THE SOCIAL ONTOLOGY OF LINGUISTIC MEANING

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1. Preliminary Remark

In my earlier writings, especially in Itkonen (1978) and (1983), I have tried to show that the methodological self-understanding of generative linguistics suffers from serious defects, and I have presented an overall conception of linguistics which is meant to be free from those defects. In this paper my primary purpose will be to clarify the notion of (linguistic) *meaning* as it is used in today's cognitive linguistics. It will turn out that whatever is problematic in this notion has been inherited from generative linguistics. Thus, what I will have to say is, to a large extent, a reformulation of my earlier position.

2. Some Historical Background

Theoretically minded linguists as well as philosophers of language have always struggled with the question 'What is language?' The first impulse is to say that language consists of form and meaning in such a way that form is physical while meaning is mental. This common-sense view cannot be right, however. First, form too must be in some sense mental. Second, if meaning is mental (in the sense of 'individual-psychological'), the practice of writing dictionaries of particular languages (which is *not* a practice of describing the minds of individual persons) becomes incomprehensible; therefore meaning cannot (at least primarily) be mental, but must rather be social. Third, and as a refinement of the first point, because form and meaning are the two components of language, and because meaning is social, form too has to be (primarily) social, rather than mental. - It is the second point that will be the focus of attention in what follows.

Frege's (1949 [1892]) definition of meaning serves as a convenient starting point, not because it is particularly clear, but rather because it has been much discussed in the philosophy of language:

> "Both the referent and the meaning of a sign must be distinguished from the associated image. If the referent of the sign is an object of sense perception, my

image of the latter is an inner picture arisen from memories of sense impressions and activities of mine, internal or external. ... The image is subjective; the image of one person is not that of another. ... The image thereby differs essentially from the meaning of a sign, which latter may well be common property of many and is therefore not a part or mode of the single person's mind;..." (p. 87-88; the terminology has been brought up to date).

It is not too difficult to see that Frege is trying to outline here a *social* conception of meaning; this is indicated by his characterization of meaning as non-subjective and as "common property of many". In light of recent developments within cognitive linguistics, it is moreover interesting to note that, for Frege, mental images result not just from sense impressions, but also from one's "external activities". - It is true that Frege's philosophy of logic has Platonist overtones (cf. Itkonen 1991: 284); but in the paper cited here he is dealing with (meanings of) natural-language expressions.

It is quite informative to see how difficult it has been for present-day (psycho)linguists, of whatever persuasion, to understand Frege's position. After presenting the same passage by Frege as above, Johnson-Laird (1983: 183-184) qua psychologist comments on it as follows:

"The doctrine that there is a *real* sense [i.e. meaning] of a sign, distinct from any individual's idea of it, which somehow society is able to possess as public property and to pass down to the next generation, is likely to perplex any psychologist. How can the sense of a sign be the property of many and passed from generation to generation without entering the mind? And yet, if it does enter the mind - and Frege and his successors certainly assumed that meanings did enter the mind - then in what way is it different from an idea?"

The questions that Johnson-Laird asks will be answered in the next section. To anticipate: social (= 'objective') and mental (= 'subjective') do not exist side by side, as it were; rather, the former is *constructed* out of (an indefinite number of instances of) the latter. This is how meanings both enter the minds and are different from (subjective) ideas.

Johnson (1987: xxx-xxxi) presents the same passage by Frege, and comments on it from the viewpoint of cognitive linguistics as follows:

"Now, in order to capture this public and universal notion of meaning, Frege thought it necessary to identify three ontologically distinct realms: (i) the physical, consisting of physical objects ...; (ii) the mental, containing what he called 'ideas', 'images', and other mental representations; and (iii) a realm of thought, consisting of objective senses ... Frege thought he needed *this strange third realm* to insure the objectivity of meaning and the universal character of mathematics and logic. He rejected as 'subjectivist' any suggestion that all of these 'objective' entities might exist merely at the mental level, which he regarded as peculiar to individual minds ... Human cognition and understanding are bypassed as irrelevant to objective meaning relations" (emphasis added).

Several things need to be corrected here. First, Johnson criticizes Frege for rejecting the view that objective entities might exist merely at the mental level; but Frege is here obviously right: social (= objective) and mental (= subjective) are distinct levels. Second, if social is seen as being constructed out of mental (including 'human cognition and understanding'), it is not correct to say that the latter is 'bypassed as irrelevant' to the former. The two are just situated at different levels. Third, it is not clear that in Frege's thinking *public* meanings (characteristic of natural languages) and *universal* meanings (characteristic of logic and mathematics) are simply identical (cf. again Itkonen 1991: 284). Fourth, let us assume, for the sake of argument, that Frege does identify 'objective' or 'public' with 'universal' (in the sense of 'Platonist'). Such a view is, admittedly, rather obscure. It does not follow, however, that we have to *abandon* any notion of a public linguistic level and to accept only two levels, i.e. physical and mental, as Johnson assumes. Rather, we have to *amend* Frege's notion of a public linguistic level, namely by redefining it as a *social* level. This is, incidentally, something that Johnson (1987) too would apparently like to do, as when he claims (p. 190) to be ultimately dealing with 'public, shared meanings'. However, he has no conceptual apparatus that would enable him to do so.

Jackendoff (1992: 26-27) considers the passage by Frege from the viewpoint of generative linguistics. He is right to claim that Frege's view of meanings as objective, publicly available entities is in stark conflict with the generative view of meanings as mental representations. He is quite mistaken, however, in further claiming that accepting the notion of public meanings commits one to regarding language as being 'independent of language users'. This eccentric view is entailed by construing Chomsky's E-language as an 'abstract artifact extrinsic to speakers'. Now, assuming that any meaningful interpretation can be attached to the distinction

between E-language and I-language, it is clear that the former stands for the social and public language whereas the latter stands for its (individual and mental) internalization. How narrow the generative ontology really is, becomes evident from the fact that there is no room left for social phenomena: if an entity is neither physical nor mental (i.e. internal to the individual mind), then it has to be something artificial and separated from (i.e. 'extrinsic to') human beings (cf. Itkonen 1995). It is noteworthy that, in the passage cited above, Johnson (1987) agrees with Jackendoff on accepting only the two ontological levels of physical and of mental.

To round off the picture, let us mention the standpoint of Head-Driven Phrase Structure Grammar, as represented by Pollard & Sag (1994). As they see it (p. 14), the grammar of a particular language has to describe the knowledge shared by the members of a given linguistic community. This view agrees with the one to be developed in the following section. Pollard and Sag add, however, that the knowledge in question is about 'linguistic types', and they leave open the question whether these types are of mental nature (as allegedly claimed by Saussure and Chomsky) or of extramental nature (as allegedly claimed by such 'realists' as Bloomfield and Katz). They doubt that the question about the ontology of language is empirical in character.

Again, several things need to be corrected. Equating Saussure's position with Chomsky's is mistaken but comprehensible (cf. below). By contrast, equating Bloomfield's position with Katz's is not just mistaken but downright incomprehensible. In his methodological statements Bloomfield flirted with physicalism and behaviorism, but in his descriptive practice he was content to describe his own linguistic intuition (cf. Itkonen 1978: 68-71; 1991: 304). Katz's standpoint shares the weakness of all varieties of Platonism, already pointed out by Aristotle: it is a mystery how people living in space and time can ever come to know Platonist entities transcending space and time (cf. Itkonen 1983a). Because the ontological question is a philosophical one, it is trivially true that it is not an empirical one. But it is a mistake to think that only empirical questions can be rationally discussed and eventually solved.

It may be fitting to conclude this brief overview with a remark on Saussure. His overall conception of language is inconsistent. On the one hand, he considers language (*langue*) as a social entitity (*institution sociale*). On the other, he considers linguistic signs (*signes linguistiques*), i.e. the basic units of language, as mental entities (*entités psychiques*). This is a contradiction which cannot be explained away, but just has to be accepted as part of the Saussurean heritage (cf. Itkonen

1978: 55-59; 1991: 297-298). The lack of clarity on this issue has vitiated the methodological self-understanding of mainstream linguistics up to the present day.

3. A Definition of Social Ontology

It is the basic tenet of Itkonen (1978) and (1983) that language is primarily a normative entity. The grammarian does not describe what is said or how it is understood, but what ought to be said or how it ought to be understood. And because the norms (or rules) of language that determine these 'ought'-aspects cannot be individual (as shown by Wittgenstein's private-language argument), they must be social. Thus, language is a social entity (in addition to being a normative entity). Social norms do not exist in a vacuum, but are rather 'supported by' individual persons and, thus, by individual minds. Language as a social and normative entity is investigated by 'autonomous linguistics'. Language as a social and non-normative entity is investigated by 'sociolinguistics'. Language as a non-social (= individual-psychological) and non-normative entity is investigated by 'psycholinguistics'. Yet, even if both sociolinguistics and psycholinguistics investigate what happens, rather than what ought to happen, they have to view their data through the 'spectacles' provided by autonomous linguistics.

Briefly summarized, this conception of linguistics is of course open to several objections. It should not be forgotten, however, that it takes some 700 pages to develop the argument for this conception in full. In developing this argument, I have anticipated and answered every objection that I am aware of (which is not to say that new objections could not be invented). It is another matter that few of those who have been keen on making objections have had the patience to read all of the 700 pages.

What, exactly, does it mean to say that language is a *social* entity? I take it to mean that language exists as an object of *common knowledge*. (Weaker definitions of 'social' are entirely possible; cf. Pettit 1996: 119). One way to define common knowledge is to say that x is an object of common knowledge if (and only if) the following three conditions are true of x and of (practically) any two members A and B of a community (cf. Itkonen 1978: 123):

(I) A knows x
A knows that B knows x
A knows that B knows that A knows x

Three-level knowledge of this kind necessarily occurs in all institutional encounters. For instance, the only reason why, when approaching a bank teller, I do not start shouting "I know what to do, you don't have to tell me!", is that I possess the relevant three-level knowledge: I know that the clerk knows that I know what to do. From the theoretical point of view, there is no way to stop the infinite regress of different knowledge-levels (= 'I know that he knows that I know that he knows..."). From the practical point of view, however, this is not a problem. People do not generally go beyond three- or four-level knowledge. Some people are able to do this; but nobody masters e.g. ten-level knowledge. Nevertheless, in order to avoid the infinite regress, Clark (1996: 93-95) replaces hierarchical definitions like (I) by *self-reflexive* definitions of common knowledge (or 'common ground', as he calls it); for instance:

(II) The members of a community know x and (II)

Here the second occurrence of (II) is equivalent to a self-reflexively used 'this'. In this way one can express, in a single formulation, both 'everybody knows x' and 'everybody knows that everybody knows x'. However, the required *third* level of knowledge still remains unexpressed. This can be achieved, if one actually replaces the second occurrence of (II) by the sentence which it stands for; but then one has started the infinite regress. Clark admits as much when he says (p. 95) that if we "start drawing the inferences that follow from [the sentence (II)]", then there is no way to avoid the infinite regress. But the point is that we *must* start drawing the inferences, because the third level is *always* psychologically real (while even higher levels are *often* psychologically real). Therefore I do not think that (II) is preferable to (I).

It is noteworthy that, according to Clark (1996: 75-77), the language that is commonly known is a set of *conventions*. This agrees perfectly with my view (even if I prefer the term 'norm'). The conventions include those for 'lexical entries' and those for 'grammatical rules', i.e. norms for pairing (morphemic and lexical) forms with meanings and those for combining meaningful forms, as I would say.

It might seem self-evident that linguistic common knowledge is about the correctness of sentences. However, since there is an infinite number of sentences whereas knowledge is necessarily finite, linguistic common knowledge is primarily about the above-mentioned norms (or conventions), and only derivatively about particular sentences (cf. Itkonen 1978: 131). This insight was already expressed by Patanjali (cf. Itkonen 1991: 77-78). In formal logic, the method of indefinitely

expanding the limited number of valid formulae is deduction. In linguistics, the method of indefinitely expanding the limited number of correct sentences is analogy (which, when fully formalized, contains a deductive component; cf. Itkonen & Haukioja 1997).

With these qualifications, we can now concretely show what it means to say that the correctness of a sentence is a social fact:

(III) The sentence *John is easy to please* is correct iff the sentence *John is easy to please* is commonly known to be correct

Thus, because the correctness of sentences is a social fact, and because social facts exist at the level of common knowledge, it follows that there is a certain correct sentence if, and only if, this fact is commonly known. In other words, the existence of x and knowledge of the existence of x coincide at the level of common knowledge.

Because (III) is a material equivalence, and thus hypothetical in character, it needs to be added explicitly that both of its constituent sentences are true: *John is easy to please* is indeed (known to be) a correct sentence. This sentence was made famous in the 60's by Chomsky. He used it, because he knew that everybody knew that (everybody knew that) it was a correct sentence. He was right. Even afterwards, no-one has ever contested the correctness of this sentence.

Common knowledge (like knowledge in general) must have a *basis*. In the simplest case, the common knowledge of a fact is based on the observable existence of this very fact. For instance, the common knowledge that it is raining now is based on the fact that (as everybody can see) it *is* raining now. (But notice that a physical fact, unlike a social fact, can exist, and typically does exist, even if it is not commonly known to exist.) What is the basis for *linguistic* common knowledge, e.g. for (III)? It cannot be pinpointed as easily as it can in the case of commonly known physical facts. It is not a particular happening, like someone uttering *John is easy to please* and no-one protesting its incorrectness. (To be sure, linguistic common knowledge must not conflict with such particular happenings.) The basis for common knowledge about the (in)correctness of sentences is 'diffuse', in the sense that it is just general facts about coming to master a language or any other institution (and the concomitant common knowledge about those facts). The most important difference vis-à-vis common knowledge about physical facts resides in that the basis for linguistic common knowledge, though undeniably existent, cannot be used to strengthen or justify that which it is a basis for:

"And here the strange thing is that when I am quite certain of how the words are used, have no doubt about it, I can still give no grounds for my way of going on. If I tried, I could give a thousand, but none as certain as the very thing they were supposed to be grounds for" (Wittgenstein 1969: §§306-307; quoted in Itkonen 1978: 142).

Concretely: It would be impossible to give a really satisfactory answer to the following question: Why is *John is easy to please* a correct sentence?

Let us continue with the main argument. It is quite interesting to note that the formulation (III) is equivalent with the following formulation:

(IV) The sentence '*John is easy to please* is a correct sentence' is true iff the sentence '*John is easy to please* is a correct sentence' is (commonly) known to be true

The sentence (IV) instantiates the Tarskian 'T-sentence', which is of this general form (cf. Itkonen 1983: 112):

(V) X is true iff p

Here 'p' represents the truth condition of X. The correspondence theory of truth is based on the idea that the truth value and the truth condition are two different things: we always know the truth condition of X, i.e. 'p', and we analyze it in a step-wise fashion, but this happens independently of whether we know 'X' to be true or false. As a general case, in fact, while we do know the truth condition of X, we do *not* know the truth value of X. Now, the example (IV) refutes the correspondence theory of truth as applied to social facts, because it shows that, in this domain, it is impossible to know the truth condition of X without knowing the truth value of X (for discussion, cf. Itkonen 1983: 129-135). Thus, at the level of social facts, the T-sentence has the following form:

(VI) X is true iff X is (commonly) known to be true

Norms are general entities. To claim that norms are *known* to exist entails claiming that the corresponding (general) sentences are *known* to be true. If they are known to be true, they must be unfalsifiable, which means that they are non-

empirical and thus in some sense *a priori*. I have in fact made all these claims and have defended them extensively. It is of some interest to note that since the end of the 80's very similar claims have been made in the borderline area between philosophy of mind and social philosophy. The central notion here is variously called 'response-dependence' (cf. Johnston 1992) or 'response-authorization' (cf. Pettit 1996). The relevance of this doctrine to linguistics is discussed in Haukioja (*forthcoming*).

The underlying idea is that our use of concepts, and of the corresponding linguistic expressions, is based on rules (or norms), and more particularly on rules with public criteria (cf. Pettit 1996: 195-196). To use Johnston's and Pettit's favorite example, something is red if, and only if, people identify it as red (under favorable circumstances). The notion of 'response' is needed to emphasize the public aspect of the process of identification. The notion of 'response-dependence' may be explicated by the following equivalence:

(VII) Something x is an instance of the concept C iff people identify x as an instance of C (under favorable circumstances)

The basic identity between (VII) and (VI) is obvious at once. Just as importantly, the proponents of response-dependence (or response-authorization) take instances of (VII) to be known *a priori*.

The same view of concepts was presented in Itkonen (1978: 42-43):

> "Analysis of knowledge is what philosophy and sociology of knowledge are about. Analysis of knowledge means, in turn, analysis of those concepts into which knowledge is structured or, equivalently, analysis of those expressions which are used to express the concepts. Concepts are tied to norms for their correct understanding and use. It might even be said that there is an *institution* connected with every coherent set of concepts. Such an institution can be experimentally investigated just as little as any other institution or game. Rather, the 'institution' of the use of concepts is the *a priori* condition for the possibility of experimentation.
>
> ...Thus, if a test person claims that things which we know to be red are not red ..., this outcome has no effect upon our concept of redness ...; and therefore what we have here is not a test about this concept. Rather, it is a test about the perceptual or cognitive state of the test person. If we were 'testing' the concept 'redness', we

would accept only such outcomes where things that are really red are claimed to be red. But this only means, again, that we are not dealing with genuine tests."

The claim that we know our concepts *a priori* can be thought to entail the absurd claim that our knowledge in general, including our knowledge of the physical reality, is *a priori*. The mistake in this line of reasoning may be exposed as follows:

"All concepts without exception are made and used by man. ... Physical reality, however it is conceptualized, is not made by man; here even if the concepts are man-made, the instances [i.e. referents] of concepts are not" (Itkonen 1978: 43; similarly Pettit 1996: 201-203).

Even after this qualification has been made, Pettit concedes (p. 204) that the doctrine of response-authorization produces "a striking and surprising thesis". Why? - Because "it offends against a deeply ingrained tradition of thought, a tradition that has been described as endorsing an absolute conception of what there is" (and, we may add, a tradition based on the correspondence theory of truth). - Reading this passage made it easier for me to understand why my philosophy of linguistics continues to be rejected by people who are not able to formulate coherent arguments against it.

Pettit (1996) defends 'holism' (which he opposes to 'atomism'), or the view that, in agreement with the private-language argument, thought is of social character. At the same time, he also argues for 'individualism' (which he opposes to 'collectivism'), or the view that human behavior is explained by reference to 'intentional regularities' (also called 'rational regularities'), and not by reference to any *sui generis* social-structural regularities. He submits (p. 173 and elsewhere) that this combination of holism and individualism is somehow unique. It cannot be quite unique, however, because Itkonen (1983) represents the same combination: on the one hand, the neo-Cartesianism evinced by generative linguistics is criticized along fully holistic (i.e. Wittgesteinian) lines (cf. Sect. 5.1); on the other, human behavior in general, and linguistic behavior in particular, is claimed to be amenable only to 'rational explanation', rationality being defined as a matter of the right type of goal-belief complexes entertained by individual persons (cf. Sect. 3.7). Pettit's dual characterization of 'rules of behavior' as both rationalizing and causing actions, or as having both an objective side and a subjective side, is paralleled by what I call the 'Janus-like character of rationality' (pp. 177-181).

There remains one very important clarification to be made. (The fact that I have been making it for some 25 years in no way diminishes the need for making it today.) The standard reaction to what has been said so far is to claim: "If our knowledge of our concepts and of our language is *a priori* and unfalsifiable (although in principle fallible, in particular cases), then nothing remains to be done; and this is impossible!" This is where my distinction between *atheoretical* knowledge and *theoretical* knowledge comes in (cf. Itkonen 1978: 144; more generally: Sect. 8.2-3). Our unfalsifiable knowledge comprises a huge set of very simple and apparently unrelated facts; it is knowledge of the atheoretical (or pretheoretical) type. One may have this knowledge without having any kind of *theory* about the facts which the knowledge pertains to. Once there is such a theory, it is falsifiable by definition. To give a concrete example, every speaker of Sanskrit who was Panini's contemporary knew the same basic facts about Sanskrit as Panini did. Yet only he was able to construct the (theoretical) grammar that bears his name. Thus, it is false to say that if our knowledge of the (normative, atheoretical) data is unfalsifiable, then nothing remains to be done. As Panini's example shows, once the data are in, *everything* still remains to be done. Or, to give a more 'modern' example, consider the task of writing a parser for English sentences. In the so-called clear cases, every moderately intelligent speaker of English, linguist or not, knows with certainty whether something is or is not a correct sentence of English. At this level, there are (practically) no interpersonal differences. But after this fact has been duly acknowledged, the parser still remains to be done. And this is something that not everyone can do. Thus, at this level, there are interpersonal differences. Writing a parser is a theoretical undertaking. And even those who can do it go sometimes wrong, which means that, on those occasions, their parser has been falsified.

The atheoretical vs. theoretical distinction, as characterized above, gives a clue as to how one should understand Wittgenstein's dictum "Everything lies open to view, nothing is hidden". In conceptual analysis (as exemplified by philosophy, formal logic, or autonomous linguistics), the facts are not in doubt. What is in doubt is the kind of system or theory (if any) which is able to accommodate the facts.

The definition of social ontology that was given above dissolves rather than solves the long-standing controversy within the philosophy of the social sciences. One side has argued that there is an ontological level of social phenomena distinct from the level of mental phenomena. The other side has argued that there are nothing but mental phenomena. Now we can see that they are both right. Indeed, there are nothing but mental phenomena characteristic of individual persons; but these are not just any mental phenomena distributed in a random order; rather, they

are quite specific mental phenomena (namely many-level states of knowledge) placed in a quite definite structure or pattern (namely that characteristic of common knowledge). It is this structure which constitutes the ontological level of social phenomena.

4. Autonomous Linguistics vs. Psycholinguistics: Examples of the Basic Division

Early formulations of the distinction between autonomous linguistics and psycholinguistics were provided by Kac (1974), Itkonen (1974) and Ringen (1975). The existence of this distinction is denied by representatives of both generative and cognitive linguistics. To show that they cannot be right, I shall now give examples of this distinction. What I am doing thus amounts to a so-called proof of existence: Claims to the effect that the phenomenon A is impossible are refuted by showing, not that A is possible but, rather, that A exists.

I shall be concerned with the *meaning* of linguistic expressions. Showing that meanings exist at the level of autonomous linguistics means showing that they exist as social or public entities, i.e. entities defined as objects of common knowledge. The public meaning of a form x equals the public use of x; and the use of x cannot be public unless x itself is public. Social meanings are open to conscious inspection (or intuition). Corresponding to the ontological distinction between social and mental, they necessarily have their individual-psychological counterparts, which may or may not be conscious.

It is justifiable to speak of social meanings and of psychological meanings. Only the former qualify as 'linguistic'. This is in keeping both with ordinary usage and with the usage sanctioned by the history of linguistics (cf. Itkonen 1991: 43, 77-78, 152-155, 202-203). Linguistic meanings are 'objective'; just like logical truths, they are known by subjective *intuition* (whereas objective physical facts are known by subjective *observation*); their 'objectivity' consists in the fact that subjective intuitions about them exhibit the pattern characteristic of common knowledge. Psychological meanings are either conscious or unconscious; when conscious, they are known by subjective *introspection*. It follows that each of Popper's 'three worlds' (= physical, psychological, and social-normative) is characterized by a specific type of act of knowledge, namely observation, introspection, and intuition (cf. Itkonen 1981; 1983: 7-9).

A) The meaning of *All F's are G's* in logic and in the psychology of logic

It is my purpose to clarify the methodological status of (the distinct subdomains of) linguistics. To do so, however, it may be good to start outside of linguistics. It seems meaningful to establish the following analogy (cf. Itkonen 1978: chap. 10):

$$\frac{\text{autonomous linguistics}}{\text{psycholinguistics}} = \frac{\text{(formal) logic}}{\text{psychology of logic}}$$

In other words, it may be argued that the distinction between (formal) logic and psychology of logic is both similar to and more clear-cut than the distinction between autonomous linguistics and psycholinguistics; thus, the former is apt to clarify the latter.

Let us see how the meaning of the sentence schema *All F's are G's* may be formulated at the public, non-psychological level. Because this sentence schema plays a crucial role in logic, the different ways to formulate its meaning undeniably fall under the notion of 'logic' (even if not necessarily of '*formal* logic'). At least the following five formulations have to be mentioned:

(i) The formulation by means of predicate logic, or the universally quantified material implication:

$$(x)(Fx \rightarrow Gx)$$

(ii) The formulation by means of Euler circles, where two figures are needed for the two readings 'All, but not only, F's are G's' and 'All, and only, F's are G's':

(iii) The set-theoretic formulation, where there are again two expressions for the two above-mentioned readings; the first says that F is properly included in G while the second says that F is included in G and G is included in F:

$F \subset G$ $\quad\quad$ $F \subseteq G$
$\quad\quad\quad\quad\quad\quad$ $G \subseteq F$

(iv) The formulation by means of mental models à la Johnson-Laird (1983):

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   f = g
   f = g
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      (g)
      (g)
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(v) The formulation by means of the dialogical logic à la Lorenzen:

Opponent	Proponent
? (x)(Fx -> Gx)	
! Fa	
	! Ga
	! (x)(Fx -> Gx)

A few words of clarification may be added concerning (i) - (v). It might seem natural to accept (i) as the right way to express the meaning of *All F's are G's*. One drawback is that then one also has to accept the so-called paradoxes of implication. In particular, (i) is true if the antecedent is always false, which conflicts with normal intuition. (ii) may seem an intuitively attractive way to express the meaning in question. However, the use of Euler diagrams produces complications elsewhere. To express the meanings of *Some F is G* and *Some F is not G*, four and three distinct figures are needed, respectively. (Venn diagrams, which use the expedient of shading parts of circles, are in this respect more economical.) (iii) is comparable to (i) in its expressive power. To be sure, one has to accept the fact that there is no way to distinguish between e.g. angels and square circles, because both types of entities are represented by the same set, namely zero. (iv) manages to represent the same information as (ii) in a single figure. (v) represents a game connected with (x)(F -> Gx) when this sentence happens to be true: The (ideal) opponent attacks it, or tries to show that it is false. To find a falsifying instance, he has to show first that its antecedent is true (because an implication is false only if the antecedent is true and the consequent is false). This is 'Fa'. The proponent proceeds to show that the

corresponding consequent, i.e. 'Ga' is true too. Thus, the entire sentence is true (for details, see e.g. Lorenz 1989).

We are staying at the public, non-psychological level. Let us now ask: Which of (i) - (v) is the *best* description of the meaning of *All F's are G's*? It is important to understand how this question ought to be answered. It *cannot* be answered in any straightforward way, i.e. by looking at each of (i) - (v) in turn. It can only be answered by reference to the simplicity of the larger system in which each of (i) - (v) is embedded. That is, the choice is not between (i) - (v), but between the five corresponding systems, and the decisive criterion is simplicity (viz. economy) or some more encompassing consideration. For instance, predicate logic, exemplified by (i), is more economical than the method of Euler diagrams, exemplified by (ii). Dialogical logic, exemplified by (v), is equivalent to predicate logic, but from the philosophical point of view it is clearly superior (cf. Itkonen 1978: 2.6). Considered in itself, however, each of (i) - (v) might qualify as the best description; or rather, the question of their mutual superiority remains open.

Next, let us move to the psychology of logic; and at this level, let us ask the same question. Significantly, the answer is now quite different from what it previously was. (i) is immediately disqualified because experimental studies have established beyond doubt that the truth-functional interpretation of implication is not psychologically real (cf. Wason & Johnson-Laird 1972: 87-93; Johnson-Laird 1983: 29-34, 51-54). The same is true of (v) as well. Relying on the principle that 'concepts are containers', Lakoff (1987: 353-354; 1990: 52-53) takes it for granted that (ii) is the psychologically (or 'cognitively') real alternative. However, he considers only the two sentences *All F's are G's* and *No F is G*, and ignores the sentences *Some F is G* and *Some F is not G*, whose meanings are more difficult to express by means of Euler diagrams (cf. above). It is precisely for reasons like this that Johnson-Laird (1983) has proposed his 'mental models'; and in light of his discussion it seems clear that if (i) - (v) are meant to describe psychological entities, then (iv) is the preferable alternative. - Let us add that (ii) and (iii) express the same information in pictorial and in digital terms, respectively. Thus, if forced to choose between the two, those who side with Kosslyn in the mental imagery debate would choose (ii), and those who side with Pylyshyn would choose (iii).

We see that the same question is answered differently, depending on whether it is asked at the level of logic or at the level of psychology of logic. Therefore the two levels must be different. The same point may be further elaborated as follows. Assuming (contrafactually) (i) - (v) to be parts of equally simple systems, they could all be accepted as equally good descriptions at the level of logic. At the level of

psychology of logic, however, this could not be the case. We have to assume that there is only *one* way in which the meanings of *All F's are G's* (or of any such sentence structure) is mentally represented. It cannot be both (i) and (ii), for instance. There may be interpersonal variations in this respect, but at least not intrapersonal variations. (More precisely, even one and the same person may have different mental representations for different instantiations of one and the same sentence structure, depending on the content of those instantiations, but not for one and the same instantiation.) If (i) - (v) are interpreted psychologically, they are meant to refer directly to something in the world (= mental states and processes). By contrast, if (i) - (v) are interpreted non-psychologically, they are not meant to refer directly to anything at all. They are just different ways to systematize bits and pieces of common knowledge (for discussion, see Itkonen 1978: 8.4; 1983: 6.2).

In the preceding discussion the distinction between formal logic and psychology of logic was taken for granted. It may be added that the current cognitivist approach, as represented e.g. by Lakoff, wished actually to *reduce* the former to the latter. This is of course the well-known psychologistic fallacy, exposed already by Husserl (1913). It should be obvious (although it
is not) that neither in logic nor in linguistics is it possible to reduce what ought to be done ('value') to what is done ('fact') (cf. Itkonen 1978: 7.0). To this Lakoff has replied in a public lecture that he intends to perform the reduction with the aid of 'ideal', rather than actual, psychological entities. It is not too difficult to see that this recourse to what is 'ideal' is just an attempt to smuggle the notion of normativity into the description.

B) Situations vs. mental images of situations

Cognitive linguistics is in the habit of using schematic images to describe word and sentence meanings. Because meanings are assumed to be psychological or mental entities, it follows that these images are meant to represent *mental* images (or 'schemas'). This position obscures the fact that in reality there are always *two* distinct interpretations connected with such images, corresponding to the distinction between autonomous linguistics and psycholinguistics.

Let us consider the following example from Langacker (1991: 25-28). As part of describing the meaning of the sentence *The lamp is above the table*, the meaning of the construction *above the table* has to be described, and this happens with the aid of the following image:

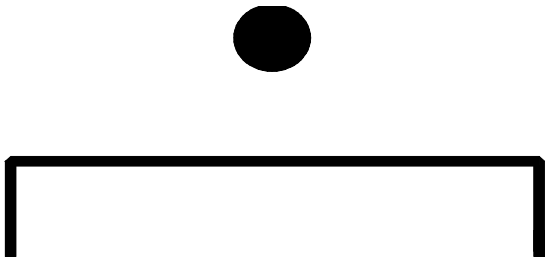


Fig. 1

Now there are two interpretations open to us: a) Fig. 1 represents part of a situation in which something is above the table. b) Fig. 1 represents part of the mental image of a situation in which something is above the table. The a-interpretation is uncontroversial. By contrast, the b-interpretation is controversial, inter alia because there are schools of cognitive (meta)psychology that flatly deny the existence of mental images (cf. Tye 1991: chap. 4).

Because one interpretation is uncontroversial while the other is controversial, they cannot be equivalent but must rather be distinguished from each other. Yet this is something cognitive linguistics has never been able to do.

C) The 'dimensions of imagery' as linguistically coded are not (primarily) psychological

Langacker (1991: 5-12) defines five dimensions of his ('conventional') imagery, i.e. profile vs. base, specificity, scope, salience, and perspective. He also announces (p. 60) that he is dealing with "cognitive operations to which we have no direct or intuitive access".

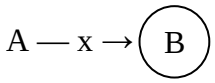
The notion of salience, for instance, is illustrated by means of the images connected with the sentences *A is above B* (= A is salient) and *B is under A* (= B is salient):

Fig. 2: A is above B

Fig. 3: B is under A

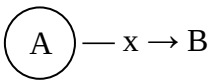
Salience is expressed by the choice of the word order and of the correlative preposition. ('If you start with A, you have to use *above*; if you start with B, you have to use *under*.') It is self-evident that what is thus expressed is an intersubjectively or socially valid *meaning* of these constructions, i.e. a meaning which is quite 'transparent' to our linguistic intuition. It is *not* some individual-psychological or cognitive entity which lies under the level of consciousness and to which we thus have no intuitive access.

The notion of perspective, in turn, subsumes such more specific notions as orientation, assumed vantage point, and directionality (Langacker 1991: 12). For instance, the semantic difference between *come* and *go* must be a matter of 'perspective', because it depends on the assumed vantage point, here represented by a circle:



X is coming from A to B

Fig. 4



X is going from A to B

Fig. 5

It is quite clear, however, that this 'perspectival' difference is not a matter of hidden, unconscious structures which we can only hypothesize about. Rather, it is a matter of social meaning to which all speakers of English have direct intuitive access.

What is true of salience and perspective, is true of the other 'dimensions of imagery' as well. They are not, primarily, unconscious or hypothetical phenomena, i.e. phenomena of the individual-psychological or cognitive sort. Rather, they are semantic phenomena at a social or public level. It is at this level that "nothing is hidden, but everything lies open to view" (cf. above). - The preceding remarks are not meant as a criticism of Langacker-type descriptions *per se*.

What I have been doing here, is just to insist on the distinction between autonomous linguistics and psycholinguistics once again. Remember that accepting the methodological primacy of the former does nothing to undermine the integrity and the relevance of the latter.

D) Images and schemas: conscious or unconscious?

Such central terms as 'image' and 'schema' are used in an ambiguous way by representatives of cognitive linguistics. Both Lakoff (1987: 446) and Langacker (1991: 60) profess to be interested in those aspects of cognition that are unconscious and automatic. However, when Lakoff goes on (pp. 446-453) to discuss his 'conventional images', it turns out that these are not unconscious at all. Everybody is able to become conscious of them and answer any questions about them. They are not 'conventional' in any normative sense, but merely in the sense that people tend to have similar images. (And 'image schemas' are claimed on p. 453 to be rather like 'conventional images'.) Apparently Langacker (e.g. pp. 12-13, 23, 61) uses the term 'conventional image' in the same sense. But then it is clear that the imagery in which cognitive linguistics is interested in represents a rather 'shallow' level of the cognitive organization.

E) An image, mental or not, is in itself never enough

Ever since Plato and Aristotle it had been thought that the existence of mental images (or more abstract schemas) intervening between words and things explains how the former become attached to the latter. Wittgenstein pointed out, however, that this, as such, explains nothing because every image, mental or not, may be interpreted in a literally infinite number of ways. Therefore images must be supplemented with rules of interpretations, or rules telling how the images are meant to be used. And this interpetation or use is ultimately grounded in our 'form of life'.

Wittgenstein's (1953: 54) original example may be rendered as follows:

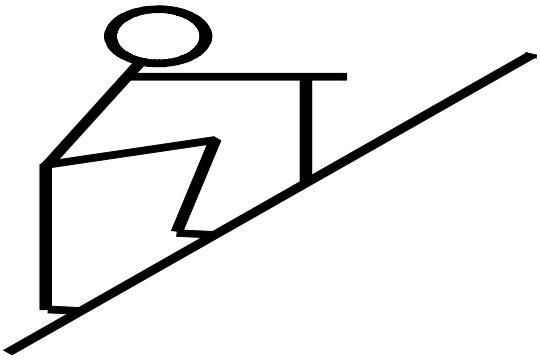


Fig. 6

What does this figure represent? We are inclined to answer that it represents a man climbing up a mountain. But on closer reflection we realize that the man *could* be interpreted as doing anything at all. Most of such interpretations are quite outlandish (for instance, he might be trying to send signals to extraterrestials). But this is precisely the point: how do we distinguish outlandinsh interpretations of an image from the normal ones? The image in itself does not tell us how. Only our (public) use of the image will tell this (for discussion, see Blackburn 1984: 45-50; Heil 1992: 25-30).

In the same vein, Putnam (1981: 18) argues, first, that if there is something in the mind that refers to things, it cannot possibly be an image, and, second, that the whole notion of something mental *intrinsically* referring to things is wrongheaded. What refers is a *concept*: "Concepts are signs used in a certain way; ... the sign itself apart from its use is not a concept" (p. 18). ... *concepts cannot be identical with mental objects of any kind* (p. 20-21; emphasis in the original). Because concepts are signs used, and because use is always of public nature (as the private-language argument has established), Putnam - equating concepts with meanings - concludes that "*meanings just aren't in the head*" (p. 19; emphasis in the original).

It may be added that Jackendoff (1996: 110) levels a similar criticism against Langacker. The latter seems to think that the images he employs are self-explanatory, but they are not. To be sure, Jackendoff has his own methodological worries (cf. Itkonen 1995, and Section E below).

To sum up: because images are never enough, they must always be provided with rules of interpretation (and these must be understood as being grounded in public use). The position of cognitive linguistics on this issue may not be literally wrong, but at least it is inexplicit.

F) A geometric image is (largely) irrelevant to (psycho)linguistics

Generativism seeks support in D. Marr's work on vision (cf. Jackendoff 1987: chap. 9, 1992: chap. 1), just like cognitive linguistics seeks support in Kosslyn's experimental work on mental imagery (cf. Gibbs & Colston 1995). One important point has been overlooked by both sides in this debate. Marr and Kosslyn concentrate on the perception (and mental representation) of *geometric figures*, but from the linguistic point of view such figures are (largely) irrelevant. They are nothing but raw material that has to be interpreted in one way or another. For instance, a running man is a unitary geometric figure, but prelinguistic thought interprets it by dividing it into two, namely a thing (= a man) and an action (=

running), and language universally reflects this interpretation. (Because, from the logical point of view, this interpretation is in no way necessary, the Stoics, for instance, claimed that the verb refers to nothing in the world.) If Marr's and Kosslyn's work is to become relevant to linguistics, more attention has to be concentrated on rules of interpretation. - This point is just a corollary of the point made in Section C.

G) Meanings: embodied concepts rather than merely-representational concepts?

In semantic metatheory, the principal dividing line has been between psychologistic and non-psychologistic conceptions of meaning; and 'non-psychologistic' has generally been identified with 'social' (given that Platonism is just too implausible as an option). Now cognitive semantics à la Lakoff & Johnson seems willing to redefine this opposition to some extent. Meanings are still identified with concepts (or, more generally, with 'cognitive models'), but because these are *embodied*, they should not be mistaken for concepts of the 'traditional' type. (To be sure, Lakoff & Johnson's position is not new or 'anti-traditional' at all, because the bodily basis of concepts is the central thesis of Piagetian psychology.)

Does this redefinition (such as it is) immunize the cognitivist meaning-conception against the antipsychological criticism? Of course not. Embodied concepts are still psychological entities; they still inhabit the individual mind, even if they are grounded in bodily behavior, that is, even if the mind has ('now') been enlarged so as to encompass the body too (cf. the 'body-in-the-mind' slogan). Or at the very least, embodied concepts are still 'tied to' individual persons. The real opposite of 'social' is not 'psychological' but 'individual'. The bounds of individualism can be transcended only by an explicit espousal of such notions as 'common knowledge' and 'social norm'.

5. Two additional remarks concerning cognitive linguistics

The methodological self-understanding of cognitive linguistics has been criticized in what precedes. Therefore it does not seem out of place to add two similar remarks although they are not directly related to the problem of (social vs. psychological) meaning.

A) Analogy is more important than metaphor

It is well known that cognitive linguistics has revitalized the old notions of metaphor and metonymy. At the same time, it seems to have been largely forgotten that metaphor is just a special case of *analogy*. Traditionally, analogy has been employed in the explanation of morphological and syntactic change (cf. Anttila 1989 [1972]: chap. 5). It has turned out, however, that at the level of synchronic syntax, analogy is not only operative, but can also be precisely formalized (cf. Itkonen & Haukioja 1997). Moreover, in the domain of diachronic linguistics, the notion of grammaticalization can be shown to be based on analogy in both of its stages, namely reanalysis and extension (cf. Itkonen *forthcoming*).

Analogy is defined as structural similarity between two 'systems'. Metaphor is defined as structural similarity between two 'systems' belonging to two distinct conceptual domains. In whatever way 'conceptual domain' is defined, it follows that metaphor is a subtype of analogy, or an analogy with additional constraints. If one does not explicitly account for this fact, one is *missing a generalization*.

B) The 'objectivism vs. experientialism' opposition revisited

Lakoff (1987) and Johnson (1987) wish to inaugurate a new type of linguistics. Not content with this, however, they also wish to see themselves as being engaged in a larger undertaking, namely rectifying the mistakes of more than two thousand years of Western thought. As they see it, the history of Western philosophy has been (nearly) exclusively governed by an 'objectivist' tradition, i.e. a tradition claiming that reality is reflected as such in the human mind. They wish to replace this erroneous tradition by a new one, i.e. an 'experientalist' tradition claiming that reality is largely determined by the human mind.

This is a wildly inaccurate construal of the history of Western philosophy. Documenting this claim in detail must be left for an another occasion. Nevertheless, the following corrective remarks have to be offered already in the present context.

By Lakoff's (1987: 174-175, 270) and Johnson's (1987: xxi) own admission, 'objectivism' is characteristic of *common-sense* thinking. This is perfectly correct. However, it is rather preposterous to claim that Western philosophy has been nothing but an exposition of common-sense thinking. Such a claim amounts to ignoring the schools of idealism and scepticism that have - rightly or wrongly - actually dominated the history of Western philosophy.

Johnson (1987: 197) tries to bolster his position by referring to Rorty (1980). However, Rorty's (1980) view of the history of Greek philosophy, for instance, is factually false (see Itkonen 1991: 189-191).

The 'experientalist' position might be defined more informatively as 'interactionism': "How we carve up our world will depend both on what is 'out there' independent of us, and equally [?] on the referential scheme we bring to bear" (Johnson 1987: 202). "Our structured experience is an organism-environment interaction in which both poles are altered and transformed through an on-going historical process" (ibidem, p. 207). Interactionism is represented also by Marxism and different versions of constructivism.

As far as the reality - mind relation is concerned, the principal philosophical schools may be characterized as follows. Realism claims that reality determines the mind. Idealism claims that the mind determines reality (and in extreme versions reality is bracketed entirely). Interactionism claims that there is an inter-determination between reality and the mind. Analogism (represented by Thomas of Aquinas and Peirce) claims that the structure of reality and the structure of the mind are the same. For the sake of clarity, these different options may be presented as follows:

realism	$R \rightarrow M$
idealism	$R \leftarrow M$
interactionism	$R \leftrightarrow M$
analogism	$R = M$

Fig. 7

In spite of its intuitive appeal, this figure is - interestingly enough - based on a fundamental error. It ignores the fact that all the different R-M relations are themselves conceived by the mind. Thus it is meaningless, or self-contradictory, to oppose R to M, because R is always inside M. Reality is always 'internal', i.e. internal to the mind. Thus, the correct figure is as follows:

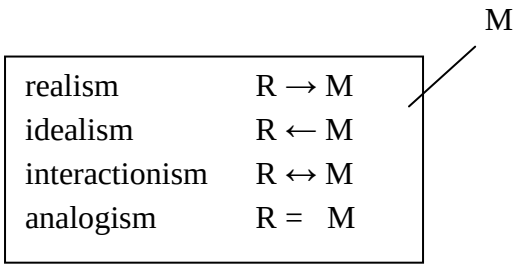


Fig. 8

This is the meaning of Putnam's (1981) 'internal realism'. Contrary to what Lakoff (1987: 260-268) and Johnson (1987: 200-209) assume, it is *not* the case that internal realism would somehow support their experientalism. (Notice, incidentally, the oddity of Johnson's claim that our view of reality depends *equally,* or 50-50, on the mind-independent reality and the mind. On what grounds would he reject the suggestion that the relation is not 50-50, but say 40-60?)

Is there then no basis for postulating the existence of 'objectivism' as a philosophical doctrine? The only such basis is the trend within truth-conditional semantics which defines intensions (= meanings) as functions from possible worlds to extensions in such a way that the former determine the latter independently of the human knowledge. This has prompted Lakoff (1987: chap. 14) to view the whole of truth-conditional semantics as an instance of 'objectivism'. This is an inaccurate interpretation, however. It is possible to provide intensions with an 'epistemic' interpretation according to which they are (human) acts of identifying individuals, sets, or truth values in possible worlds. Moreover, since truth-conditional semantics has also been used to *define* such propositional attitudes as knowledge, belief, and memory, it cannot be claimed to simply describe mind-independent reality. (For a more accurate, but still critical, interpretation of truth-conditional semantics, see Itkonen 1983: 136-152).

There is an ironic twist to Lakoff's (1987) purported criticism of 'objectivism', as one can see from the following quotations:

> "There is one psychologically relevant level at which *the categories of the mind fit the categories of the world*" (p. 34; emphasis in the original). "The categories of the mind fit discontinuities in the world very well at the level of genus, though not very well at other levels" (p. 36).

The context makes it clear that Lakoff is speaking of a fit between the categories of the world and those of the *scientific* mind. (Cf. p. 32: "Berlin and his students...have compared [folk classifications of plants and animals] with scientific classifications.") Thus, oblivious to the fact that science too is a product of the human mind, he assumes that science reveals us the reality as it *really* is. He goes on to compare the categories of this mind-independent reality and the categories of the mind, and he cannot help noticing a remarkable similarity. Needless to say, this is 'objectivism' in its purest form.

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