Post-cognitivism: A Plea for Reference in Linguistic Theory

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Abstract

This paper examines how reference has been accounted for by the three main linguistic traditions in the 20th century: structuralism, analytical philosophy and cognitivism. Structuralism acknowledged the importance of reference but postponed its study to the future; analytical philosophy is centrally concerned with reference, thought and language and holds that the link between them can be accounted for by logic; cognitivism ignores the problem altogether and is content with holding implicit views in terms of logic and psychology. Yet speaking necessarily means speaking about *something* and linguistic theory should take this something into account. The question is how. This paper develops a referential view based on C.S. Peirce which could offer linguistics a new paradigm.

Introduction

Twentieth century linguistics has not been very sympathetic towards reference. The fact that speaking necessarily involves speaking *about something* has not been at the heart of linguistic theory, to say the least. It is argued in this paper that disregard for reference has produced a theoretical dead end in the study of language. Cognitivism is resorting to an ever increasing array of *ad hoc* explanatory entities such as functions, universals, principles whose metaphysical nature is not recognised; corpus linguistics is often content with listing a chaos of observations which offer no real explanation; and continental linguistics has recently been concentrating on the study of minute linguistic phenomena, with no global theoretical outlook. We are not arguing in favour of an all-encompassing, do-it-all theory of language. There is nothing wrong with eclecticism as long as it produces results, and all theories do, albeit in a somewhat dispersed way. Yet maybe the time has come to formulate a new paradigm which could help foster convergence in linguistic theory and we believe the study of reference could just trigger such a change. This paper gives a brief account of how reference has been treated by the three main linguistic traditions of the twentieth century, namely structuralism, philosophy of language and cognitivism. It will then show how necessary reference is and discuss how it could be taken into account by linguistic theory.

1. Reference and structuralism

Structuralism did not deny the importance of reference in the study of language. L. Bloomfield and F. de Saussure formulated a whole new approach to language and they were somewhat awed by the scope of the task. That is why they tried to simplify their subject, leaving the mental and real-world aspects of meaning to other sciences. For Bloomfield, "*the situations which prompt people to utter speech include* ***every object and happening in their universe****. In order to give a scientifically accurate definition of meaning for every form of language, we should have to have a scientifically accurate knowledge of* ***everything in the speaker's world****. The actual extent of human knowledge is very small, compared to this*" (Bloomfield 1933/1970: 139-140). "*In practice, we define the meaning of a linguistic form, wherever we can, in terms of some other science*". This in effect means that the study of meaning is "outsourced" to other sciences, not because reference and psychology are not relevant (Bloomfield acknowledges they are), but because the amount of knowledge needed to account for them is too awesome to be considered by just one science.

Another reason for the structuralist neglect of reference was the suspicion that taking the real-world into account would mean treading down the slippery path to metaphysics. Linguistics had just managed to establish itself as a science, and linguists were loath to introduce metaphysical elements into the theory. As E. Benveniste remarks: "*ce problème métaphysique de l'accord entre l'esprit et le monde* [est un] *problème que le linguiste sera peut-être un jour en mesure d'aborder avec fruit, mais qu'il fera mieux pour*

l'instant de délaisser"[1] (Benveniste 1966 : 52). This wariness about metaphysics can be linked to the evolution of ideas at the time. The *Vienna circle*, the terminologists, many philosophers, mathematicians, physicists, were advocating a godless view of science, freed from any trace of metaphysics, and linguists thought their science should not be an exception.

Also, Saussure's seminal definition of the sign as a double entity made up of a *signifier* and a *signified* locked the theoretical discussion into a tête-à-tête between form and concept where reference can only be thought of as an intruder, an outsider trying to find an illegitimate place by means of some sort of magical metaphysical trickery. Rejection of reference has sometimes been theorised, as for example by A. J. Greimas, when he argues that taking the referent into account is a "*dreamlike*" undertaking: ".... ***se référer aux choses*** *pour l'explication des* ***signes*** *ne veut rien dire de plus que tenter une transposition, impraticable, des significations contenues dans les langues naturelles en ensembles signifiants non-linguistiques : entreprise, on le voit, de caractère* ***onirique***" (Greimas 1986 : 15-16)[2].

Structuralism had outlined a theoretical framework within which it developed successfully and produced a fascinating view of language as a system of signs which can be fruitfully studied by observation of corpora and a few quite simple methodological tools such as paradigmatic permutations and syntagmatic shifts. Saussure's notion of language as a system "*où tout se tient*", where everything holds together, did not include reference, but the relevance of the real-world in linguistics had been acknowledged. Present day linguistics certainly owes structuralism a great debt of gratitude, which is not always recognised.

2. Reference in the analytical tradition

Philosophers have studied the mystery of reference since the beginning of philosophical times. How is it possible that words are able to designate things? What is the nature of that referential link? Is it a gift of God? Some sort the species-specific feature? A property of the world? Etc. To give but one example of how the subject has been tackled, Aristotle made a distinction between proper nouns, which refer to unique substances such as the sky, the moon, the sun, Plato, etc. and adjectives (*white, round, beautiful*,…) and categories (*dog, tree*…)[3], which refer to attributes and pluralities. *Tree* or *beautiful* need individuals or substance to come into existence: beauty has to be carried by something (which is then beautiful), and categories (trees) can only be apprehended through instances (one or several trees). Thus proper nouns refer directly to substance, while adjectives and categories refer to substance by way of abstract entities. Aristotle also thought that such entities as *beauty* and *tree* exist *per se*, as ideal forms, which may incarnate in matter, and this explains why we are able to name *tree* or *beautiful* or *round* a great variety of very different objects. When the artist makes bronze spheres, he makes use of an existing form (the sphere) which he applies to matter (bronze). If we are able to name *tree* such or such an instance, it is because it shares properties with an ideal category. The conclusion is that naming is a sort of process, possibly a calculus.

The mystery of reference has been the subject of countless studies since Ancient Greece. For example, this is how B. Russell saw the relationship between words and things. *"Let us give the name "qualities" to specific shades of colour, specific degrees of hardness, sounds completely defined as to pitch and loudness and every other distinguishable characteristic, and so on. [...] Common sense regards a "thing" as having qualities, but not as defined by them. [...] I wish to suggest that, wherever there is, for common sense, a "thing" having the quality C, we should say, instead, that C itself exists in that place, and that the "thing" is to be replaced by the collection of qualities existing in the place in question."* (Russell 1950, p. 98).

To understand an object, we should break it down into its constituents and consider the whole as a function of the parts. The parts are assembled according to mathematical and logical rules, and this explains why scientists are able to formulate Laws of Nature. Such laws are there somewhere, hidden behind the chaos of the visible world, but we can formulate them because

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[1] *The metaphysical problem of the accord between the mind and the world* [is a] *problem the linguist might one day be able to tackle fruitfully, but he had better leave it aside for the time being*.

[2] *… referring to things to explain signs means nothing else than attempting an unworkable transposition of the meanings contained in natural languages into non-linguistic meaningful sets : obviously a* ***dreamlike*** *undertaking*.

[3] Much of this section is inspired by Russell 1946.

logic and mathematics are the ontological principle of the universe. If nature is fundamentally logical, it follows that thought and language, being part of nature, must also be logical. Therefore, whatever can be expressed logically is in effect related to the world. Any truth found in a logical proposition is thus true of the world itself, and therefore referential. Reference is "outsourced" to logic.

This is of course a very Cartesian stance, but with a difference. Descartes explicitly attributed mathematics and logic to God, who made them available to mankind to study His creation. Modern Cartesians think of them as some sort of property of the universe. Descartes' position is arguably more coherent, as he does not try to hide a basically metaphysical position behind a rather weak implicit hypothesis about a supposedly logical nature of Nature. The belief in the ontological value of logic has very strong cultural roots, especially in the Anglo-Saxon world. It does not seem to have been harmed much by Gödel's proof, formulated in 1931[4], where mathematical evidence is given that the truth of all the propositions within an axiomatic system cannot be shown. Truth needs an external point of view, and therefore a system of systems, containing all systems, if there was one, could not provide the whole truth. Logic can therefore not be the ontological principle of the universe.

Logic and mathematics are certainly very successful at describing the world and predicting phenomena, but this does not mean that nature obeys logical and mathematical laws. Logic and mathematics are languages created by humans, and they are particularly efficient at helping us get a grasp on things. It does not follow that they are the essence of the universe. A logical or mathematical truth about the world only expresses a point of view about selected and named elements of the world.

The legacy of analytical philosophy is extraordinarily rich, not so much in terms of actual results, which are quite often somewhat scholastic and contrived, but because this branch of Western philosophy has generated a very lively century-long debate about the nature of the world, thought and language, and because it produced philosophers such as L. Wittgenstein, B. Russell and J. Searle.

[4] *On formally undecidable propositions of 'Principia Mathematica' and related systems*

3. Reference and cognitivism

Cognitivist theories do not offer a theory of reference. The problem is simply ignored, in sharp contrast to structuralism and to analytical philosophy. Yet cognitivism does hold an implicit view of reference, which can sometimes be detected in the literature, for example in Chomsky (2000), which has inspired much of the following discussion. In fact cognitivist theories hold *two* views on reference, both implicit. One of them may be called *cultural logicism* and the other one *thought as reference.*

3.1 Cultural logicism

Cognitivist theories are basically concerned with matching thought and language. For example, this is how S. Pinker explains the nature of language in a BBC Radio Four interview in 1997. "*I think language shows signs of complexity to make it uncannily crafted to get ideas from inside one person's head to another. It's really a way of taking this complicated thing that we call an idea, this set of logical propositions, and convert it into a series of squeaks and hums and pops and hisses that can go through the air and that a brain at the other end can then decode to figure out what thoughts originally went into it*". This view of language is the bread and butter of cognitivist linguistics. Thought is coded into language, transmitted and then decoded into thought at the other end. The linguist's task is to formulate the laws which are able to produce such a feat.

To that end, cognivist theories posit innumerable entities such as functions, principles, universals, operators, and so on, without worrying much about their reality. And indeed why worry? Has it not been established that logic and mathematics are the means by which scientists are able to discover the Laws of Nature? Therefore, whatever can be expressed in terms of logic and mathematics inherits a link to the very nature of the world. An idea is a set of "*logical propositions*", according to Pinker (and many others). If these are *true*, then they are *ipso facto* related to the general Truth of the Universe.

Cognitivism has in effect inherited analytical views about logic and the world by way of uncritical social acceptance. Indeed, there is a sharp difference between this sort of *cultural logicism* and analytical philosophy. Debates in the analytical tradition have been extraordinarily passionate and have produced no certainty. Unconventional philosophers such as L. Wittgenstein have formulated theories that go

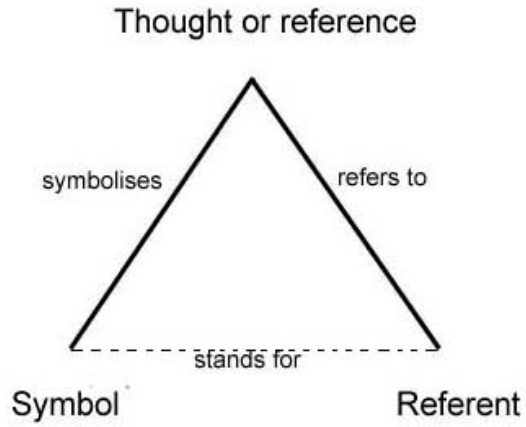
against the received wisdom of mainstream analytical philosophy. And indeed, mainstream philosophy has been busy trying to cope with Wittgenstein's extraordinary insights. B. Russell, for example, dismissed them by claiming Wittgenstein had taken to mysticism (Russell 1959, 1993:82-94). More recently S. Kripke tried to come to terms with Wittgenstein's scepticism, but failed (Kripke 1982, 1996).

Cultural logicism is nothing more than received wisdom. This is for example how Hun-Tak Lee introduces his interesting paper on child language: "*The acquisition of […] natural language logical structures is of interest to linguistics and cognitive science for a number of reasons. They are to the best of our knowledge a species-specific property that has emerged in the course of human evolution. No other animal has a communication system that is anything close to propositional logic or predicate calculus. All human languages have them. Operator-variable structures are closely tied to the ability to handle numbers, which exhibits the property of 'discrete infinity', considered to be also the most elementary property of the language faculty. Understood as instructions to performance systems, these representations are accessed by the conceptual-intentional system, which handles such things as thematic roles and their ranking hierarchy, or knowledge states such as what is counted as background or presupposed knowledge*" (Hun-Tak Lee, 2002, p. 157). There is such a thing as a language faculty, which is species-specific; human languages all possess propositional logic and predicate calculus, which are properties of the language faculty, along with the ability to handle operator-variable structures and numbers. All of this practically goes without saying.

Reference is thus "outsourced" to logic and mathematics, just as in the analytical tradition, with a smattering of genetics and biology into the bargain. Logic and the ability to handle numbers are hard-wired in our brains by way of our genome. Since logic and mathematics are the languages of the universe, any true idea is necessarily true of the real-world and therefore, necessarily, true for everyone. Thus, mutual understanding is achieved by way of some sort of general real-world and biological accord expressed in logical terms. Some authors, and most notably G. Lakoff in his 1972 book programmatically entitled "*Linguistics and Natural Logic*", tried to establish a "natural" link between generativism and logic, but it can be shown that such endeavours are doomed (Frath 2005a). Cognitivists have certainly managed to spare themselves the torments of doubt and uncertainty about the ontological nature of logic and mathematics, but at the cost of unwittingly swallowing metaphysics with line, hook and sinker.

3.2 Thought as reference

The other implicit position about reference in cognitivism probably originates in Ogden & Richards 1923 book, "*The Meaning of Meaning*" in which the now famous semiotic triangle appears for the first time[5]. Here it is with most of its original features.



For Ogden and Richards, "*between the **symbol** and the **referent** there is no relevant relation other than the indirect one, which consists in its being used by someone to stand for a referent. Symbol and Referent, that is to say, are not connected directly […] but only indirectly round the two sides of the triangle*" (Ogden & Richards 1923: 9-12). And indeed, there can obviously be no direct link between a word and an object. Whatever relationship there is takes place inside the brain. For Ogden and Richards, thought *is* reference: thought consists of relating words and other mental items such as concepts, representations, perceptions, etc. Therefore the study of thought *is* the study of reference.

4. A cognitivist dead end

The question is: can reference *only* be studied as an aspect of thought? When we speak, we speak *about something*, and this *something* is certainly of interest to the theory of language. Our linguistic activity is not triggered by some

[5] Though the Ancient Greeks had discussed the link between language, thought and the world long before.

internal urge to give our brains the opportunity to match thought and language. Utterances are not produced for possible decoding, as pheromones are released by butterflies just in case a sexual partner happens to be around. Language is not an autistic activity. There is an *I* who speaks about *something* to *someone*. In this section we shall see how the absence of reference in linguistic theory generates a metaphysical dead end.

Let us consider the following examples, taken from Talmy (2000). They refer to a contraption made up of a tank with a piston and a plug. The oil contained in the tank can be made to flow either by moving the piston at the side of the tank or by loosening the plug at the bottom of the tank. I can say:

a) I made the oil flow from the tank by pressing the piston against it
b) I made the oil flow from the tank with the piston
c) I let the oil flow from the tank by loosening the plug

but not

*d) *I let the oil flow from the tank with the plug*

The question Talmy addresses is why *b* is possible while the very similar *d* sentence is not. He hypothesises that "*the explanation for this asymmetry may lie in a language-universal treatment of 'instrument' as involving only positive impingement*" (Talmy 2000, p. 425). In other words, *with* implies a positive use of the instrument used to achieve such or such a result. In *d* the plug is loosened, *i.e.* used *negatively*; in *b* the piston is used *positively* to produce the oil flow.

In case the reader finds it difficult to grasp Talmy's point, we give another of his examples. To topple a display of cans, I can say:

*I toppled the display **with** a can*
*where **with** covers*
- by throwing a can at it
- by pressing against it with a can

but not

*-*by pulling a can out **from** the bottom tier*

Now let us try to figure out the consequences of such a position. On hearing a sentence containing *with*, for example *he was shot with a gun*, the mind is temporarily disturbed. Could it be that *with a gun* could mean the gun was used negatively, *i.e.* taken from him or something, and that this caused his death? No. *With* is an operator of *instrument* which implies a *positive* use of the gun (so to speak). This means we understand *with* by way of some other entity, *instrument,* which makes sure that *with* does not mean *without* or *from*. But where does this entity get its meaning from? Still some deeper and more basic elements?

Also, if understanding *with* means triggering some other entity, then a lot of other questions will have to be solved as well. To list but a few: who is *he*? what is a *gun*? what does *shot* mean? how can you get shot with a gun? is a bullet a part of a gun? is there another operator making sure that *with a gun* implies *with a bullet*? what is a bullet? And so on. Speaking and understanding are an endlessly recessing calculus and an ever-renewed recreation of language.

Let us now consider *he was **killed** with a gun*? What do we hesitate? Why do we tend to surmise he was not *shot* but killed otherwise, possibly by being hit on the head? Are there still other operators at work somewhere in that sentence, maybe on the lexical level of *killed,* implying a variety of ways one can get killed with a gun?

Also, Talmy's view implies a notion of language as the individual product of some genetic device. If surface sentences are constructed at a deeper level to match our even deeper thoughts, then they are forever ***re**constructed* by rules and principles from primes and universals which we possess from birth. This is a very Cartesian hypothesis. Descartes thought abstract ideas such as quantity, width, length, movement, were located in the mind by an effect of God's will. Therefore, when we make use of them, we actually only have to *remember* them. "*Leur vérité est si manifeste et si accordée à ma nature que, la première fois que je les découvre, je n'ai pas tant l'impression d'apprendre quelque chose de nouveau que de me **ressouvenir** de ce que je savais déjà avant, c'est-à-dire de me tourner pour la première fois vers des choses qui étaient en moi depuis bien longtemps, quoique le regard de mon esprit ne se fût pas encore retourné vers elles*"[6] (Descartes 1990:177).

We understand each other basically because we are all endowed with the same innate elements. Meaning is inside words, selected by

[6] *Their truth is so manifest and so in accordance with my nature that, when I discover them for the first time, I do not so much have a feeling of learning something than of **remembering** what I have always known, to turn myself for the first time towards things which have been inside me for a long time, although my mind had not as yet looked at them.*

operators and assembled by a set of rules. This is in effect a mechanical, autistic, pheromone-like view of language. What is missing here is the "*ghost in the machine*", *i.e.* a conscious *ego*, and an incentive, *i.e*. the desire to speak about *things*.

5. The case for reference

Now let us go back to

*d) *I let the oil flow from the tank with the plug*

Suppose the tank is equipped with a special sort of plug, a *'leaking plug*', which allows the oil to flow when it has reached a certain level of viscosity, say linked to temperature. When the temperature reaches a certain level the plug starts leaking and the oil is allowed to flow. We could then say:

e) I let the oil flow from the tank with a leaking plug

or even

f) I let the oil flow from the tank with the plug

if it is understood we are talking about a *leaking* plug.

In fact, we could accept *d* even if this was the first time we heard of leaking plugs, even if we knew nothing about them, even if we did not understand what is meant, on the condition that we can accept the speaker's competence in oil storage, pistons and plugs. What really matters is the sheer existence of the object. We then surmise *d* has meaning for those who are knowledgeable. Such an *empty* use of words is what language is about. The use of words does not entail *concepts* about objects. What would be the link between concept and object? How can the object produce the concept, the same for everyone? Is there some sort of Platonic essence of things that we are somehow able to capture? Conversely, how can the concept point to the object? The simple answer is it cannot. To give an example found in Deacon (1997), suppose scientists suddenly discover that mosquitoes are in fact alien devices dispatched to test our DNA. Our *concept* of mosquito would certainly be shattered, but we could still *name* mosquitoes these unpleasant little creatures.

Reference has something to do with naming. There is certainly an ontological link between words and objects. When we come across a new word, for example *USB flash drive*, we are sure it refers to an object, even if we are not acquainted with it ourselves: the sheer existence of a name is evidence that there is a related object in our common experience. Conversely, when we come across some new object, an artefact like a USB flash drive or even a natural object such as a sort of tree, a kind of rock or a colour, we believe they probably are already named. Medieval philosophers called such words *denominatio* and the objects they refer to *suppositio*, *i.e.* what is supposed to exist in relationship to the *denominatio*. French linguistics has inherited the word *dénomination* from medieval Latin and some linguists have taken a keen and fruitful interest in the *denominatio/suppositio* paradigm[7]. G. Kleiber has written extensively on the subject. His definition is as follows: "*la caractéristique référentielle majeure [de la dénomination est] de présupposer l'existence de la chose ou des choses qu'[elles] dénomment :* sage *présuppose la propriété d'*être sage*,* courir *présuppose l'action de* courir*,* chien *la classe des* chiens*, etc.*"[8] (Kleiber 2001:28). He even considers proverbs to be *dénominations* (Kleiber 1994).

Unfortunately, the *dénomination* does not have a social existence in English-speaking linguistics: *dénomination* is not a *dénomination* in English. This means the related object is non-existent as well, and this explains why it is sometimes difficult to make the point in papers written in English. The closest would be *name*, but the use of *name* to refer to adjectives, verbs and even proverbs could be a problem. My colleague Christopher Gledhill and myself have sometimes used *denominator*[9], and I shall use it here as well.

It is somewhat strange that English-speaking linguistics is alien to these notions, as the philosopher who developed them into a powerful theory is American, C. S. Peirce. His semiotics (he actually created this branch of linguistics) is based on what is known as a *triadic* view of signs (contrasting with Saussure's *dyadic signifiant/signifié* definition). Peirce argued that there are three sorts of semiotic entities: the *representamen* (the *denominator*), the *object* and the *interpretant*.

We live in a world populated with named objects. What is not named is practically non-existent for us. We do not notice unnamed objects very easily. When we do, we first inquire whether there is a word unknown to us; if not, we may endeavour to name the object, if we think we are in situation where we can do so. For

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[7] For example Martin 1976.

[8] *The major referential feature of the* dénomination *is to presuppose the existence of the thing or things it names:* wise *presupposes the property of being wise,* to run *the action of running,* dog *the class of dogs, etc.*

[9] For example Frath & Gledhill 2005

example, when a scientist becomes aware of some new object, he can certainly refer to it for a while by pointing at it or with a discursive phrase, but this is very impractical and very soon a denominator is coined, quite often an abbreviation or an acronym, for example HIV, or a metaphor, for example the computer mouse. Other people are then able to use the word and refer to the object in what Wittgenstein has called *language games*. The *denominatio/suppositio* link is ontological. Without it thought is impossible. Thought is not the condition for language; it is the other way round: language is the stuff thought is made of. The ontological link between a denominator and an object is mainly vacuous, it does not involve knowledge. But knowledge can be created by observing parts of the object or by comparing it to similar objects. For example, we might say about a USB flash drive that it has a USB connector, or that it differs from other means of data storage by its small size, its low cost, etc. Such discursive signs are known as *interpretants* in Peirce's theory.

The concept can be thought of as an *interpretant*. It has been produced with language about a named object; it is not the content of a lexical item. Talmy thinks of *piston* as being a sort of abbreviation of *pressing the piston against the oil*, the label of all we know about pistons. Yet whether we know anything about pistons is not relevant. What matters is the certainty of their existence, of which the denominator is evidence. If we are interested in pistons and plugs, we may acquire discursive knowledge either by getting acquainted with them through interpretants (books, explanations), by producing interpretants in relationship to their function, their use, etc., or by examining them and constructing interpretants. Knowledge is not necessarily coherent, exhaustive, well-structured. It may even be entirely false. I may think whales are fish and still be able to say meaningful things about them.

The Peircean view of language is communal and externalist, contrasting with the Cartesian individual and internalist view. Language is given to us by our community and used according to social *habits*; it is not produced by our brains with formal operators applying to genetic operands. Language is certainly species-specific, but it does not involve genetically determined semantic and syntactic contents. This is the gist of Wittgenstein's private language argument[10]. This is also what M. Merleau-Ponty means when he says that thought is nothing interior[11].

6) Some consequences for the study of language

The Peircean point of view, if taken seriously, has far-reaching consequences for linguistic theory and methodology. Language has to be studied as a social and individual *habit*, as a *system* of denominators and as *construction* of interpretants. We have been working along these lines with some interesting results, especially in the domain of lexical semantics[12], phraseology[13] and anaphor[14]. To give but one example: the observation of the verb *begin* in corpora (Frath 2002). In a nutshell, *begin* is practically never used in nominal sentences such as *she began a novel* (Pustejovsky 1995) or *I began a rock* (Pustejovsky 2001). *Begin* behaves just like any other denominator: it refers, but in a special way. By using the word *begin*, we declare some other object to be "*beginable*". Our *habit* of using the word implies that such "*beginable*" objects should be verbs (*singing, reading*, …) or procedural nouns (*song, story*…). Yet physical and other non-procedural objects can be concerned as well if we can accept them as "*beginable*" in interpretants, for example *novel* and *rock* in some situations. *Begin* is a *syncategoremic* denominator. The *syncategoreme* v. *categoreme* distinction is also a medieval legacy. A *categoreme* is a word which refers directly to an object, for example *horse* or *sun*; a *syncategoreme* is a word which involves another object in order to refer[15]. For example, *white* can not refer as such, some other object has to carry whiteness. *Love* implies love *of* or *for* someone or

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[10] *Philosophical Investigations*, §242-315

[11] ***La pensée n'est rien d'intérieur****, elle n'existe pas hors du monde et hors des mots. Ce qui nous trompe là-dessus, ce qui nous fait croire à une pensée qui existerait pour soi avant l'expression, ce sont les pensées déjà constituées et déjà exprimées que nous pouvons rappeler à nous silencieusement et par lesquelles nous nous donnons l'illusion d'une vie intérieure. Mais en réalité ce silence prétendu est bruissant de paroles, cette vie intérieure est un langage intérieur. La pensée "pure" se réduit à un certain vide de la conscience, à un vœu instantané* (Merleau-Ponty 1945: 213).

[12] Frath 2004a, 2004b, 2002, 2001, 1999.

[13] Frath & Gledhill 2005, Gledhill & Frath 2005.

[14] Frath 2005b, chapter 4.

[15] See the discussion about Aristotle in section 1

something. Etc. *Begin* does not refer directly to an element of our experience. It prototypically refers to the selection of the first part of a process, for example *reading* and *song* in *she began reading* and *she began a song.*

Why are the objects affected by *begin* mainly procedural (though by no means entirely)? The simple explanation is *this is the way we do it*. As Wittgenstein maintains, the meaning of a word is its use, *i.e.* a sort of habit with deep roots in our being[16]. Most of our behaviours are habits. Language is not an exception and should not be given special treatment. When a friend is mourning the loss of a loved one, I do not explain my sympathetic behaviour by some sort of calculus, with the brain considering all possible behaviours and selecting the proper one after analysis of input from the situation, as if I were some sort of mindless computer. Meaning is use, a linguistic habit. And when habits change, so do meanings[17].

Another question arising from the Peircean point of view is how reference is actually achieved. Let us consider the following sentences, which could have been uttered in a station about trains which are not on time.

a) it's always late

b) this train is always late

There is a problem with *it* in *a*: how do we know the pronoun refers to a train? There are two views in the literature about anaphor, both based on some calculus. If someone has mentioned trains just before *a* is uttered, then we have a *textual* anaphor: the mind somehow manages to link *it* to a noun which was uttered shortly before. This leaves us with a problem if no one has recently mentioned trains. Anaphor is then accounted for by mental scenarios (for example in the theory of relevance[18] and in artificial intelligence[19]). The speaker is in a station; the most salient objects in a station-scenario are trains; and this explains why *it* refers to a train and not, say, to a plane or a bus. We then have a *situational* anaphor. There again, the speaker is considered as to be some sort of dumb computer which has to run a program in order to "know" what is going on.

The most remarkable thing about this explanation is that it is purely *denominational,* and a good example of *empty* use of language. *Naming* the anaphor *textual* or *situational* creates the illusion that an explanation has been given, when in fact nothing has been said about *how* the mind actually achieves the anaphoric link. The mystery remains.

Also, she sheer existence of the word *anaphor* gives the set of denoted phenomena some sort of categorical existence *per se*. The denominator claims there *is* such a thing as the anaphor, which may incarnate in a variety of occurrences. We feel the anaphor has some sort of isolated existence when in fact it is only a special case of reference. Let us consider *b*. The reference of *this train* seems straightforward enough. Yet, how can we explain the link the mind is able to make with a particular train, not even in sight? Evidently, the reference of *it* and of *this train* generates similar theoretical difficulties.

An alternative, non-computational view on reference would be to think of the object and the denominator as *two* aspects of *one* phenomenon. Trains do not have an unnamed existence and the *train* denominator is not a label we stick to objects at the end of some mental process, if we can. The denominator is a sort of delimiter of experience. An object cannot be fathomed without its name, just as wind cannot be conceived without air. A denominator must refer. Denominators and objects are not two separate elements some sort of calculus should match when need be. On hearing *this train is always late*, I evidently know immediately what the speaker means. *Train* comes with its object just like an apple comes with its constituent matter. Denominators delimit experience and are therefore part of that experience.

If we can accept that the *train* denominator refers, and that therefore comprehension of this sort of speech is immediate, we can also accept that words which are sometimes used in lieu of others, *i.e.* pronouns, refer in exactly the same way. This is what pronouns are for. They refer in their own way within situations where they are able to do so. If uttered in a station, the pronoun in *she's always late* cannot normally refer to a train. On hearing it, I will try to find an object which can match the pronoun. For example, is someone waiting for a woman and do they think that this is obvious?

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[16] *If I have exhausted the justifications [for my following a rule the way I do] I have reached a bedrock, and my spade is turned. Then I am inclined to say:* ***'This is simply what I do'***. (Wittgenstein 1963, §217). *[Human beings] agree in the language they use. That is not agreement in opinions but in* ***form of life*** (§241)

[17] See for example the analysis of *holocaust* in Frath 2003.

[18] Sperber & Wilson 1986

[19] For example Schank and Abelson 1977

Another question is the difference between denominators and interpretants. Lets us compare *a* and *b*. The reader will probably agree that *b* is much more informative than *a*. It is a factual statement about some trains, of which the speaker says that they are always late, presumably for some reason one could formulate. This is not the case with *a*. We utter *a* when we want to vent frustration; *a* does not purport to give factual information. Therefore, while *b* may be construed as an interpretant made up of constituent elements, *a* works as some sort of phraseological denominator.

Language is a largely memorised object. It is not a permanent reconstruction according to rules. A structuralist finding was that words get some of their meaning from paradigms, *i.e.* open sets of words which could have been used but were not[20]. Thus *He was killed with a gun* sounds weird because we know the proper denominator for the process of getting killed or hurt with a bullet from a firearm is *shot*. When we hear *he was killed with a gun*, we wonder why the speaker has not used the regular denominator, *i.e. shot*? We then look for a reason: was he killed in some other way with a gun? Is he a foreigner whose command of English could be shaky? Has his tongue slipped and has he used some other word by mistake? Etc. Wondering about the proper uses of words implies a memorised link between objects and denominators. If there is a discrepancy, we look for another object to match the denominator. If we cannot find one, we think the utterance is weird or incomprehensible.

Conclusion

Peircean reference can certainly help solve some linguistic problems. Yet many remain and there are a large number of difficulties lying ahead. For one thing, what is meant by *object* needs to be clarified. Another problem is the nature of the *category*, which was not mentioned here for lack of space[21]. The most daunting is certainly the formulation of a theory of syntax which does not involve metaphysical rules. Also, if language is a social habit, then the biology of memory is certainly an issue and so is the social meaning of signs.

This paper has tried to show that there is life outside cognitivism. Reductionism claims metaphysics can be reduced to physics, the universe to a set of laws, life to a genome, the mind to a programme. The alternative to such materialistic views is then thought of as necessarily spiritualistic: if the mind is given some sort of autonomy from matter, then the soul is just there in the offing, along with the dreaded Cartesian dualism, against which cognitivists like to "*fulminate*", as J. Searle would say (1980).

Consciousness (the philosophical denominator for *soul*) is certainly a question the linguist must address because it seems difficult to posit meaning without intentionality. But what is consciousness? The mind/body problem was handed down to us by Descartes in an insoluble way. Yet there are alternatives. Consciousness can be analysed as the ability to read exterior signs from inside the body (Frath 2005b). Indeed, without such an ability there could be no quest for food and no search for sexual partners, for example. This means that consciousness is consciousness of the distinction between the interior and the exterior; *i.e.* between what is *me* and what is *not me*. Therefore Descartes has a good point when he posits the *ego*, because without the notion that *I* am not the same thing as my environment, there could be no *I*. Aristotle thought of the *soul* as the *form* of living matter, *i.e.* what gives the body its limit. Life is not inert matter plus a living soul. It is a delimited lump which is conscious of its boundaries, *i.e.* of its existence as en entity. A very similar view is defended in a book by a post-modernist philosopher, J.-L. Nancy (Nancy 2000: 107-129). He says that the soul feels the body from the outside because it cannot touch itself from the inside, and being conscious of a boundary, it has an inside. "*L'âme c'est l'être dehors d'un corps et c'est dans cet être dehors qu'il a son dedans*". He also says: "*L'âme est un nom pour l'expérience que le corps est*". The soul is a name for the experience that the body is.

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[20] Some linguists have taken a keen interest in what they call *differential semantics* (Rastier 1987; Rastier, Cavazza & Abeillé 1994).

[21] Interested readers may refer to Frath 2005b, ch. 2.

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