The Dependence of Language on Consciousness

Jordan Zlatev, Lund University

> For we have the experience of ourselves, of that consciousness which we are, and it is on the basis of this experience that all linguistic connotations are assessed, and precisely through it that language comes to have any meaning at all for us.
>
> Merleau-Ponty, *The Phenomenology of Perception*

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1. Introduction

The first hurdle to overcome in approaching the complex topic of the relation between language and consciousness is terminology. So let me begin, in good philosophical style, by explaining the senses in which I use the three lexical terms in the title. Luckily I need not explain that of the three grammatical words *the*, *of*, and *on*: there is probably a minor library of semantic literature devoted to the explication of the meaning(s). I need not, since I both know their meaning pre-theoretically, and know that my readers, as users of English, know

them. The significance of this simple fact concerning the meaning of all everyday words, in everyday constructs, is something that I will return to, since it plays a central role in the argument in Section 2. However, with abstract, theoretically loaded nominalizations such as *dependence, language*, and most of all *consciousness*, we need to beware since we cannot assume common knowledge – myriads of misunderstandings arise since we mean somewhat different "things" by them.

1.1 Dependence

Most linguists, irrespective of theoretical persuasion, cognitive scientists and even most philosophers – apart from those who like (Merleau-Ponty, 1962 [1945]) work within the tradition of phenomenology founded by Husserl (Husserl, 1999 [1907]) – allow for *some* role for consciousness in their accounts of language. For if not, how could language be linked to experience, and thus have "any meaning at all for us"? Still, when it comes to the possibility of consciousness playing any major role for language, the majority are sceptical. It is typically claimed that linguistic knowledge and the cognitive processes which apply to this knowledge, lie "below the surface" of consciousness. This is the view expounded in one of the major texts of the school known as Cognitive Linguistics:

> Cognitive scientists have shown experimentally that to understand even the simplest utterance, we must perform ... incredibly complex forms of thought **automatically and without noticeable effort below the level of consciousness**. It is not merely that we occasionally do not notice these processes; rather, they are **inaccessible to conscious awareness and control**.

> ... The **cognitive unconscious** is the massive portion of the iceberg that lies below the surface, below the visible tip that is consciousness. It consists of all those mental operations that structure and make possible all conscious experience, including the understanding and use of language … **it is completely and irrevocably inaccessible to direct conscious introspection** (Lakoff & Johnson 1999: 11, 103, my emphasis).

Elsewhere (Zlatev 2007) I have argued that Lakoff and Johnson's construct of "the cognitive unconscious" is incoherent. As other, both related and conflicting, accounts placing knowledge in the "deep unconscious" (Searle 1992), it introduces a black box between neurobiological structures and processes on the one hand, and consciousness on the other. This is what "first generation", computationalist cognitive science (Chomsky 1975; Fodor 1983; Jackendoff 1983), thrived on, and this was expressed is quite unequivocal terms:

> … the **unconsciousness of mental grammar** is still more radical than Freud's notion of the unconscious: mental grammar **isn't available to consciousness under any conditions**, therapeutic or otherwise. (Jackendoff 1994: 19, my emphasis)

Despite all disagreements, "second generation", "embodied cognition" researchers (cf. Gallese & Lakoff 2005) follow in the steps of their predecessors in underestimating consciousness and placing their bets on (again, mostly computational) models of "incredibly complex forms of thought" taking place in this black box, which can only be unlocked using the tools of neuroscience or other objective methods. In contrast, I will argue that

consciousness is far from being "the tip of the iceberg" with respect to language, but rather constitutes its basis, i.e. *a necessary precondition for language.*

In Section 2, I provide three conceptual arguments for this claim, based on (a) the nature of language as a "social institution" (Saussure, 1916), consisting of commonly known conventions or norms, (b) the universality of grammatical and semantic intuitions concerning correct linguistic usage, i.e. *normative intuitions* and (c) the fact that language is composed of *signs*, in the semiotic sense, and true signs (as opposed to various pre-sign meanings) require a subject, i.e. a consciousness to relate their expressions and contents. In Section 3 I turn from language as *langue* (and its knowledge) to language as *parole*, i.e. language use, and show (more briefly) that consciousness must also be involved in most, though not all, aspects of language production. In Section 4 I consider even more empirical issues in language research: the processes of cognitive and linguistic development, i.e. "language acquisition", and I will show that even there, prominent researchers assume, either explicitly or implicitly, that consciousness plays an irreducible role.[1]

Thus, my argument is that consciousness is an essential precondition for language: for its existence, its use and its acquisition: a strong form of dependence indeed. On other hand, it should be made clear from the onset that may claim is not that language is reducible to consciousness, in the sense that there is a near-complete "symmetry" between it and consciousness, and therefore can be explained solely by analyzing consciousness. Such claims of symmetry (or identity), made by some representatives of Cognitive Linguistics (Langacker 1987; Talmy 2000) may be justly criticized for missing what is special about language (Itkonen this volume; Stamenov this volume), and the ways in which language yields new powers/features to human consciousness, e.g. though narratives (Menary this volume). Non-withstanding, consciousness as such is more basic than language, and determines language to a greater extent than the contrary. But to for the reader to be able to evaluate this claim, I first need first to explain the senses in which I use the terms 'language' and 'consciousnesses.

1.2 Language
The term 'language' is notorious for its many definitions, both within and outside linguistics. For structuralists it was a "hidden code" (Sapir 1928), while the generative grammarians attempted to "naturalize" it in describing it as special type of "mental organ" (Chomsky 1975), "computational device" (Jackendoff 1994), or even "instinct" (Pinker 1994). Even some cognitive linguists (as shown in the previous subsection) have taken a similar direction, in attempting to reduce language to the operation of unconscious cognitive/neural operations.

The problem with all such attempts is that they neglect the essentially *social* nature of language, with *normativity* as a central characteristic (Itkonen 1978, 2003). As famously pointed out by Wittgenstein (1953), using language implies knowing certain *criteria of correctness* and such knowledge cannot be private, but must be shared within a community. This inherently social, intersubjective and normative nature of *linguistic signs* (both lexical and grammatical) is irreducible to individual minds/brains (Burge, 1979). Thus, Saussure's

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[1] For lack of space, I will not discuss the evolution of language, but evidence from that could be brought to bear for my central claim as well (Donald 1991, 2001; Zlatev 2003, 2008).

characterization of language as a "social institution", was more to the point (though incomplete), then those of most present-day linguists. One thing that he neglected, though, was that language is used not only for "packaging" pre-existing ideas, but for *formulating* them (Vygotsky, 1962 [1934], 1978; Sinha, 1988; Tomasello, 1999; Hutto, 2007).

Thus, language can be succinctly defined as *a conventional-normative semiotic system for communication and thought* (Zlatev 2007, in press-a). It is conventional, in the sense that it is based on an implicit or explicit agreement among its users. Even when implicit, these conventions are normative, in the sense of prescribing criteria for correct or incorrect use. These conventions/norms are semiotic, since they take the form of signs (see section 2.3), organized in a system. And finally this system is used not only for communication (through speech, signing, or writing) but also in thinking, after being internalized by children.

To emphasize again, language, in the sense of *langue* is super-individual. Its "rules" are like those of chess, or to use a more "embodied" example: boxing (Zlatev 1997). In a second, related but non-identical sense, 'language' is often used by linguists to refer to the speaker/hearer's *knowledge* of language. My argument will be that consciousness is a necessary prerequisite for both.

1.3 Consciousness

The readers of this journal will be aware that the use of term 'consciousness' is no less polysemous than 'language'. If there is any degree of agreement on what it refers to over the extensive debates that have gone on during the last few decades, it is that (a) consciousness does not a unitary phenomenon, and (b) that whatever else it may include, it must involve *sentience*, the presence of phenomenal experience in the being that possesses it. So, what are its types or modes?

Stamenov (this volume), refers to Edelman´s (1992) distinction between "primary" and "higher-order" consciousness. The first involves awareness of the here-and-now, while the second, assumed by Edelman to be made possible by language, involves various forms of detachment from the present, including conceptions of past and future. The "primacy" of the first is phylogenetic and ontogenetic, but also implicitly logical – without it language and the second would be impossible. The same could also be said about Damanio's (2000) conception of "core" consciousness, in relation to its extensions. Thus for these researchers, at least some form of consciousness is more basic than, and thus a precondition from language. Such dependence is however, not especially controversial. If all "higher-order" consciousness is on the other hand *based* on language, as is the case by definition in Edelman's theoretical framework, then the foundational role of consciousness would not run very deep.

Another division in modes (or types) of consciousness follows a more traditional division between affect, perception and reflection. Honderich (2006), for example distinguishes between (a) *affective*

consciousness, which roughly corresponds to Damasio's *feeling*, an aspect of "core consciousness", (b) *perceptual consciousness*: the presence (or "existence") of a world for the subject and (c) *reflective consciousness*, involving indeed "higher-order" mental processes such as judgement, imagination, recall, and planning.

Again, it would be much too easy to argue that language in all of its manifestations presupposes affective consciousness, for else there would be no intrinsic meaning, or *value* to our words (Zlatev 2003). Similarly if there were no perceptual consciousness there would be no "objects", "states" and "events" to talk about but only something like the "booming, buzzing confusion" of William James, and it would require a particularly strong form of nominalism to argue that that it is language that creates all order from perceptual chaos. The notion of consciousness that I argue priority for in this paper is rather the third type: reflective consciousness.[2]

The ambiguity of the term 'consciousness' is matched by that of 'the unconscious' or 'pre-conscious'. We must distinguish between at least between the following phenomena in dealing with the latter:

- The aspects of my experience that **not in focus** at the moment. Say that I *walk to the kitchen to cook some food since I feel hungry*, I do not – and cannot – focus on everything in the same moment: my walking to the kitchen, the location of the food, the way to prepare it, my hunger etc. One of these will be the *theme*, situated in a *field* of consciousness, with some aspects situated in the *margins* of consciousness (e.g. the propioceptive feel of by body as I walk, or the sense of touching the floor (cf. Gurwitsch 1964). Using such a broad, and I believe phenomenologically accurate, conception of consciousness, it would appear to be erroneous to describe everything but the theme of consciousness as "unconscious".

- Aspects of **semantic and episodic memory,** e.g. what is far from my thoughts as I plan to cook my dinner, e.g. the fact that George W. Bush is (alas!) the president of the USA, or the image of my office. Still these are aspects that I can "bring back" to focal consciousness, at least "in principle" (Searle 1992), and hence does not constitute any "deep unconscious".

- Those structures and processes in my brain and body that I **can never be conscious of**, e.g. all patterns of neuron-firings, the oxidation, the "autonomic" system regulating my breathing etc.

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[2] Note, however, that I am using the distinctions between (a), (b) and (c) primarily for expository purposes. Husserl described in considerable detail various types of consciousness, such as those mentioned above, but also the experience of others (*Fremderfahrung)*, "picture-consciousness" (*Bildbewusstsein*) etc. (cf. Moran 2005). As emphasized by phenomenology, we first need to carefully describe the "eidetic" (essential) features different consciousness-forms before proposing one or another kind of "hierarchy", for logical or empirical reasons.
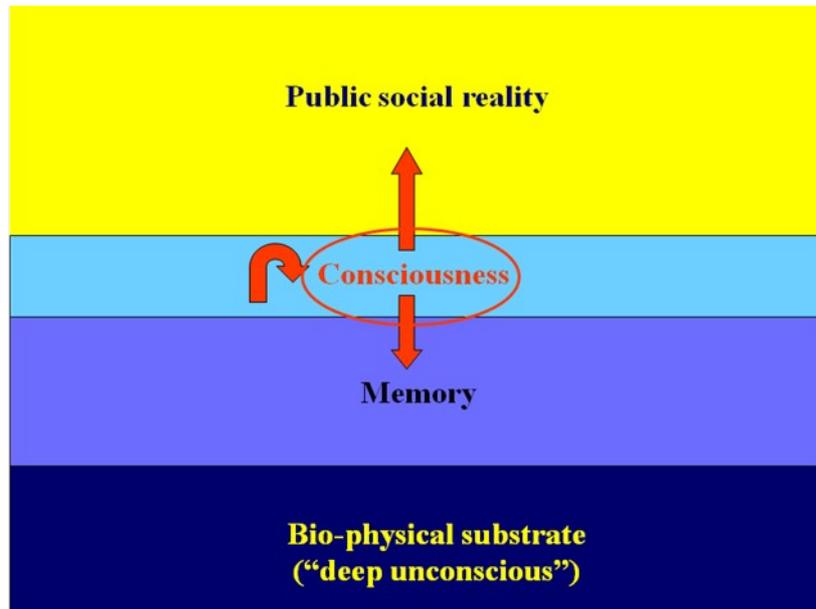
Figure 1. Consciousness in relation to the public, private and the "deep unconscious"

The picture of consciousness we come to can be represented as in Figure 1. Consciousness is always directed at something, i.e. it is *intentional*. It can be about either public ("real") or private (remembered, imaginary) objects. Consciousness is also always to some degree of self-aware, pre-thematically: every experience of wither public or private objects involves a *co-experience*, however dimly of the experience. The objects of consciousness and its co-experience may itself be reflected on, resulting in self-consciousness (the loop in Figure 1). The only true "unconscious" consists of the biological "substrate" of consciousness, which cannot be studied by phenomenological ("first-person") methods and requires the use of "third-person", "empirical" methods. But even these are never applied "unconsciously" by zombie-like scientists, but by persons with pre-reflective and reflective consciousness, with at least the latter conditioned by culture and language. By recognizing *this primacy of consciousness* (and phenomenology) we may finally make the necessary interpretative bridges in studying language, in ways that are similar to those that are currently undertaken by neurophenomenologists (Lutz & Thompson 2003). I will return this in the final section of this paper.

2. Conceptual arguments for the priority of consciousness

2.1 Meanings and rules are commonly known
If language is primarily a social institution, word meanings such as those expressed highly simplistically in (1-3) and grammatical rules (4) must be objects of *common knowledge*.

(1) *cat* means a 'small, furry animal that meaws'

(2) *run* means 'move rapidly by a particular mode of bodily locomotion involving the legs'

(3) *the* means 'that the noun following it is "definite", i.e. it refers to something that the addressee can identify'

(4) In Swedish you (should) say *ett bord* ('a-neuter-gender table') not *en bord* ('a-common-gender table').

There are various different conceptions of common knowledge, and in the philosophical literature they have become quite technical (Vanderschraaf & Sillari, 2007). Lewis (1969) defined it as hierarchical knowledge of the type "I know that you know that I know that... P", where the levels of embedding are in principle endless, but in practice limited to as many as the situation requires. Lewis' well-known definition of *convention*, an abbreviated form of which (with apology) is given below presupposes common knowledge:

> A regularity R in the behaviour of members of a population P when they are agents in a recurrent situation S is a *convention* if and only it is true that, and it is common knowledge in P that, in any instance of S among the members of P, (1) everyone conforms to R; (2) everyone expects everyone else to conform to R; ... (Lewis 1969: 76).

Itkonen (1978) applied this to explicating *linguistic* conventions such as (1-4), adding that in practice third-level knowledge is sufficient for common knowledge, and criticizing Lewis for attempting to reduce the *normative* element (see 2.2. below) of such conventions, i.e. that it is not a matter of "a regularity in the behaviour" and mutual expectations (cf. Itkonen in press). Clark (1996) introduced a similar notion of *common ground*, using it for explicating features of both knowledge and *use* of language. The commonality to these approaches is that what is implied is not only is a "knower", but a *reflective* knower. Thus, if linguistic meanings and rules exist as common knowledge, they must be either conscious, or accessible to consciousness (made available through reflexion or "elicitation").

A common objection to this conclusion is that when the average speaker "introspects", s/he finds neither transparent meanings such as (1-3), nor rules in consciousness (cf. Zlatev 1997), ergo meanings and rules, in much more complex form, such as that "discovered" by linguists must be "unconscious". The fallacy of this argument is that it assumes a simplistic dichotomy conscious/unconscious and that it equates the *accessibility* to consciousness of meanings/rules with "introspectability". Following Itkonen (1978, 2003), I would say that meanings/rules are known *pre-theoretically* (as opposed to theoretically), but not "unconsciously". Statements such as (1-3) and (4) are rule-*sentences*, rather than the meanings/rules themselves. The naive speaker knows the rules and expects others to know them, also pre-theoretically, and sometimes even explicates them in statements such as (5).

(5) *I first thought that it was a cat, but then it barked, and I realized it was a dog.*

On the other hand, it is the linguist, lexicologist, language teacher, philosopher... who explicates these *theoretically*, and there is no ultimate perspective-independent theory in which these can be formulated. The latter has been shown in practice: Langacker-style representations, "semantic features", Chomskyan rules or principles... – are all not

representations of the "language faculty", hidden in the unconscious mind/brain, but various explications of the common knowledge of the speaker*s* of a language.

2.2. Linguistic intuitions are normative

The fact that this is indeed *knowledge*, and not just procedural skills (know-how) is shown by the universal phenomenon of *linguistic intuitions*, which are the primary "data" on the basis of which the grammars (i.e. explications) of all languages are constructed – from that for Panini Sanskrit some 2500 years ago, to the most modern "usage-based" accounts (cf. Stamenov this volume). Furthermore, these are not simply intuitions of "acceptability", but of *correctness*, i.e. normative intuitions, such as those giving the following judgements.

(5) *John loves Mary. *Loves John Mary.*

(6) *A dog is an animal. *A dog is a number.*

(7) *Give me the book!* is a request. **Give me the book!* is an assertion.

The "star" in these examples is commonly used by linguists to indicate that a sentence is *judged* to be incorrect.[3] Note that such judgment is performed primarily by the speaker (either linguist or naïve informant) pre-theoretically and not by the linguist qua theoretician. It is a well-established empirical fact that in the core of a language, speakers *agree* on such judgments. Ergo these are judgments concerning intersubjectivly known social facts which Itkonen correctly insist on calling *norms* (Itkonen 1978, 2003, 2008, this volume).

Speakers of the same language may, of course, also disagree concerning some forms of usage and much has been made concerning cases of uncertainty on whether to use the nominative or accusative form of the first-person pronoun in (9) and the (in)famous (10), purportedly showing that speakers are unable to separate unacceptability from "ungrammaticality" (cf. Stamenov this volume). Therefore, it has been argued, it must be unconscious individual "knowledge" that underlies variation/instability in intuitions.

(8) *John is taller than me/I.*

(9) *Colorless green ideas sleep furiously.*

But on closer reflection, such examples rather support than question my argument. In the case of (9), there is not one, but two "competing" norms, with the first one being preferred in informal contexts, while the second in formal ones, due to historical and educational reasons. But this is just what one should expect: even though norms are in a sense known "a priori" (i.e. known through intuition rather than observation by the mature language user or analyst, cf. Itkonen 2003), they are not immutable Platonic ("innate") objects, but learned from experience (thus "a posteriori"), and reflecting the changing, and situation-dependent nature of language. Concerning (10), the decision to regard it as "grammatical" is based on (a) its analogy (cf. Itkonen 2005) with fully correct sentences such as (11) and (b) on *theoretical* decisions to regard a generalized "tree structure" such as (12) to "underlie" all such analogical

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[3] See Itkonen this volume, on how this is asserted even by those who wish to "purge" linguistics from consciousness in order to make it "a natural science".

(i.e. structurally similar) sentences. If (12), and its much more complex cousins used in generative linguistics nowadays is seen not for what it is – a theoretical *explication* of the grammatical structure of (10) and (11), produced through conscious analogical analysis of intuitions concerning simple, clear cases – but as a structure "generated" unconsciously by the mind/brain, by still more complex unconscious rules, principles, parameters, constraints etc, then one is lead down the garden path leading to a mysterious unconscious "language faculty", operating in the deep unconscious.

(10)Overworked, exhausted academics sleep heavily.

(11) $_S(_{NP}(_{AP}(_A(overworked), _A(exhausted)), _N(academics)), _{VP}(_V(sleep), _{ADV}(heavily)))$

Finally, let me consider two additional problems for an unconscious "language faculty". Language may be taken to consist simply of spatio-temporal utterances ("behaviours", "E-language"), triggered by environmental stimuli, producing "responses" in hearers, and all this being conducted without any conscious common knowledge. Then it is indeed conceivable that the "knowledge" governing linguistic behaviour would be in the deep unconscious. But, in that case our concept of language would appear to be no different from the alarm calls of various species such as vervet monkeys and domestic hens (cf. Sinha 2004).

Furthermore, why and how should unconscious mechanisms produce conscious judgements such as those in (4)-(6)? And if they somehow do, *what* are these judgements of? Not of *correctness* – since that is a normative notion, and norms are social by definition, but of "grammaticality" – the "internal constraints" of the language faculty, no matter if this is understood along the lines of Chomskyan "competence"/"I-language" or a Lakovian "cognitive unconscious". But since this faculty is inaccessible per definition, then *what are the objects of speakers' intuitions*? (see Figure 2)
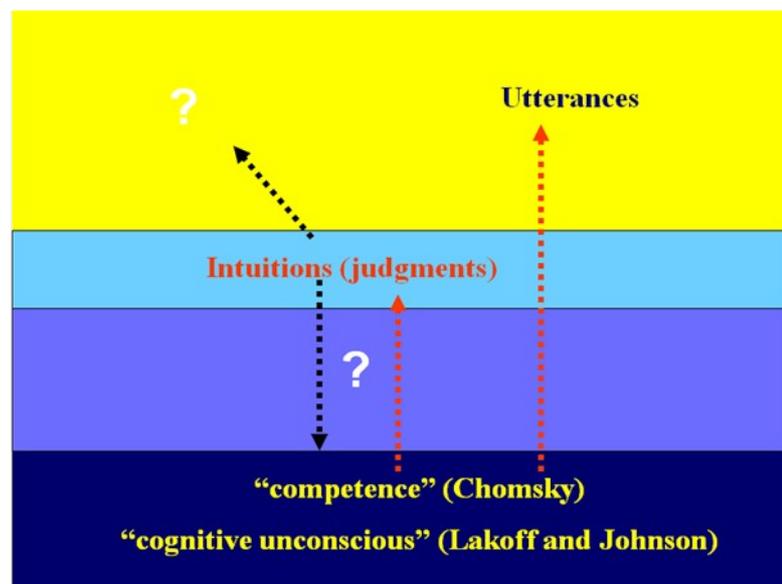
Figure 2. The unconscious language (faculty) model: both actual utterances and intuitions are produced by structures and processes of the deep unconscious. The object of these intuitions (i.e. what actual utterances are compared to) remains mysterious.

The conclusion to be drawn from this and the former sections combined is that language (as a social, public phenomenon) and knowledge of language are co-dependent concepts: each one implies the other. Both imply consciousness. These conclusions rest on the essential *normativity* of language. It is essential to distinguish between intuitions of norms and the psychological processes involved in using these norms in "language behavior":

> … we have here a confusion between the following two types of entities: on the one hand, the concept of '*correct sentence of a language L*', which is the object of conscious knowledge; on the other, *utterances of language L*, which are manifestation of unconscious 'knowledge'. In the former 'knowledge' equals consciousness, while in the latter, 'knowledge' is a hypothetical dispositional concept. (Itkonen 1978: 82)

However, I would maintain that Itkonen underestimates the role of consciousness also for the latter case: utterances are not simply "manifestations of unconscious 'knowledge'". I will suggest why in Section 4, but prior to that I wish to add one final (for this paper) conceptual reason why consciousness is necessary for language.

2.3 True *signs* imply a subject

Language has been defined, both classically and in the definition offered in 1.3, as a system of signs, but what is a *sign*? The "classic" definition, attributed to Augustine is "something which, on being perceived, brings into awareness another beside itself" (Sonesson 2007: 97). The concept has been defined and redefined multiple times within semiotics, giving rise to different schools within the field, but in (nearly) all cases it maintains it fundamental status. It is similar, if not identical to the notion of *representation* within cognitive science, which also provokes endless debates (cf. Nöth 1997; Sonesson 2007; Zlatev 2007).[4] In the case of skills and perceptual meanings, a notion of sign/representation with a subject maintaining, operating or interpreting it may indeed be argued to be superfluous (Dreyfus 1993 [1972], Gibson 1979). But skill and perception can and should be distinguished from cognitive processes which do involve *signs/representations proper*, such as those involving pictures and words (cf. Sonesson 2006, 2007).

Unlike an association, a sign is asymmetric: the expressions stands for "something else" (a content or referent), but not vice versa. Furthermore, the expression needs to be simultaneously seen as (a) corresponding to and (b) differentiated from that something else. For instance, to see a picture of an apple as a sign/representation of an apple implies for someone to become aware of (a) and (b): if (a) is absent, the sign will not be interpreted, if (b) then it will be confused with its referent, and one may attempt to eat the picture of the apple (as non-human primates often do).

The natural question is who is that "someone" doing the differentiation and finding the correspondence? A "naturalistic" reply may be: An unconscious "subpersonal" (neural)

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[4] At least in his early writings Peirce defined semiotics as "the general science of representations" (quoted by Nöth 1997: 204)

mechanism. The problem with this answer is that postulating such a "homunculus" leads to infinite regress. To establish (a) and (b) implies a process of *interpretation* (Sinha 1988), and we must ask: according two which "internal representations" of the two sides of sign relation (expression and content) is the mechanism performing this interpreting? But then these internal representations are themselves signs, i.e. they stand for, but are not identical with the (consciously accessible) expression and content, respectively. So we need a new cycle of interpretation, and mechanism performing this, and so on *ad finitum.*

The standard reply to this argument within (computational) cognitive science is that the digital computer (or its central processor) operates on "internal representations" and that this constitutes an existence proof of the possibility of an unconscious (in the sense of "deep unconscious", cf. 1.3) processing of representations. A well-known definition, from the "classical" cognitive science of "physical symbols systems" thus postulates: "X represents Y if X designates aspects of Y, i.e., if there exist symbol processes that can take X as input and behave as if they had access to some aspects of Y" (Newell 1980: 156) This reasoning however runs into other problems, since such "representations" or "symbols" are meaningful only for someone *else* than the system that is actually using the symbols. But then the representation is not *intrinsic* to the system but to the programmer, or whoever else is doing the "interpreting" (cf. Searle 1992). As stated clearly by Winograd and Flores (1986: 86):

> The problem is that representation is in the mind of the beholder. There is nothing in the design of the machine or the operation of the program that depends in any way on the fact that the symbol structures are viewed as representing anything at all.

This leads to the third, and I believe only viable answer to the question who is it that "sees" both the correspondence and makes the differentiation between expression and meaning: the *subject* himself or herself, i.e. the conscious person who *experiences* the sign as such, and furthermore imbues it with a qualitative subjective tone.[5] This answer implies that a reflective consciousness intervenes, so to speak, between the expression and content "poles" of the sign. Of course, we do not always perform such an act of reflection: we customarily go from word-expressions directly to their meanings and referents, as we go from pictures to theirs, since it is the latter that are *thematic*, i.e. focal in consciousness. But unless the expression side was simultaneously in the field of consciousness (or even in the margins), we would be confusing the two constantly, as in some of Magritte's paintings. Thus, a semiotics that acknowledges the foundational role of consciousness may appropriately be characterized as *phenomenological* (Sonesson 2007).

3. The consciousness-dependence of *parole*

If language as *langue* (i.e. as commonly known norms of correct usage) and as individual knowledge imply a dependence on consciousness, as argued in the previous section, could it be then that language as *parole*, as actual utterances produced by speakers/writers/signers

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[5] This was also the answer given by Piaget (1945) in his account of the emergence of the "sign function" in the second year of life (cf. Sonesson 2007) and at least in some of his writing, seems to have been endorsed by Peirce as well: "To represent is to stand for, that is to be in such a relation to another that for certain purposes it is treated by some mind as if it were that other" (quoted by Nöth 1997: 204).

their production and comprehension, is governed entirely by unconscious processes? As we saw in section 2.2, even a staunch defender of the priority of consciousness such as Itkonen seems to accept this. I will be brief here, due to space limitations and since the question requires empirical, rather than conceptual argumentation, and with some rare exceptions (Chafe 1994), it has not even been posed by psycholinguists and cognitive scientists. Nevertheless, just observing what is presupposed in accounts of linguistic communication suggests strongly a negative answer.

First, if our knowledge of language consists of knowing norms of correct usage, is it reasonable to assume that such knowledge is involved only in "grammaticality judgements" but plays no causal role in language production? If so, how would the phenomenon of *self-correction* be explained? It is an everyday fact that we perform multiple "slips of the tongue", catalogued by psycholinguists in a few basic types (cf. Carroll 1994: 192) such as (12-14).

(12) *Fancy getting your model renosed (getting your nose remodelled).* "Exchange"

(13) *Bake my bike (take my bike).* "Anticipation"

(14) *At low speeds it's too light (heavy).* "Substitution"

But at the same time, we are able to recognize them as such: we correct ourselves. From a corpus of 648 spontaneous speech errors, Nooteboom (1980) found that 415 (64%) were self-corrected more or less immediately. Levelt (1989) also found different types of self-repairs, based on whether the utterance obviously differed from what was intended, or whether it was judged to be somehow socially inappropriate. DeBois (1974) found different "editing expression" such as *that is*, *rather* and *I mean*, which were used for different types of self-corrections: *that is* when an ambiguity is to be resolved, while *I mean* when one's utterance was in conflict with one's intention. All these imply rather sophisticated *monitoring* of one's speech production (and signing, cf. Carroll 1994) and it is hard to comprehend how this could go on "unconsciously". If reflective consciousness becomes obvious when something "goes wrong", it is equally reasonable that it *monitors* the process, when things go "as planned". Levelt's (1989) influential model of speech production has been criticized by Dennett (1991) for its heavy reliance on a pre-linguistic "Conceptualizer", and indeed this may be questioned on phenomenological grounds, since we are rarely aware of pre-linguistic meanings which are subsequently dressed in words. But it is characteristic that Dennett does not say anything about the "Monitor", and Dennett's "multiple drafts" model, when applied to language seems more appropriate for some forms of schiziophrenic speech than normal human talk.

It is not only a logical, but a phenomenological fact that we make *choices* in expressing ourselves, both in terms of the words we use (e.g. *funding/money/bread*...) and the constructions (e.g. active vs. passive voice) we employ, depending on our assessment of the situation and the addressee. Grammatical organization is not arbitrary, but dictated by functional factors such as "information structure" (given-new information) (e.g. Halliday 1975). Therefore, sweeping statements such as that of Hurford (2003: 49) that "syntactic and phonological organization of utterances, though learned, is largely automatic, not under

conscious control" may be questioned. Let us take the following example, taken not from psycholinguistic research, but from a popular textbook on semantics.

> 4.71 John's brother has just got back from Texas.
> 4.79 Assertion 1: John has a brother X.
> 4.80 Assertion 2: X has just got back from Texas.
>
> Why foreground one assertion rather than another? The answer must depend on the speaker's **intentions** and her **guesses** about the **knowledge held** by the participants. For example the speaker might **judge** that the listener **knows** 4.79 but that 4.80 is new information, and therefore needs to be foregrounded. … Note too that a speaker can use 4.71 even if the listener **does not know** John has a brother. In such a case both assertions are new but the speaker has **decided** to rank them in a particular order." (Saeed 2003: 104, my emphasis)

The highlighted terms, and the presentation in general presume a considerable degree of (reflective) consciousness on the part of the speaker. Certainly, most of these processes will not be in focal consciousness, and some may be not even conscious at all, depending on the occasion. But is it possible for *all* of them to be unconscious on *all* occasions?

If such simple cases as the utterance of "John's brother has just come back from Texas" involve prior "guesses", "judgements" and "decisions", than what about other more complex phenomena studied within the contextualized study of language use known as *pragmatics*: (novel) metaphors (15), irony (16), cf. Simpson (this volume), conversational implicature (17) and indirect speech acts (18).

(15) *Linda is a kind of kangaroo of a mother.*

(16) *George W Bush is as wise as the people who elected him.*

(17) *A: What's for dinner? B: Can't you see the fridge?*

(18) *Don't you think it's rather cold in here?*

The conclusion form these observations is that the processes of language production and comprehension cannot be characterized as "automatic procedures" performed in the "deep unconscious". To summarize, in contrast to the problematic picture, represented in Figure 2, a more correct picture, based on the discussion of this and the previous section is shown in Figure 3.
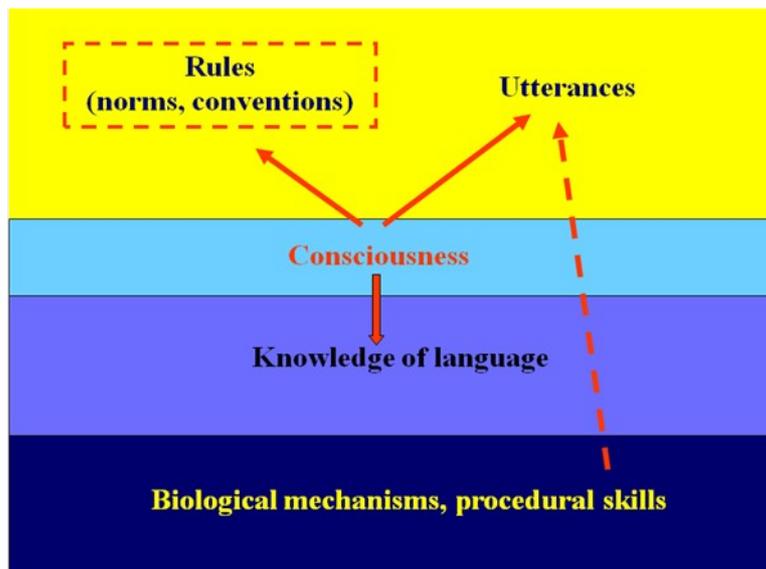
Figure 3. The consciousness-dependence model: The reflective consciousness of speakers co-constitutes the rules of language as objects of common knowledge, and is aware of them pre-theoretically. It also governs language use, without determining it completely.

Notice that I am not denying that there are "unconscious" procedural skills and biological mechanisms that are involved in the support of linguistic knowledge and language use: that would be self-defeating. What I reject is that they are solely responsible for language use, and even more so that such unconscious, "subpersonal" operations are somehow constitutive of our "knowledge of language", understood as a procedural know-how, a position that I more or less defended in some early work (Zlatev 1997).

4. Development and language acquisition

One of the mains reasons that I (along with many others) underestimated consciousness in some of my early work, was due to the promises of *connectionism* (Elman et al. 1996) in the decade around 1990 to provide an alternative to the earlier "symbol processing" paradigm of cognitive science. Much of the debates between cognitivists and connectionists at that time focused on language acquisition, and in many ways paralleled the classical opposition between empiricism and rationalism (nativism). However, it eventually became clear to me that both sides had a common presupposition: that language acquisition could be explained in purely mechanistic terms, implicitly or explicitly denying any substantial role for consciousness, as shown in the following quotations, taken from each of the two camps:

> Implicit learning is an **unconscious** process… yielding abstract knowledge. Implicit knowledge results from the induction of an abstract representation of the structure that the stimulus environment displays, and this knowledge is **acquired in the absence of conscious, reflective strategies to learn.** (Reber 1989: 219, my emphasis)

> We can acquire **unconscious** patterns **unconsciously**, with little or no deliberate training. (Jackendoff 1994: 25, my emphasis).

In this section I will not explicitly argue against such models, but rather refer to work of three currently prominent developmental psychologists who independently from one another have

argued for the role of consciousness in cognitive and linguistic development. The choice of these is their focus on three complementary aspects or even "stages" of the process: preverbal concepts, word meaning and grammar.

4.1 Pre-verbal cognitive development

Mandler (2004) presents an original and coherent developmental theory in which infants are neither sophisticated pattern learners (as in most connectionist models) nor driven by unconscious innate "domain-specific" knowledge and language-acquisition devices (as in nativist models), but conscious beings who construct their conceptual systems through a process that Mandler calls *perceptual meaning analysis*. In this process infants "consciously analyze what objects are doing. The result of this process – interpretations of the world that suffuse the mind with meaning – are also accessible to consciousness" (ibid: 292). The distinction between procedural and declarative knowledge is crucial:

> **Procedural knowledge**, both perceptual and motor, in inaccessible to consciousness. … In spite of taking in lots of information at once … it is also relatively slow to learn, and learning is accomplished by associative strengthening, typically over a number of trials, as in operand conditioning or perceptual schema formation. It aggregates frequency information… This is also part of language learning. **Declarative or conceptual knowledge**, in contrast, is **accessible to awareness** … It **requires attention** to be encoded into this format; this means that it is selective. … The system can learn information in a single trial (in small quantities, of course) simply by being told. In comparison to procedural knowledge, it is **relatively context-free**." (ibid: 55, my emphasis)

Thus, Mandler's theory of cognitive (and in part semantic) development is a *dual systems* theory with (a) perceptual learning giving rise to procedural knowledge of the kind shown in e.g. priming and habituation tasks and (b) concept formation leading to accessible declarative knowledge used in recall, inference, planning and imagination. On this basis, Mandler defends the rather non-orthodox claim that the first true concepts (as opposed to perceptual schemas) are *global* concepts such as ANIMAL and VEHICLE and not "basic level" categories such as DOG and CAR, as has been assumed for quite a while in the literature. The overall theory is supported with reference to a wealth of data such as the following:

- Experiments with *generalized imitation* in which infants first observe pretend-actions such as giving a sip of water to toy-objects such as airplanes, birds, jeeps and dogs, and then are given the chance to imitate with either the same (kind of) object or novel ones. These studies show that starting from 9 months, but progressing up to 14 months, infants do not imitate "inappropriate" actions (e.g. water is given to animals, but not vehicles) and when given a novel object, do not generalize on the basis of shape (e.g. from bird to airplane), but stay within the global category.

- Studies involving *deferred imitation* show that infants, again from 9 months "begin to be able to reproduce event sequences after a delay" (ibid: 232) which is judged as evidence for non-verbal recall. When this interpretation was challenged, Mandler performed corresponding experiments with amnesic patients, showing that these were not able to pass the deferred imitation tests in which infants excelled. Since what amnesiacs lack is

precisely conscious recall of the past, this strengthens the claim that pre-verbal infants possess explicit, declarative knowledge.[6]

- Cross-cultural studies with English and Korean infants and adults, which provide a good illustration of how pre-linguistic conceptualization interacts with learning the semantic structure of a language, and support the recent revival of a moderate form of linguistic relativity.

Similar to Piaget (1945) Mandler gives *imitation* central stage – for Piaget imitation of observed actions and events becomes interiorized and gives rise to the first "symbols", which are more appropriately called *mimetic schemas* (Zlatev 2005). Also, for both Piaget and Mandler, pre-linguistic conceptual structures are a necessary prerequisite for the acquisition of language. The only major difference is that Mandler chooses to analyze these concepts at a higher level of abstraction than Piaget (and Zlatev), not as symbols/mimetic schemas like GRASP, PUSH or FLY, but as *image schemas* ("analog representations that summarize spatial relations and movements in space" (p.79) like PATH and CONTAINMENT etc. However, Mandler's reliance on the notion of "image schemas", borrowed from Cognitive Linguistics (Lakoff & Johnson 1999) is the most problematic part of her theory. For one thing the leading exponents of this concept regard these as procedural, non-representational structures within the "cognitive unconscious" (cf. Section 1.1) and not as consciously accessible, which would seem to be necessary for attributing to them conceptual status by Mandler's own definition.

4.2. Word learning
In his influential monograph, Bloom (2000) similarly argues against a view in which children learn the meaning of words through (unconscious) processes of association between sounds and perceptual stimuli, but differs in focusing on the role of *social* interaction, and in particular on the crucial role of the highly developed human capacity for *intersubjectivity*[7]:

> … it is impossible to explain how children learn the meanings of a word without understanding of certain non-linguistic mental capacities, including **how children think about the minds of others** and how the they make sense of the external world. (ibid: 2, my emphasis)

In brief, Bloom's arguments against word meaning learning through "association" are the following:

- Association-learning yields procedural rather than declarative knowledge (cf. Mandler's definitions in the previous section), and this is difficult to reconcile with what is often called "fast mapping" (learning from a single instance): "The fact that

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[6] However, amnesiacs retain the ability to perform grammaticality judgments, showing that they are not deprived or reflective consciousness just because they lose the ability to recall (episodic memory). This suggests that the role of (reflective) consciousness in relation to knowing a language and language learning is not identical.

[7] Bloom uses the more problematic notion of "theory of mind", cf. Zlatev et al (2008) for the difference between the two concepts and the respective theoretical approaches.

object name acquisition is typically both fast and errorless suggests that it is not a form of statistical learning" (ibid: 59).

- At most half of the children's first words refer to basic-level object terms; the rest to locations (*beach, kitchen*), actions (*kiss, nap*), social roles (*doctor, brother*), natural phenomena (*sky, rain*), and time (*morning, day*) – as well as actions (*go, sleep*) and properties (*big, good*) – and it is difficult to account for the learning of these though associationist processes.

- Most importantly, however, word-learning (in non-autistic children) relies on the understanding of communicative intent. In the well-known experiments performed by Baldwin (1991, 1993), for example an 18-month old child is given a novel toy to play with. Another toy is put in a bucket in front of the experimenter. As the child is playing with the toy, the experimenter looks at the toy in the bucket (at the moment invisible for the child) and says: *It's a modi*. The child looks at the experimenter, follows his gaze to the object and learns the term *modi* to be the name of the hidden toy and not of the toy the child is engaging with when hearing the phrase, as would be predicted by an associationist account. Furthermore, if a (healthy) child is playing with a novel toy and a "disembodied" voice says *It's a modi* the child does not learn this to be the name of the toy he is playing with (though some children with autism may do so, at a later age).

While the ebb of Bloom's critique is directed at the associationist camp, which has been most influential with respect to word learning, the empirical findings are equally problematic for an "unconscious-modules" account, since even granted a "Theory of Mind" system such as that of Baron-Cohen (1995) – which is problematic for other reasons, cf. Zlatev et al. (2008) – it is becoming well-established in cognitive psychology that "[u]nless there is conscious encoding, most observable information does not enter memory" (Bloom 2000: 32).

4.3 Grammar learning

Tomasello (1999, 2003) develops even further the argument for the crucial role of social-cognitive factors such as imitation and the understanding of (communicative) intent for language acquisition, based on the concept of "cultural learning", in which children learn not only by, but "through" others, i.e. by being able to empathetically place themselves in the position of others. The theory is comprehensive, and concerns pre-linguistic, lexical and grammatical development, but let me only mention an important aspect concerning the latter, since it is there that nativist (in particular Chomkyan) approaches have made their strongest claims for mechanisms in the deep unconscious such as a "Language Acquisition Device".

For Tomasello and his colleagues, grammar learning is basically an inductive process, but unlike connectionists this is consciousness-driven inductive process, based on understanding communicative intent, and matching this to the structure of the utterances heard though a process of:

> **…functionally based distributional analysis:** to understand the communicative significance of a linguistic structure of any type, the child must determine the contribution it is making to the adult's

communicative intention as a whole. … [T]his process does not in any way conflict with or compete with processes of **cultural learning**; the only issue here is that what units children are imitatively learning and **how they manage to isolate these units so that they can imitatively learn their conventional use**." (Tomasello 1999: 147, my emphasis)

In fact, Tomasello does not refer to consciousnesses, but to "analysis", "abstraction" and "understanding". But given what was said in the previous sub-sections, especially concerning the difference between procedural and declarative learning, it is clear that he presupposes it.

4.2 Summary
The theoretical and empirical work summarized in this section on the acquisition/learning of language by children – and similarly for adults: there are differences, but not in terms of "unconscious" vs. "conscious", as simplistically assumed in some accounts (cf. Schmidt 1990) – supports a fundamental role for consciousness. Figure 3, shown as a representation of language production, can thus be used also as a (highly schematic) representation of what goes on in language acquisition: Consciousness perceives and analyzes (when necessary) the speech of others, "grasps" their intentions, "compares" with the norms of correct usage, recalls and "stores" in memory both specific instances and generalizations. Unconscious processes support these processes, off-load them, etc – but do not *exhaust* them. Let me conclude by quoting Augustin's well-known passage, much ridiculed in the literature, and famously by Wittegenstein (1953, #1):

> When [my elders] named any thing, and as they spoke turned towards it, I saw and remembered that they called what they would point out by the name they uttered. And that they meant this thing and no other was plain from **the motion of their body**, the natural language, as it were, of all nations, expressed by the countenance, glances of the eye, gestures of the limbs, and tones of the voice, **indicating the affections of the mind, as it pursues, possesses, rejects, or shuns.** And thus by constantly hearing words, **as they occurred in various sentences**, I collected gradually for what they stood; and having broken in my mouth to these signs, I thereby gave utterance to my will." (Augustine 398/1961, my emphasis)

I urge the reader to notice how much richer this "picture" is than what Wittgenstein makes out of it ("...the individual words in language name objects - sentences are combinations of such names"). I would venture to claim that the analysis here presented, (and the evidence reported) rehabilitates the Augustinian infant against its undeserved ridicule.

5. Conclusions: Towards a phenomenological linguistics
In this paper I have presented arguments based on the normativity and semiotic nature of language that reflective consciousness is indispensible for the existence of language as a special form of common knowledge, as well as for our individual knowledge of language. Furthermore, I have argued that consciousness is essential for ordinary language use, on the basis of self-monitoring and the multiple choices we have in formulating our utterances, on the basis of awareness of the hearer's knowledge state and on the context. Recent work on cognitive and linguistic development further supports that the learning of language also presupposes consciousness: for forming preverbal concepts, understanding communicative intent, and learning grammatical generalizations. On the basis of this we can draw a number of important implications, both "negative" and "positive".

First of all, by pushing the knowledge, acquisition and use of language into the (deep) unconscious, most linguists and psychologists and some philosophers have misrepresented both language and our nature as "conscious beings", as stated eloquently by Itkonen (2003), in conclusion of his monograph entitled, characteristically, *What is Langauge?*

> For years now, leading representatives of theoretical linguistics have been arguing that humans, being governed by a blind 'language instinct', can be exhaustively described in physico-biological terms. … [T]his conception has been shown to be fundamentally false. Humans are also, and crucially, social, normative, and conscious beings, occasionally capable of acts of free will." (Itkonen 2003: 183)

Some philosophers occasionally claim that (the illusion of) consciousness is produced by language (e.g. Dennett 1991). But if consciousness in general and reflective consciousness is particular is more basic than language, then this clearly cannot be the case. Once this is acknowledged, one can (and must) still ask how language gives human consciousness its particular characteristics (Vygotsky 1962; Donald 1991, 2001; Zlatev in 2008). But this is, as they say, another story.

Concerning language acquisition, both proponents of "rule learning" (Pinker 1994) and their detractors (Elman et al. 1996) have regarded this as a mechanistic consciousness-free process. From this arises, I would claim, their inability to explain it, and that we still regard this relatively "easy problem", compared to the much harder problem of explaining consciousness as such, as a "mystery". One (positive) implication from this paper is that by carefully analysing the role of consciousness in language learning – as well as its interaction with more automatic non-conscious processes – we may finally be able to explain this "miraculous" process. This should be of central concern not only for linguists.

Concerning language use, we should not over-intellectualize "the behavior of the spontaneous speaker" – but nevertheless, the creativity and sensitivity in which speakers apply their linguistic knowledge to actual circumstances cannot be accounted for my mechanistic procedures. This implies that there is a difference in degree, and not in kind, between "spontaneous" speech and writing, and a re-evaluation along the lines here suggested may help mend the rift between linguistics and literature studies.

Acknowledging the dependency of language on consciousness by the research community may perform a few additional feats of integration. It would seriously help establishing a truly *general* linguistics. To explain: The study of our knowledge of language has been performed within "autonomous linguistics" applying "hermeneutic" methods, i.e. analysing the intuitions of researchers themselves, or of their informants (Itkonen 1978). On the other hand, the study of the causal processes involved in language acquisition and use has been performed by psycho- and (more recently) neurolinguistics, relying on (predominantly) mechanistic explanations. But this has introduced a rift between "intuition-based" and experimental approaches, with persistent (often misguided) debates on criteria of explanation, methodology and ontological questions ("what is language"). As a result, and especially after the demise of Chomskyan orthodoxy and the failure of alternative "movements" such as cognitive linguistics to replace it with any largely consensual foundation, linguistics as a field is

experiencing a *crisis*, as testified by dropping rates of students and funding, and the closing down of numerous Linguistics departments, at least in the West.

While to show this would take considerably more space that what is here left, I believe that recognizing *the primacy of consciousness* – ontologically, epistemologically, and ontogenetically (at least) – to language, shows the direction for seeking a new foundation: *phenomenology* (cf. Zlatev in press-b). A succinct characterization of this tradition of thought, inaugurated by Husserl is that it is based on "the careful description of what appears to consciousness precisely in the manner of its appearing" (Moran 2005: 1). *Pace* Itkonen (this volume) this does not imply limiting oneself to "introspection", but to all forms of consciousness, including the normative intuitions of speakers, discussed in Section 2. Empathy, which as argued by Itkonen (2003, this volume) is essential for typological and historical explanations of language, has been extensively explored by phenomenologists (e.g. Scheler 1954 [1913]). It is crucial to recognize that phenomenology does not deal with the idiosyncrasies of individual experience, but rather "intersubjectively accessible modes of experience" (Zahavi 2003: 54).

In the same way that phenomenology and scientific research is currently experiencing a rapprochement in the study of consciousness (Lutz and Thompson 2001), and cognition (Gallagher 2005), a *phenomenological linguistics* would provide the bases for mending the above-mentioned rift, and uniting (in a non-reductive way) "autonomous linguistics" and "empirical linguistics". As recently suggested by Gallager & Broested-Soerensen (2006), there are several complementary ways in which this may be done. First, one my incorporate phenomenological methods and data into studies, training participants to conduct a form of phenomenological reduction and become more aware with their own experiences, as done by "neurophenomenologists" (Lutz & Thompson, 2003). More generally, one may use insights from phenomenological analysis, e.g. the distinction between "body schema" and "body image", described by Gallagher (2005) into experiments, without any pre-training. Most importantly, however, is that phenomenology provides a basis for the elucidation of the nature of language by making clear differences in our access to "linguistic date", e.g. distinguishing between (normative) linguistic intuition, introspection, and observation emphasized by Itkonen (this volume). The point is that "an objective interpretational framework requires a reflective, methodically guided phenomenological analysis" (Gallager & Broested-Soerensen 2006: 131) and it is the lack of such a framework that linguistics has suffered mostly from, leading to constructs such as "mental organs", "cognitive unconscious", "image schemas" etc. which have brought more confusion rather than explanation.

A phenomenologically-based interpretive framework for language implies exploring both its dependence on consciousness, in its various forms, and the limits of this dependence, i.e. the unconscious processes that were admitted to play an important role as well. Even so, one can and should perform "correlation research" between the "data" from first-person, second-person (intersubjective) and third-person (objective) methods in the study of language. This is a completely different kind of foundation than the kind which attempts to reduce linguistics to a natural science and which, as Itkonen states in the quote earlier in this section, is misguided,

since language and human nature cannot be studied only through the methods of the natural sciences.

What gives me grounds for some optimism, is that cognitive science as a whole seems to be shifting in a direction that is (more) consistent with the one proposed in this paper. "Classical" cognitive science (e.g. Fodor 1983) was based on putative unconscious rules and representations. "Second generation" cognitive scientists rebelled against this and instead emphasized (again unconscious) sensorimotor interactions with the physical (and social) environment (e.g. Brooks 1999; Lakoff & Johnson 1999). However, with the recent rehabilitation of consciousness as a "scientific" concept, and as a phenomenon that lies at the very essence of cognition, I believe we already have a *third generation* of cognitive science in our midst – irrespective of whether phenomenology is explicitly seen as an ally or not (cf. Searle 1992; Donald 2001; Mandler 2004; Gallagher 2005; Hutto 2008; Zlatev et al 2008). In a sense, this "consciousness-dependent" cognitive science can be viewed as a dialectic synthesis of the first two: unconscious processes are important ingredients in (human) cognition, but are not sufficient; on top of these there are also "rules and representations" as *structures of consciousness*, rather than either "physical symbols" or "neural networks" .

It will be remembered that a concern with explaining language was at the core of what defined both previous "generations", e.g. Chomsky (1975) and Newell (1980) on the one hand, and Elman et al (1996) and Lakoff and Johnson (1999) on the other. It would be necessary for the rising third generation to provide a new, more phenomenologically and empirically adequate conception of language than those of its predecessors.

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