brandom’s [2004] words, that “the contents of beliefs and the meanings of sentences are to be understood in terms of the roles they play in processes of intelligent reciprocal adaptation of organism and environment in which inquiry and goal-pursuit are inextricably intertwined aspects”.

This view of language led to a conception of meaning very different from the view of meaning as that which is “stood for” by the expression in question – to its conception as a kind of capability of serving as a means to peculiar communicative (and possibly other) ends. In an instructive way, this is articulated by G. H. Mead [1934, p. 75–76]:

Meaning arises and lies within the field of the relation between the gesture of a given human organism and the subsequent behavior of this organism as indicated to another human organism by that gesture. If that gesture does so indicate to another organism the subsequent (or resultant) behavior of the given organism, then it has meaning. ... Meaning is thus a development of something objectively there as a relation between certain phases of the social act; it is not a physical addition to that act and it is not an “idea” as traditionally conceived.

It is surely not a coincidence that a very similar standpoint was, by that time, assumed also by the leading figure of American linguistics, Leonard Bloomfield [1933, 27]:

When anything apparently unimportant turns out to be closely connected with more important things, we say that it has after all, a “meaning”; namely it “means” these more important things. Accordingly, we say that speech-utterance, trivial and unimportant in itself, is important because it has *meaning*: the meaning consists of the important things with which the speech utterance is connected with, namely the practical events [stimuli and reactions].

During the last quarter of the twentieth century, the ideas of pragmatism reappeared in a new guise in the writings of some of the American analytic philosophers, who found it congenial to the kind of naturalism (see 5.2) they wanted to endorse. The initiator of this ‘neopragmatist’ approach to language was Willard Van Orman Quine [1960; 1969; 1974], who proposed seeing language as “a social

art we all acquire on the evidence solely of other people's overt behavior under publicly recognizable circumstances" [1969, 26]. Therefore, he concluded, "the question whether two expressions are alike or unlike in meaning has no determinate answer, known or unknown, except insofar as the answer is settled by people's speech dispositions, known or unknown" (*ibid.*, 29). (Obviously a standpoint not too far from Wittgenstein's.)

Quine thus concluded that as we cannot find out what a word means otherwise than by learning how it is used, meaning cannot but consist in some aspects of use. He claims that though a psychologist can choose to accept or reject behaviorism, the theorist of language has no such choice: every user of language did learn language by observing the behavior of his fellow speakers, and hence language must be simply a matter of this behavior. Resulting from this were various kinds of 'use-theories of meaning'.

To throw light on the details of meaning, Quine devised his famous thought experiment with radical translation. He invites us to imagine a field linguist trying to decipher an unknown 'jungle language', a language which has never before been translated into any other language. The first cues he gets, claims Quine, would consist in remarkable co-variations of certain types of utterances with certain types of events — perhaps the utterances of "gavagai" with the occurrences of rabbits. Quine takes pain to indicate that the links <sentence → situation> thus noted cannot be readily transformed into the links <word → object> (<"gavagai" → rabbit>), for *the same* <sentence → situation> link could be transformed into *different* <word → object> links (not only <"gavagai" → rabbit>, but also e.g. <"gavagai" → undetached rabbit part>) and there is no way to single out the 'right' one. Hence, Quine concludes, language cannot rest on a word-object relation, such as the relation of reference.

From this point of view, there is not more to semantics than the ways speakers employ words, and hence if we want to talk about meanings (and Quine himself suggests that we would do well to eschew this concept altogether, making do with only such concepts as reference and stimulus-response), we must identify them with the words' roles within the 'language games' that speakers play. This Quinean standpoint was further elaborated by a number of philosophers, the most prominent among them being Donald Davidson [1984; 2005] and Richard Rorty [1980; 1989].

Davidson compromised Quine's naturalism and pragmatism by stressing the centrality of the irreducible (and hence unnaturalizable) concept of truth: "Without a grasp of the concept of truth," he claims, "not only language, but thought itself, is impossible" [1999, 114]. This means that interpreting somebody as using *language*, i.e. uttering *meaningful* words is impossible without the interpreter being equipped with the concept of truth, which is irreducible to the conceptual apparatus of natural sciences. On the other hand, Davidson went even further than Quine by challenging the very concept of language: "There is no such thing as a language, not if a language is anything like what many philosophers and linguists have supposed" [Davidson, 1986]. This means that there is nothing beyond our

‘language games’, the interplays of our communication activities. To see language as a steady, abstract system is a potentially misleading hypostasis.

Rorty, on the other hand, has fully embraced the Quinean (neo)pragmatism, but claims that this view of language leads us if not directly to a form of linguistic relativism, then to its verge. He concluded that the Quinean and Davidsonian view of language implies that there is no comparing languages w.r.t. how they ‘fit the world’; and indeed that there is nothing upon which to base an arbitration between different languages. Hence, Rorty [1989, 80] urges, “nothing can serve as a criticism of a final vocabulary save another final vocabulary” — we cannot compare what is said with how things really are, for to articulate how things really are we again need words, so we end up by comparing what is said with what is said in other words.

3.2.3 *The later Wittgenstein and the problem of rule-following*

The concept of *language game*, of course, was introduced by the later Wittgenstein — he employed it to indicate that the ways we use language are far too varied to be reduced to something like ‘naming things’. Wittgenstein [1953, §23] says:

But how many kinds of sentence are there? Say assertion, question, and command? — There are countless kinds: countless different kinds of use of what we call “symbols”, “words”, “sentences”. And this multiplicity is not something fixed, given once for all; but new types of language, new language-games, as we may say, come into existence, and others become obsolete and get forgotten. ... Here the term “language-game” is meant to bring into prominence the fact that the speaking of language is part of an activity, or of a form of life.

This has led some authors to render Wittgenstein as a relativist and a prophet of postmodernist pluralism (see esp. [Lyotard, 1979]).

However, Wittgenstein did not take the statement of the plurality of language games as a *conclusion* of his investigations, but rather as a preliminary diagnosis leading him to investigate the specifics of this species of ‘game’ and consequently of the nature of language. Wittgenstein concluded that the concept of language game is inextricable from the concept of *rule*, and as he was convinced that not all the rules can be explicit (in pain of an infinite regress), he decided that the most basic rules of language must be somehow *implicit to the praxis of using language*. This has opened up one of the largest philosophical discussions of the second half of the twentieth century — the discussion of what it takes to ‘follow an implicit rule’ (see esp. [Kripke, 1982; Baker & Hacker, 1984; McDowell, 1984]).

The approach to language which stresses the importance of *rule-determinedness* of the usage of expressions (the distinction between *correct* and *incorrect* usage) led to a *normative* variety of the ‘use-theory of meaning’. In parallel with Wittgenstein, this approach was elaborated by Wilfrid Sellars [1991]. Sellars’ view was that concepts and rules are two sides of the same coin; that having a concept is nothing over and above accepting a cluster of rules. Language, according to him, was

directly a system of rules which gets handed down from generation to generation by initiating new adepts into the rule-following enterprise.

Sellars' continuator Robert Brandom [1994] then redescribed language as a set of rule-governed games centered around the crucial game of *giving and asking for reasons*. This game, he claims, is prominent in that it gives language its basic point and it is also constitutive of its semantics. As this game is fuelled by our ability to recognize a statement as a sound reason for another statement and as meaning is constituted by the rule within this very game, meaning comes down to *inferential role*.

3.3 *Continental philosophers on language*

The conceptions of language outlined so far have been developed mostly by *analytic* philosophers, i.e. the philosophers from that side of the philosophical landscape where philosophy borders with science; this approach to philosophy has predominated within the Anglo-American realm as well as in some European countries. But on the other side, there are philosophical lands bordering with literature; and the nature of language has also been addressed by philosophers from these realms, the *continental* ones, whose center has always been in France and some other European lands. And expectably, the theories of these philosophers are sometimes not really theories in the sense in which the term “theory” is employed by scientists or analytic philosophers, but rather texts of a different genre — in some cases more works of art than of science.

3.3.1 *Heidegger*

Martin Heidegger, probably the most celebrated representative of continental philosophy of the twentieth century, paid language quite a lot of attention. In his early seminal book *Sein und Zeit* [1927a], he was concerned with the impossibility of considering language as just one thing among other things of our world. Language — or better, speech, which he maintains is more basic than language as a system — is first and foremost our way of “being within the world”; it is not part of the world, but rather, we can say, its presupposition.

Just like the later Wittgenstein, Heidegger vehemently rejected the code conception of language: “not even the relation of a word-sound to a word-meaning can be understood as a sign-relation” [1927b, 293]. And he insisted that the world we live in is always ‘contaminated’ by the means of our language: “we do not say what we see, but rather the reverse, we see what *one says* about the matter” [1927a, 75]. Thus Heidegger indicates that language plays a crucial role within the forming of our world.

Speech and language kept assuming an ever more important place in Heidegger's later writings; and he kept stressing the ‘ineffability’ of language. As Kusch [1989, 202] puts it, he maintained that “we cannot analyze language with the help of any other category, since all categories appear only in language”. He also intensified his pronouncement to the effect of the world-forming capacities of language: “Only

where the word for the thing has been found is the thing a thing. Only thus it is. Accordingly we must stress as follows: no thing is where the word, that is, the name, is lacking” [1959, 164].

In an often quoted passage Heidegger [1947, 145] says:

Language is the house of Being. In its home man dwells. Those who think and those who create with words are the guardians of this home. Their guardianship accomplishes the manifestation of Being insofar as they bring the manifestation to language and maintain it in language through their speech.

In this way he reiterates his conviction that language cannot be seen as merely one of the things within the world, but rather as something more fundamental — not only that it is ‘ineffable’, but also that it is something we should investigate in a disinterested way, characteristic of science.

3.3.2 *The French poststructuralists*

In France, de Saussure’s structuralist approach to language led, via generalization, to the philosophy of structuralism and subsequently its poststructuralist revision. Originally, it was based on the generalization of de Saussure’s approach from language to other kinds of ‘systems of signification’; however, it has also brought about new and ambitious philosophical accounts of language.

Michel Foucault [1966; 1971] stressed that the structure of languages and of individual discourses within its framework are man-made and are often tools of wielding power and of oppression. Establishing a vocabulary and standards of a discourse we often establish a social order which favors certain groups whereas it ostracizes others (thus, according to Foucault, calling somebody “mad” is primarily not an empirical description, but rather a normative decision). Therefore, language is a very powerful tool in ‘creating reality’ — it is not a means of describing a ready-made world, but rather a means of production of a world of our own:

The world does not provide us with a legible face, leaving us merely to decipher it; it does not work hand in glove with what we already know We must conceive discourse as a violence that we do to things, or, at all events, as a practice we impose upon them; it is in this practice that the events of discourse find the principle of their regularity.

The most celebrated poststructuralist thinker to deal with language, Jacques Derrida [1967], concentrated especially on the criticism of the “metaphysics of presence.” Meaning, Derrida argues, is usually conceived of as wholly present, as a “transcendental signified”; however, according to him, significance is always a matter of not only presence (of some ‘parts’ of meaning), but also of a necessary absence, of a *deference* (of other ones). (Hence Derrida’s neologism *diférance*.)

The failure to see this dialectical nature of any signification, according to Derrida, is closely connected with what he calls the *logocentrism* of the ordinary

Western philosophy. It was, he says, de Saussure's failure that he did not utterly repudiate the traditional metaphysical conception of significance, but merely replaced the traditional metaphysics of meanings-objects by the new metaphysics of structures. We must, Derrida urges, see language as lacking any substantial 'centre' — hence his views are usually labeled as *poststructuralist*.

4 KEY CONCEPTS

Aside of the very concept of *language*, linguistic and philosophical accounts of language usually rest on some fundamental concepts specific to their subject matter. Without aspiring to exhaustivity we list what may be the most crucial of them.

4.1 Grammar

A grammar of a language amounts to the ways in which its expressions add up to more complex expressions. (Sometimes this term is employed so that it applies not only to the expressions themselves, but also to their meanings.) A grammar is usually seen as a system of *rules* which, thanks to the Chomskyan and post-Chomskyan mathematization of linguistics, can be captured formally in various ways.

Some theoreticians of language, especially logically-minded philosophers, take grammar to be merely 'in the eye of the beholder' — i.e. to be just a theoretician's way of accounting for the apparent ability of the speakers to produce an unrestricted number of utterances. Hence they take the concept of grammar as a not really essential, instrumental matter.

On the other hand, from the perspective of many linguists, it is this very concept which appears as the key concept of the whole theory of language — for grammar, according to this view, is the way in which language is implemented within the human mind/brain. After Chomsky [1957] presented his first mathematical way of capturing grammar, several other attempts (due to himself as well as his followers) followed. This was followed by attempts at addressing semantics in straightforwardly parallel terms [Lakoff, 1971; Katz, 1972]. Also Chomsky himself incorporated semantics into his theory of the "language faculty" as one of its grammatical levels (that of "logical form").

The concept of grammar is important also because it underlies the much discussed *principle of compositionality of meaning* [Janssen, 1997; Werning *et al.*, 2005]. This principle states that the meaning of every complex expression is uniquely determined by the meanings of its parts plus the mode of their combination. (Another, equivalent formulation is that to every grammatical rule R there exists a semantic rule R^* so that the meaning of $R(e_1, \dots, e_n)$, where e_1, \dots, e_n are expressions to which R is applicable, always equals the result of applying R^* to the respective meanings of e_1, \dots, e_n .) The role of grammar within this principle is essential — taking grammar to be wholly arbitrary trivializes it (for then every

language becomes compositional); so we can have a nontrivial concept of compositionality only if we rely on some substantial concept of grammar [Westerståhl, 1998].

4.2 *Meaning*

The study of meaning is, of course, a natural part of the study of language; and it was a linguist, Michel Bréal [1897] who coined the word *semantics*. However, the study of meaning within linguistics was always hindered by the fact that the linguists were not quite sure *what exactly* to study under the heading of meaning. Even de Saussure, who proposed the structuralist foundations of linguistics, did not give a clear answer to this question; and Chomsky explicitly denied that we need any such things as meanings to account for linguistic communication. (“As for communication,” he claims [1993, p. 21], “it does not require shared ‘public meanings’ any more than it requires ‘public pronunciations’.”).

However, as a matter of fact, we often do speak about meaning: we say that words acquire, change or lose their meanings, we distinguish between words or expressions which do have meaning and those which do not etc. This made many philosophers contemplate the question *what kind of entity (if any) is meaning?* For the answer there are four basic kinds of candidates:

1. Meaning is a ‘tangible’ object, i.e. an object of the physical world. This answer suggests itself if we take proper names as our paradigm of meaningful expressions (see 3.1). However, if we insist that each ‘meaningful’ expression should have a meaning, then there are clearly not enough suitable entities of this kind to fulfill the task. What would be, e.g., the tangible meaning of ‘pig’? We have already seen that it can be neither a particular pig; nor the collection of all existing pigs (unless we want to allow the word to change its meaning all the time). Therefore probably no one would want to explicate the concept of meaning in this way — though these considerations may lead to a view of language in which the concept of meaning is superseded by the concept of reference (see 3.1.1).
2. Meaning is a mental entity. This explication avoids the problem of the previous one, as the mental realms appear to be inexhaustibly rich. However, it faces another kind of problem: it would seem that meaning, by its very nature, must be something that can be *shared* by various speakers and hence cannot be locked within the head of any of them. Nevertheless, there is little doubt that meaningful language is closely connected with mental content; and hence psychologist theories of semantics flourish (see [Shiffer, 1972; 1987; Fodor, 1987; 1998]).
3. Those who think that meaning is an object and admit that it can be neither physical, nor mental are forced to maintain that it must be an entity of a ‘third realm’ (beyond those of the physical and the mental). This was

the conclusion from Frege [1918/9], who initiated a host of semantic theories grappling with meaning using the means of mathematics or logic. The semantics of the formal languages of logic was then elaborated especially by Tarski [1939]; but this still provided no suitable framework for natural language analysis. Only after Chomsky's revolution in linguistics did the methods of 'formal semantics' come to be applied to natural language; the first to do this quite systematically was Montague [1974].

4. A large number of philosophers and linguists put up with the conclusion that there is no such object as meaning, that the meaning talk is a mere *façon de parler*. This does not mean that there is no distinction between meaningful and meaningless expressions; but rather that meaningfulness should be seen as a property of an expression rather than as an object attached to it. Typically, *to have such and such* meaning is explicated as *to play such and such role within a language game*.

Aside of the questions concerning the 'substantial' nature of meaning, we can investigate also its 'structural' nature. This is to say that there are some determinants of meaning which hold whatever kind of stuff meanings may be made of. An example of such a principle is the principle of compositionality (see 4.1), or else the principle stating that if two sentences differ in truth values, then they are bound to differ in meanings [Cresswell, 1982]. *Structuralism* with respect to meaning can then be characterized as the standpoint denying meaningfulness of the 'substantial' questions and concentrating on the 'structural' ones. In the spirit of this standpoint Lewis [1972, p. 173] claimed that "in order to say what a meaning *is*, we may first ask what a meaning *does* and then find something which does that."

4.3 Reference

The paradigm of the relation of *reference* is the link between a singular term, such as "the king of Jordan" and the object within the real world that is 'picked up' by the term — the actual king. Some theoreticians of language argue that this is *the* relationship constitutive of language, for they see the whole point of language in referring to things (see 3.1.1).

On the other extreme, there are theories which deny reference any important place at all. An example of such an approach is Quine's, resulting into the doctrine of the indeterminacy of reference (see 3.2.2), which, according to Davidson [1979, pp. 233-234], must lead us to the conclusion that "any claim about reference, however many times relativized, will be as meaningless as 'Socrates is taller than'."

From the viewpoint of the two-level semantics (see 3.1), the level of reference (Frege's level of *Bedeutung*, Carnap's level of *extension*) is considered important also because it appears to be just on this level that *truth* emerges (indeed, according to both Frege and Carnap, the reference of a sentence directly *is* its truth value). However, Carnap's considerations indicated that this level is not 'self-sustaining':

that the extension of many complex expressions, and consequently truth values of many sentences, are a matter of more than just the extensions of its parts (in other ways, extensions are not compositional — see [Peregrin, 2007]).

4.4 *Truth*

One of the most crucial questions related to the working of language was always the question how does language “hook on the world”. And it was often taken for granted that it is the concept of *truth* which plays an important role here — for is it not *truth* which is the mark of a successful “hooking”? Do we not call a sentence or an utterance *true* just when it says things within the world are just the way they really are?

Viewed in this way, truth appears to be something like the measure of the success of the contact between our linguistic pronouncements or theories and reality; and hence appears as one of the indispensable concepts of any account of language. This construal of truth as a matter of *correspondence* between the content of what is said and the facts of the matter is almost as old as the interest in language itself — thus, Aristotle [IV 7, 1011b25-28] writes

To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, or of what is not that it is not, is true.

However, the construal of truth as a correspondence has been often challenged on the grounds that the idea of comparing two such different entities as a (content of a) linguistic expression and a (part of the) world does not make any understandable sense — what can be compared, claim the critiques, is always a statement with another statement, a belief with another belief, or a proposition with another proposition. This led to an alternative, *coherence* theory of truth, which maintains that truth amounts to a coherence between a statement (or a belief) and a body of other statements (beliefs). The trouble with this construal of truth is that the concept of coherence has never been made sufficiently clear.

During the first half of the twentieth century, the logician Alfred Tarski [1933; 1944] tried to provide a theory of truth in the spirit of contemporary axiomatic theories of other general concepts (e.g. *set* or *natural number*). And though some of the consequences of his achievement are still under discussion, their influence on almost all subsequent theoreticians of truth has been overwhelming. Tarski concluded that what we should accept as the determinants of the theory of truth are all statements of the form

The sentence ... is true iff ...

where the three dots are replaced by a name of a sentence and the three dashes by the very sentence. Thus, an instance of the scheme is, for example,

The sentence ‘Snow is white’ is true iff snow is white.

Tarski showed that to find a finite number of axiom entailing the ensuing infinite number of statements requires underpinning the concept of truth with the semantic notion of *satisfaction* (this holds for languages of the shape of predicate logic, on which he concentrated; for natural languages it might possibly be a concept such as *designation* — cf. Carnap, 1942). Some of Tarski's followers have taken this as indicating that Tarski's theory is a species of the correspondence theory; others have taken it to be *sui generis* (the *semantic* conception).

Today, we can distinguish several competing answers to the question about the nature of truth (see [Kirkham, 1992; Kühne, 2005], for more details). Besides various elaborations of the correspondence theory (see [Davidson, 1969; Armstrong, 2004]) and the coherence theory [Rescher, 1973], we can also encounter various neo-pragmatic approaches, taking truth as a form of utility [Rorty, 1991], approaches taking truth as a kind of ideal justifiability [Dummett, 1978], 'minimalist' or 'deflationist' theories based on the conviction that the role of the truth-predicate within language is purely grammatical and hence that there is really no concept of truth [Horwich, 1998], and also theories which, contrary to this, hold the concept of truth for so fundamental that it is incapable of being explained [Davidson, 1999].

5 METHODOLOGICAL ISSUES

It is clear that linguistics is partly carried out in accordance with the relatively clear methodological canons of empirical science. However, we saw that the closer we are to such abstract questions as *what is meaning?* and *what is language?*, the less clear its methodological tenets are. Should we answer these questions by comparative investigations of various languages; or should we resort to some kind of 'philosophical' or '*a priori*' analysis?

Let us survey some of the most discussed problems concerning the ways to study language.

5.1 *Syntax, semantics and pragmatics*

The study of language is usually subdivided into various subdisciplines. The most common division, canonized by Morris [1938], distinguishes between

syntax, which deals with the relations between expressions;

semantics, which addresses the relations between expressions and what they stand for;

and

pragmatics, which examines the relations between expressions and those who use it.

This delimitation has been widely accepted, but is also subject to quarrel. Philosophers usually do not question the boundary between syntax and semantics (though

within some linguistic frameworks, in which semantics looks very much like an ‘inner syntax’, even this boundary may get blurred), but they often dispute the one between semantics and pragmatics (see [Turner, 1999])

The boundary is clear only when we stick to the code conception of language: within this framework an expression comes to literally *stand for* its meaning (or its referent) and we may say that pragmatics concerns various ‘side-issues’ of this standing for. Pragmatics thus appears as entirely parasitic upon semantics. On the other hand, from the viewpoint of the toolbox conception it looks as if, on the contrary, semantics were parasitic upon pragmatics: the meaning of an expression appears to be simply the most central part of the employment of the expression by its users. Hence semantics comes to appear as a (rather arbitrarily delimited) core of part of pragmatics.

5.2 *Naturalism*

What kind of idiom should we use to account for language and meaning? What kind of reality do we refer to when we say that an expression *means thus and so*?

Modern science tends to take for granted that everything there really is is capturable by the conceptual means of natural sciences and consequently perhaps of physics, to which the other natural sciences are thought to be principally reducible. This kind of *naturalism* seems to suggest that if the talk about language and meaning is to be understood as contentful at all, then it too must in principle be translatable into the language of physics. So how can we so translate a statement to the effect that some expression means thus and so? In general, there seem to be three possibilities:

1. We can try to reduce the concept of meaning to the concept of reference and explain reference physicalistically — usually in terms of a causal connection [Field, 1972] or a co-occurrence [Dretske, 1981; Fodor, 1998].
2. We can claim that we do not need the concept of meaning at all and all we have to do is to describe the way we use language and/or the way our brains back up this usage [Quine, 1960; Chomsky, 1995].
3. Posit some irreducible non-physicalist concepts. The most popular options appear to be *the concept of intentionality* between mental contents, and consequently expressions expressing them, and things in the world [Searle, 1983]; and *the normative mode of speech* rendering the meaning talk as a normative talk (explicate *E means thus and so* roughly as *E should be used thus and so* — [Brandom, 1994]).

5.3 *Formal models*

When Chomsky bridged the gulf which traditionally separated linguistics from mathematics, the study of language became receptive to the ‘mathematization’

which many natural sciences had undergone earlier. Language as an empirical phenomenon (just like many other empirical phenomena) is described in mathematical terms to obtain a ‘model’, which is investigated using mathematical means and the results are then projected back on the phenomenon. (We can also understand this mathematization as a matter of extracting the *structure* of the phenomenon in the form of a mathematical object.)

In his first book, Chomsky [1957] often talked about “models of language”; however, later he has ever more tended to see the rules he was studying as not a matter of a model, but as directly engraved within the “language faculty” of the human mind/brain. Formal models of language, however, started to flourish within the context of the so called *formal semantics* (a movement on the borders of logic, linguistics, philosophy and computer science) which used mathematical, and especially mathematico-logical means to model meaning.

This enterprise was based on the idea of taking meanings-objects at face value and hence modeling language as an algebra of expressions, compositionally (and that means: homomorphically) mapped on an algebra of denotations, which were usually set-theoretical objects. As this amounted to applying the methods of *model theory*, developed within logic (see, e.g. [Hodges, 1993]), to natural language, this enterprise is sometimes also referred to as *model-theoretic semantics*. The first models of language of this kind were the intensional ones of Montague [1974], Cresswell [1973] and others; and various modified and elaborated versions followed (see [van Benthem & ter Meulen, 1997], for an overview).

Some of the exponents of formal semantics see their enterprise as the underwriting of the code conception of language, seeing the relationship between an expression of the formal model and its set-theoretical denotation as a direct depiction of the relationship between a factual expression and its factual meaning. This, however, is not necessary; for the relation of such models to real languages can be understood in a less direct way — for example the set-theoretical denotations can be seen as explication of inferential roles of expressions (see [Peregrin, 2001]).

5.4 *Linguistic universals and linguistic relativism*

One of the tasks often assigned to a theory of language is the search for ‘linguistic universals’, for features of individual languages which appear to be constant across them. The study of such universals is then considered as the study of ‘language as such’ — of a type whose tokens are the individual natural (and possibly also some artificial) languages. Theoreticians of language often differ in their views of the ratio of the universal vs. idiosyncratic components of an individual language.

At one extreme, there are ‘universalist’ theories according to which all languages are mere minor variations of a general scheme. Thus, Wierzbicka [1980] proposed that there is a minimal, generally human conceptual base such that every possible language is merely its elaboration. Also, Chomsky suggests that the most important inborn linguistic structures are the same for every individual — learning only delivers vocabulary and fixes a few free parameters of this universal structure.

At the other extreme, there are those who doubt that there are any important linguistic universals at all. These ‘linguistic relativists’ claim that, at least as for semantics, individual languages may well be (and sometimes indeed are) so ‘incommensurable’ that their respective speakers can not even be conceived as living within the same world. The idea of such relativism goes back to Wilhelm von Humboldt, and within the last century it was defended both by linguists [Sapir, 1921; Whorf, 1956] and by philosophers [Cassirer, 1923; Goodman, 1978].

6 PROSPECTS

It is clear that a language, being both a ‘thing’ among other things of our world *and* a prism which is related to the way we perceive the world with all its things, has one aspect which makes it a subject of scientific study and another which makes it an important subject matter for philosophical considerations. Hence, linguistics and philosophy (of language) are destined to cooperate. However, the fruitfulness of their cooperation largely depend on the way they manage to divide their ‘spheres of influence’ within the realm of language and on building a suitable interface between their ‘spheres’. Fortunately, the host of scholars who study language disregarding barriers between disciplines continually increases.

The list of questions situated along the border of linguistics and philosophy, the answers to which are far from univocally accepted, is long; without pretending to exhaustivity, let me indicate at least some of the most important:

- *the nature of language*: Should we see language primarily as a communal institution; or rather as a matter of individual psychologies of its speakers; or rather as an abstract object addressable in mathematical terms?
- *the nature of meaning*: Should we see meaning as an abstract object, as a mental entity or rather as kind of role?
- *the nature of reference*: What is the tie between an expression and the thing it is usually taken to ‘refer to’? Is its nature causal, is it mediated by some non-causal powers of human mind (‘intentionality’), or is it perhaps a matter of ‘rules’ or ‘conventions’?
- *language vs. languages*: does it make sense to ponder *language as such*, or should we investigate only individual languages (making at most empirical generalizations)? How big is the ‘common denominator’ of all possible languages? Can there exist languages untranslatable into each other?
- *the ‘implementation’ of language*: what is the relationship between public language and the states of the minds/brains of its speakers (Chomsky’s E-language and I-language)? Is the former only a kind of statistical aggregation of the manifestations of the former, or does it rather exist in some more ‘independent’ way, perhaps even conversely influencing people’s minds/brains?

- *the nature of a theory of language*: What conceptual resources should we use to account for language and meaning? Are we to make do with the terms we use to account for the non-human world, or are we to avail ourselves of some additional concept of a different kind? And if so, what kind?

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