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Structural semantics and "cognitive" semantics[1]

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Abstract

This paper discusses the central claims advanced by present-day "cognitive" semantics with respect to the "older" tradition of structural semantics. The author asks whether these claims can be considered well-founded. After arguing that "cognitive" semantics misrepresents the structuralist view of linguistic meaning in some important respects, he goes on by giving a criticism of cognitive theory itself, especially prototype semantics. In particular he considers two fundamental questions: how exactly the object of this type of semantic theory should be defined, and what such a theory might contribute to the clarification of *meaning* in general.

1. Introduction

1.1 During the past two and a half decades, linguists all over the world have taken a lively interest in "cognitive" semantics, especially in the form known as "prototype semantics". Cognitive semantics originated in the United States of America in response to the older "analytical" tradition, which analysed meaning in terms of distinctive features. Cognitive semantics is an offshoot of cognitive psychology, in particular the kind concerned with problems of "categorization", i.e. the constitution of mental representations of categories and species designated by words (initially, generic nouns), or more accurately, of the mental images and/or notions corresponding to such words. Two of the immediate precursors of prototype semantics are Brent Berlin and Paul Kay, authors of the well-known and influential book *Basic color terms* (1969, ²1991), which discusses the perception, delimitation (or classification) and de-nomination of colours in about one hundred different speech communities, and in addition makes some sweeping statements about the "evolution" of the colour lexicon. Yet the person who created prototype semantics as an original new discipline is in fact the psychologist Eleanor Rosch (until 1972 Eleanor Heider), who since 1971 elaborated its fundamental concepts from a psychological point of view in a series of articles about "categorization" that are now regarded as "classics" of the discipline. Within a few years, other psychologists had joined her new theory, and before long, Rosch also counted linguists among her followers, especially scholars who were dissatisfied with current "componential analysis" of meaning. Ever since, the cognitive turn has been evolving and expanding in various directions, often changing and correcting the original psychological theory in a fairly drastic way. Hence it would be highly misleading to claim that there is a single prototype semantics. Rather, there are several theories, even mixed ones which are partly prototypical, partly analytical. Different concepts of prototype semantics can be found in the works of R. Jackendoff, G. Lakoff, T. Givón, Ch. Fillmore, R. Langacker, among others.[2] Overall, however, the classic version of prototype semantics (undoubtedly the most influential version in American and European linguistics over the past 20 years) has been based on the work of E. Rosch. Modifications and minor adaptations are primarily due to the change of focus from psychology to linguistics.

1.2 In fact, prototype semantics – understood as a general model of descriptive semantics – is just the application to language of an ambitious general theory of prototypes purporting to be a universally valid theory of "categorization". Ultimately, the theory is concerned with universals of categoriza-

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[1] This paper is based on a series of lectures the author delivered at the University of Tübingen, Germany, between October, 1989, and February, 1990 (*Editor's Note*).

[2] For bibliographical details, see the references at the end of the article.

tion and the way they are established. With respect to language the theory offers a model for general semantics, and with respect to reality (the "world") it offers a model for a theory of "species". "Semantic" description and interpretation together represent both the heuristic and the verificational levels of the general theory.

There are scholars who speak of a "Roschian revolution" not only in semantics and linguistics, but in the theory of knowledge and theory of universals (classes, viz. "categories") as well. In fact it has been claimed that Rosch's new theory equals a kind of Copernican revolution in the theory of "categorization". In addition, the revolution is said to be "anti-Aristotelian", the basic assumption apparently being that the traditional theory of categories – and of natural "species" in particular – which are said to be homogeneous and "discrete" (i.e. can be delimited unequivocally), goes back to Aristotle. According to the "anti-Aristotelian" view, categories are not constituted or even delimited globally on the basis of a fixed number of specific and constant features (so-called "necessary and sufficient conditions") common to all the members of a category. Rather, categories are constituted on the basis of some best members or specimens ("prototypes") via associative extensions in various directions, based on a greater or lesser similarity with prototypes, and with other types that are already part of one or another category by association, explaining why category boundaries are imprecise and vague. This argument is to be understood in both a dynamic and a static sense, i.e. with respect to the "evolution" of categories as well as to the way they "are" (including their configuration). On this view, categories are not homogeneous but "diffuse", having a centre and a periphery, their internal cohesion being based on an associative relation with prototypes which function as implicit "cognitive reference points" (E. Rosch 1975). The categories cannot be "discrete" since the peripheries of several categories overlap. For example, as far as colours are concerned (recall that E. Rosch's own initial investigations were related to the field of colours, see Heider 1971 and 1972), the basis is constituted by certain prototypical cases (for example "red", the colour of blood, "blue", the colour of the cloudless sky, "yellow", the colour of many canary birds); and since these chromatic zones extend via partial similarities, there can be no precise boundaries between, e.g., "red"

and "orange", or between "blue" and "green" and "yellow". Similarly, in the category of birds, the prototype is represented by the robin, the sparrow, the swallow or the eagle, and via intermediate members (finch, blackbird, raven, etc.) we reach the peripheral ones, such as the penguin and the ostrich, that have very little in common with the "best" members of the category, thus explaining the various "degrees of membership".
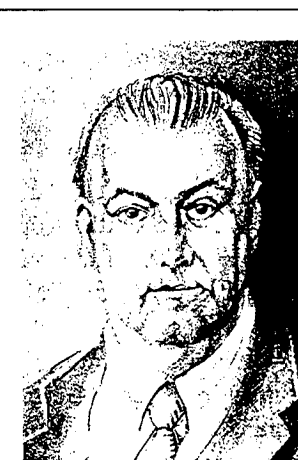
1.3.1 The problem raised by so-called "cognitive" theory is the problem of how objective categories are constituted, and this is not, strictly speaking, a linguistic or semantic problem. Reference to semantics is merely a *result* of the fact that we use words to designate "categories" or "species", as those words represent "categories" or "species" when we speak about things. As a consequence, in the cognitive paradigm the "constituting" of categories is identified with the "constituting" of "meanings" of language, raising the following question: "what kind of cognition (or knowledge) does a word contain?" The problem of categorization is thus approached from the point of view of "meanings" insofar as the latter appear to be part of the implicit "cognitive" motivation to use words in the process of designation. An important corollary of this idea is that categories are diffuse associative wholes organized around certain central and "prototypical" mental representations. Evidence for this view can be drawn not only from common linguistic activity but also from certain psycholinguistic "tests". For example, it can be observed that the usual representation of "bird" implies the capacity to fly, yet at the same time the word *bird* is also used to refer to birds that cannot fly, like penguins and ostriches. According to proponents of cognitive theory (who have devised special tests for the purpose), this is due to a more or less mediated association with the primary or prototypical mental representation (a "prototype" like a robin, a sparrow, etc.), that is to say on the basis of secondary, mediated, or marginal "meanings". It also explains how properties that in language use are constantly being attributed to prototypes and justify extending a given category by means of analogy, can acquire the status of "semantic features".

It should be clear by now that the main issue in prototype semantics is not "meaning" (strictly speaking, "word meaning") but *how objects and*

things are included in a particular category. The question is not what a word like *bird* means or how the meaning of this word is to be described or analysed. Rather, the problem is why a single word like *bird* can function as the name of various, heterogeneous sorts of birds and how objects are subsumed under particular concepts. For advocates of the cognitive paradigm in linguistics, the above-mentioned tests surely demonstrate more than just the psycholinguistic and social reality of the prototypes. They also (indeed, especially) allow us to identify the specific properties of prototypes, and the properties of prototypical "meanings".

1.3.2 In both prototype semantics and cognitive psychology, prototypes were originally considered to be real mental representations of classes of things or objects (e.g. "red", the colour of blood, a "robin", "sparrow", "swallow" as prototypical birds, etc.), or image schemas of kinds of objects – the sort of images that could be visualised in drawings.[3] As prototype theory then came increasingly to be applied in linguistics, especially to cases that could not be represented by images or drawings, the concept of „semantic prototype" changed in some important respects, giving rise to what is now often called the "standard version" of cognitive semantics. It soon became clear that while it is not unreasonable to claim that the word *red* means "the colour of blood (and what is similar to that colour)", it would be absurd to say that the word *bird* means "a robin", "a sparrow" or "a swallow", or "something like a robin", "something like a sparrow", etc. This difficulty has had important consequences. On the one hand, the concept of prototype has come to be defined as the sum total of prototypical properties. On the other hand, it has been invoked as an ideal and abstract entity, a kind of "cognitive model". There may be "optimal

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Porträtzeichnung von Hans Joachim Madaus

Eugenio Coseriu was born in Mihăileni (Bessarabia, Rumania) in 1921. 1944 Ph.D. ("Lettere") in Rome, 1949 Ph.D. ("Filosofia") in Milan. After being a Professor of General and Indoeuropean linguistics in Montevideo (Uruguay) from 1951 to 1963, he was appointed Professor of Roman Languages and General linguistics at the University of Tübingen (Germany). E. Coseriu is the author of numerous major contributions to linguistics, esp. in the field of language theory, philosophy of language, history of the language sciences, semantics, phonology, language change, text linguistics, translation studies, language typology, contrastive linguistics, and the relation between language and literature.

specimens" of such a model that possess most of the prototypical properties; but it is equally possible that no class of objects actually exists in which the cognitive model, with all its prototypical properties, is fully realized.

As a result, prototype semantics is undeniably drifting in the direction of precisely the type of analytical semantics which it was originally designed to refute, because "prototypical" properties turn out to be completely analogous to distinctive features and the necessary and sufficient conditions of the latter, the essential difference being that the "prototypical" properties are not regarded as necessary and sufficient for the constitution and delimitation of the categories, i.e. for the use of a word to designate every single member of a class. In the practice of cognitive linguistics, such properties are tolerated as definitional features and necessary and sufficient conditions only for the real or ideal prototypes, precisely with the aim to show that they do not hold in the same way for other members that are – or may be – designated by the same word. Therefore, "meanings" are not com-

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[3]   It is important to note that many 'cognitive' authors regard it as particularly advantageous to represent word meanings by means of non-verbal codes. The truth is, however, that we are dealing with a totally unacceptable reduction of meanings to images and, consequently, with the reduction of concepts to objects. As such, non-symbolic images do not constitute a semiotic "code", they are not signs of concepts but merely reproductions of objects. Images and schemata can certainly be didactically useful in *suggesting* meanings and concepts, yet they cannot represent them, as meanings and concepts simply cannot be visualized by drawings. Images and schemata always represent "things" (cf. § 6.2.2.).

pact and homogeneous, but "gradient", which means that they have only so many of the respective properties, resulting in differences of "degree" rather than "quality".

1.4   Prototype semantics has been welcomed in both the United States of America and Europe, particularly by American scholars familiar with the "logistic" tradition in semantics, and by European scholars who only possess a superficial knowledge of the type of structural semantics that has been the object of extensive research in Germany, France, Spain, Italy and elsewhere for the past thirty years. In the course of this research the theory of structural semantics has been specified for a large series of lexical fields. It should not come as a surprise, therefore, that the success of prototype semantics often goes hand in hand with a rather shallow or, even worse, plainly false conception of structural semantics, its aims, fundamental assumptions, and methods. Among some scholars, misunderstandings and misrepresentations are particularly glaring. For example, in his article "Cognitive semantics", G. Lakoff (1986b) presents some interesting ideas which he regards as not only novel but "anti-Aristotelian". The author is apparently unaware that very similar ideas have been the object of thorough investigations in European linguistics for a long time (although in other contexts) – investigations which, incidentally, have revealed their profoundly Aristotelian nature. Another example is the rather exotic discussion of semantic problems by Ch. Fillmore in his article "Frames and the semantics of understanding" (1985), in which the author seriously misrepresents modern European research on lexical fields.

The linguist Georges Kleiber has declared that if prototype semantics is apparently so successful, it must be for a good reason. Obviously, he writes, many linguists hope that prototype semantics will remedy "all errors of classic lexical semantics" (Kleiber 1988, 1). It should be emphasized, however, that this "classic" semantics has nothing to do with the European structuralist tradition. It is rather the kind of semantics that has been proposed by logicians and linguists working in the "logistic" tradition, the kind Fillmore (1975) called "check-list theories of meaning". A well-known example is the famous article "The structure of a semantic theory" by J. Katz and J. Fodor (1963) who, in the vein of generative grammar, proposed

a very problematic analysis of the English word *bachelor*.[4] This kind of semantics resembles prototype semantics in one very important respect: neither of them is concerned with "semantic relations" between words in a particular historical language, but exclusively with "referential" or "designational relations" between words and "things" named and referred to, i.e. with words as *names of classes* of "things". As both theories fail to distinguish between "meaning" and "reference" (or "designation"), they cannot define and analyse *linguistic meanings* but only deal with concepts and classes of things at best. On the other hand, as both theories make use of distinctive features (though not in the same way and not to the same ends), serious confusions are not far off, particularly in the work of non-specialists. It is important, therefore, to examine the alleged errors of "classic" semantics as well as the alleged remedies offered by prototype semantics.

In the present paper I will challenge both views. First, I will investigate what critics can reasonably have in mind when they speak of the alleged errors of "classic" semantics. I will try to show why structural semantics *stricto sensu* is not affected by such criticisms. Secondly, I will discuss the important question as to whether the remedies allegedly offered by prototype semantics are of any relevance at all to linguistic semantics proper. I will start my discussion by considering in great detail a revealing, indeed typical (though not prototypical) paper by G. Kleiber (1988). His article is of special interest for the purpose of my paper, not only because he accepts the internal configuration of prototype theory while voicing serious objections against statements concerning the prototypical delimitation of categories, but also because the article shows that Kleiber (like many of his colleagues) obviously has not understood what structural semantics really is about.[5]

2.   The alleged shortcomings of analytical semantics[6]

2.1   G. Kleiber lists five major shortcomings of analytical semantics (in fact, the third shortcoming turns out to be a mere consequence of the second). I will discuss them in the order in which he proposes them.

2.2.1   Analytical semantics cannot be applied to all domains of the lexicon, because there are certain domains that do not admit to analysis in terms of distinctive features. The best-known example where such an analysis is doomed to fail is, of course, the domain of colour terms. For terms like *red, yellow, blue,* etc., it would indeed be difficult to imagine other distinctive features than just "red", "yellow", "blue".

2.2.2   Categories cannot be defined on the basis of necessary and sufficient conditions, because any given "meaning" does not apply to *all* members of a category. Prototype semantics has challenged the necessity as well as the general sufficiency of features, and it has presented evidence for the fact that often enough, features admitted by a certain prototype are not necessary at all for the application of a word to a non-prototypical case – and sometimes not even sufficient either. L. Coleman and P. Kay, for example, in their well-known analysis of the verb *to lie*, consider the following features as constituting the verb's prototypical meaning: a) 'to say something untrue', b) 'the speaker believes that what he is saying is false', c) 'the speaker intends to deceive the hearer' (Coleman/Kay 1981). Yet speakers interpret (classify, "categorize") as acts of "lying" a host of assertions lacking at least one of these three features. Another scholar, Ch. Fillmore, has claimed that the definitional features of *bachelor* ('human', 'male', 'adult', 'who has never married') are non-sufficient in certain cases, since for example the word cannot be used to refer to the Pope and other special cases of unmarried adult men (Fillmore 1975). Fillmore also points out that, in an analytical account, the verb *to climb* has two prototypical features ('ascend' and 'by means of hands and/or feet'), but that in a sentence like *The monkey is climbing down the flagpole* the first feature is lacking, while in *The snail is climbing up the*

flagpole the second feature is lacking, since a snail does not have feet (Fillmore 1978).

2.2.3   Analytical semantics does not provide the theoretical flexibility needed to account for the actual *use* of words. Since it assumes neat boundaries between categories, analytical semantics fails to do justice to "referential vagueness", i.e. to the fuzzy boundaries, the "blurry edges" of the designated classes, and to "marginal cases". For example, analytical semantics requires necessary distinctive features like 'with four legs', 'made of solid material', 'with a back' for *chair*; Kleiber (1988, 8, 10-11, 22-23, 37-38) here refers to B. Pottier's famous analysis of the French word *chaise* (see Pottier 1963 and 1964). The theory actually "forbids" objects lacking one of these features from being called *chair*. Yet speakers do in fact consider these objects as "chairs" and they consistently tend to use the word *chair* in referring to them.

2.2.4   Moreover, analytical semantics reveals nothing about the internal constitution (the "configuration") of categories. In analytical semantics, categories are totally homogeneous. For example, all "birds" are categorically equivalent, because each member of the class of "birds" is a "bird" solely on the basis of the features that define the whole category. Yet, our intuition as well as certain linguistic aspects (cf. § 3.2.3.) clearly show that the internal structure of categories is based on the principle of gradience. There can be no doubt, for example, that a robin or a sparrow is a better specimen of the category "bird" than an ostrich or a young chicken.

2.2.5   Finally, the framework of analytical semantics cannot account for features that are linguistically pertinent[7] without being necessary and sufficient. Hence, definitions of analytical semantics are "minimalistic", as they exclude certain features that many language users regard as part of the content of words even though they obviously do not hold for all the members of the category. This is true, for example, of the feature 'being able to fly' with regard to the category referred to by the word *bird*, even though not all "birds" fly. In analytical semantics, features that are not necessary for the delimitation of a given category belong to the realm of extralinguistic knowledge. Critics claim

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[4]   For a more detailed criticism of this analysis, I refer to Coseriu (1981a) and (1981b).

[5]   Like other scholars, Kleiber (1988, 3-4) explicitly identifies structural semantics with the general semantic theory of "necessary and sufficient conditions". Essentially, Kleiber accepts prototype theory as far as its internal configuration is concerned, but he rejects its account of how categories are delimited.

[6]   Wherever possible, Kleiber's French examples are accompanied by English translations (*Editor's Note*).

[7]   For obvious reasons, the terms "relevant" and "relevance" are avoided here (*Editor's Note*).

that such features are more than simply "encyclopedic" in nature, that they are on the contrary highly pertinent linguistically. Evidence for the immediate consequences of such features in everyday language use can be drawn from tests, such as involving the conjunction *but*. If a prototypical (though not necessary) feature is affirmed in adversative form – for example: *It is a bird, but it flies* or Fr. *C'est un oiseau, mais il vole* –, the result, though grammatically correct, is very awkward, while denying the same feature in adversative form yields a perfectly acceptable sentence: *It is a bird, but it does not fly* (Fr. *C'est un oiseau, mais il ne vole pas*, Kleiber 1988, 8).

3. The alleged advantages of prototype semantics

3.1 After listing the five (or four) shortcomings of analytical semantics, G. Kleiber expounds the principal advantages of prototype semantics. These advantages are, of course, said to provide the appropriate "remedies" for the shortcomings of its analytical counterpart.

3.2.1 Prototype semantics can be applied to a far greater domain and a much larger number of linguistic problems than analytical semantics. Prototype semantics manages to deal with issues that have thus far resisted any coherent treatment in the analytical framework, such as colour terms. Moreover, "classic" cases, too, have been successfully analysed from the point of view of prototype semantics, for example *bachelor*. Prototype semantics has thus proved to be a much more powerful tool than analytical semantics, enabling scholars to tackle not only important problems concerning the lexicon, but also all other linguistic issues that bear upon the problem of "categorization". Indeed, as the theory of prototype semantics evolved, its possible applications expanded steadily. Over the past ten years, prototype semantics has become, at least in part, a "prototypical method" for describing and analysing a vast array of issues no longer restricted to the lexicon. Starting from colour terms, the analysis turned to words for natural kinds and species and for certain artefacts (like W. Labov's cups and bowls, see Labov 1973); later, verbs like *to lie* and *to climb* (cf. § 2.2.2.) were analysed as well as nouns.

Ch. Fillmore distinguishes between various types of prototypes in the lexicon and has used the technique of prototype interpretation in his analysis of demonstratives (Fillmore 1982). G. Lakoff (1972) presented an analysis of grammatical rules from the point of view of prototype theory, and more recently other scholars have expanded prototype research to include phonetics and morphology.

3.2.2 An intrinsic advantage of prototype semantics is that it can conceive of categories as less than strictly or rigidly delimited; usually they are said to have fuzzy boundaries. Therefore, the step from something (called) *x* to something (called) *y* is not a sudden but a gradual one. This means that when we are confronted with an object and have to designate it adequately, the problem is not to find the category in which the object should necessarily be included (i.e. the problem of the "tertium non datur", either *x* or *y*), because it is possible that the object turns out to be "something like *x*" or "something like *y*". For example, particular objects may quite plausibly be called *chairs* although they are very different from prototypical "chairs". This has two general consequences. On the one hand, prototype semantics can explain "referential vagueness" as well as "marginal cases". On the other hand, prototype semantics accounts for the fact that "new" objects can be included in already existing categories – for the fact, in other words, that prototypically constructed categories show "structural stability" (i.e. a particular form of cohesion due to association with prototypes) and are at the same time sufficiently flexible to adapt to new experiences and technical progress. Yet the most important achievement of prototype semantics is that it eliminates the lexicographer's difficult task of having to define the meanings of "marginal cases". The history of linguistics has shown that analytical semanticists who pretend to give comprehensive definitions for the entire range of language use and for all the uses of a single word, have been unable to provide solutions for such cases. In prototype semantics, "marginal cases" present no difficulties at all. Moreover, in prototype semantics such cases do not need to be accounted for individually, because they are a simple corollary of the general theory. To put it more succinctly: prototype semantics actually predicts "marginal cases", they simply *have* to exist, as they are the

"atypical members" of their category and, as it were, the "exceptions that confirm the rule".

3.2.3 Instead of postulating homogeneous categories the way analytical semantics does, prototype semanticists claim that categories are "gradient"; hence their frequent reference to the concept of centrality. According to prototype semanticists, such a view perfectly agrees with language users' intuition, because for them the members of one category are not entirely equal; in their experience, certain members are "better" and more appropriate than others. This can be seen from a whole series of linguistic phenomena. Certain members are designated by means of specific expressions, called "hedges" by G. Lakoff (1972): *(something) like, a sort of, nearly*, etc. Hedges are much more commonly used in combination with non-prototypical members than with prototypical ones. It is therefore natural to speak of a young chicken as having "more of a bird than of something else", whereas such expressions will not be used when referring to a robin, a sparrow, or other prototypical members of the category that do not give rise to similar doubts. Another relevant phenomenon has to do with so-called "preferred interpretation", which is of considerable importance when interpreting and understanding information in a text or context. For example, when someone says *If I were a bird!* (Fr. *Si j'étais un oiseau*, Kleiber 1988, 24), then they are imaginatively referring to a prototypical "bird" (like a robin, a sparrow, a swallow, or even an eagle) rather than a chicken, an ostrich, or a penguin.

3.2.4 The major advantage of prototype semantics is that, unlike analytical semantics, it allows for pertinent but non-necessary features to be part of the meanings of individual words; this aspect of prototype semantics also has an important bearing on its application to lexicography. Lexicographers are thus no longer forced to make definitions of word meanings as analytical and "minimalistic" as possible. Rather, they are free to give much richer and varied definitions that are real descriptions of the corresponding objects. Such definitions should include various features that are "linguistically pertinent" without being distinctive. That such features really are pertinent, as well as the kind of pertinence involved, can be seen from a series of logical and linguistic facts that are characteristic of the structure and interpretation of speech. As an

example, consider the phenomenon that could be called "tacit inference" (or "reasoning by default"). If, for example, *x* is being called a *bird* and nothing contradictory is added, then the feature 'being able to fly' is automatically implied. Consequently, *If I were a bird!* is generally understood in the sense 'if I could fly'. There is an immediate relation between this type of inference and generic assertions like *Birds fly*. Such assertions can be used with respect to an entire category even though not all members of the category meet the condition of being able to fly. Thus, any exceptions to the generic assertion do not imply that its interpretation will be false.

Generally speaking, the use and interpretation of words in context is based on two principles (see Schlyter 1982). According to the first, the "principle of prototypical approximation" (Germ. "Prototyp-Annäherungs-Prinzip"), a word will normally be interpreted in a prototypical sense unless explicitly contradicted. This explains why in a sentence like *We arrived at a village. The church was closed* (in French: *Nous arrivâmes dans un village. L'église était fermée*) an associative anaphor is not only permitted but also perfectly "normal". This would not be the case in the following sentence: *We arrived at a village. The department store was closed* (Fr. *Nous arrivâmes dans un village. Le grand magasin était fermé*, Kleiber 1988, 26). The reason is that a prototypical village has a church (and normally only one) but no department store. According to the second principle, called "the principle of specified deviation" (Germ. "Abweichungs-Signalisierungs-Prinzip"), atypical members of a category (so-called "deviations") tend to be specified. Generally speaking, the verb *reiten* in German (*to ride* in English) implies 'a horse', but if another animal is meant, this is usually specified explicitly, as in: *Er reitet auf einem Kamel* (Kleiber 1988, 26-27; English translation: *He rides a camel*).

For these four reasons, according to G. Kleiber, prototype semantics constitutes a great step forward in lexical semantics.

4. The limits of prototype semantics

4.1 I now intend to discuss whether the alleged shortcomings of "classic" semantics really *are* shortcomings when considered against the background of the specific scope of analytical seman-

tics. In fact, this could only be the case if the two theoretical "models" at issue were concerned with the same object. This is why it is so important to explain the essential differences between the two theories.

The theory of "necessary and sufficient conditions" (henceforth: NSC), as developed in the USA (cf. § 1.4.), considers each word separately in relation to the objects it designates ("things", "persons", "events", "classes", etc.); at this point, analytical semantics coincides with prototype semantics. As far as the level of objects is concerned, the distinctive features with which the theory of NSC operates are distinctive properties of objects; as for the mental level, they are distinctive properties of the corresponding concepts. Just like prototype semantics, the theory of NSC is therefore a kind of "universal" semantics, even though the analysis is normally restricted to only one historical language. For the same reason, the "lexicon" in NSC-analysis is undifferentiated, because that part of the lexicon of a given language that is structured on the idiomatic level is not distinguished from the unstructured part. Strictly speaking, the theory of NSC prefers to study terminological "nomenclatures", especially "popular" ones, and indeed treats the whole lexicon as if it were a nomenclature.

The theory of "structural semantics" is of a totally different order. Here, what is at issue is first and foremost the *intralinguistic meaning relations between words in one and the same historical language*. The true objective of the theory of structural semantics is a coherent analysis of the meaning structures of individual historical languages.

The focus on a particular historical language should be stressed indeed – and properly understood. What do I mean when I claim that the aim of structural semantics is to establish ("uncover") semantic distinctions and delimitations that are typical and constitutive of individual languages? First of all, as far as the objective part is concerned, distinctive features are the ("substantive" or relational) properties of designated objects that correspond, on the mental level, to functional ("distinctive") features in a given individual language, that is to say, to constitutive properties of the intralinguistic meanings of that language. As an example, consider Spanish. We find that the verb *traer* ('to bring') has the distinctive feature 'in the direction of the first person', while the distinctive features of the verb *llevar* ('to take') include 'in the direction

of the second or third person'. Secondly, in the theory of structural semantics it is extremely important to distinguish clearly between the "primary" lexicon, which is linguistically structured, and the "secondary" or "terminological" lexicon, which is not structured in an idiomatic way (i.e. in a way that is specific to a particular language). Therefore sets of scientific, technical, and popular nomenclature (or terminology) do not belong to the subject area of structural semantics proper.

Kleiber is thus completely mistaken when he – along with many other scholars – identifies the theory of NSC with the theory of structural semantics, claiming that in the latter, too, distinctive features turn out to be "referential" in practice, even though theoretically they should not. The point is not whether the features are "referential" or not, but whether they function as distinctive features (objective or not) in a given language; nor whether features are "natural", but whether they belong to a particular historical language and are therefore functional on the strictly linguistic level. Of course, as far as the proper "naturalness" of distinctive features is concerned, most of the features turn out to be "referential" anyway, insofar as they correspond to "real" properties of "objects" and are attributed to them. In this sense, properties that are attributed to objects "subjectively" are, of course, "objective" as well (see Coseriu 1981a).

4.2.1 Prototype semanticists, when discussing the validity of analytical semantics in describing the lexicon, tend to stress a single shortcoming. They claim that analytical semantics cannot give an adequate account of the basic colour terms.

What is the validity of such a claim? The answer is quite straightforward. It is true that the content of basic colour terms cannot be analysed by means of distinctive features. Yet this is not a shortcoming of any semantic theory. Rather, it is a simple linguistic fact. *No* semantic theory is able to analyse what cannot be analysed – not even prototype semantics (strictly speaking, its second version) – because it is altogether impossible to determine the prototypes of colours as conjunctions of prototypical properties! In the theory of NSC, colours can be nothing but primary and elementary properties ("semantic primitives"), something that cannot be explained by linguistic "reasoning". Within the theory of structural semantics, on the other

hand, basic colour terms (as I showed as early as 1964) can be considered to be linguistically structured on the level of distinctive features alone. As a consequence, we cannot analyse them on any additional level, we can only *show* them objectively; colours can only be perceived. The treatment of basic colour terms in structural semantics therefore does not constitute a "failure" of the theory but the exact opposite: the structural approach was not only the first to provide an explicit account of this thorny issue, it also revealed the true nature of the content of colour terms.

The above does not, however, imply that there is no linguistic structure *corresponding* to the field of colours. Nor does it mean that structural semantics is unable to precisely describe this structure. On the contrary: the theory of structural semantics has discovered that in most languages the linguistic colour field is divided into a "chromatic" and an "achromatic" section, expressions like Sp. *en blanco y negro y en colores* (English translation: *in black and white and in colours*) being a clear manifestation of the former. The "achromatic" section is characterized by gradual oppositions (*white – grey – black*, in this order), whereas in the "chromatic" section only equipollent oppositions exist (*red – yellow – green*, etc., in an arbitrary order). Moreover, it can be shown that for historical languages *black* and *white* are the exact opposites of what they are in physics. In language *black* is the "suppression" of colour as a result of "saturation", whereas *white* is "primary absence" of colour; in physics, on the other hand, *black* stands for total absence of colour, whereas *white* "contains" all colours. Furthermore, at the linguistic level there are numerous distinctions within the (archilexical) basic contents (see Bidu-Vranceanu 1976, and Grossmann 1988).

It is perfectly reasonable to call it a "limitation" of structural semantics that this theory explicitly excludes terminology and nomenclature[8] from its object of study. But it is completely unreasonable to claim that such a limitation is a shortcoming of the theory as such; it is, on the contrary, its strength, as it proves the internal coherence as well as the methodological rigour of the theory. Any semantic theory that aims to reveal the semantic structures of particular languages is forced to dis-

tinguish carefully between the idiomatically structured lexicon of a language and its idiomatically unstructured counterpart.

4.2.2.1 As I mentioned earlier, analytical semantics has been blamed for not possessing enough "flexibility" because of its limitation to necessary and sufficient conditions. This criticism, however, is based on a series of fallacies.

First of all, one should not confuse the "non-sufficiency" of distinctive features with their "non-necessity". The claim that some features are not sufficient because they do not allow certain exclusions, implies that these features are necessary but do not suffice to delimit a certain category. This means that the number of features should be increased and that features which have been adopted as part of the definition must be modified (and, of course, described with great precision). As a consequence, the criticism concerns the definition, not the type of semantics from which the definition arises. Thus, when the word *bachelor* cannot be used to refer to the Pope and other unmarried adults (e.g. members of religious orders, priests in certain religions, etc.), this means that the definition hitherto accepted as prototypical is simply incorrect – and, what is more, incorrect in all cases! Evidently, the feature 'who has never married' has to be modified, and other features have to be added in order to account for such exclusions. It appears to be necessary, for example, to add that referents excluded from the extension of the word *bachelor* 'could have been married but have not yet done so, deliberately or involuntary'.

In discussing features that in certain cases turn out to be non-necessary, it is absolutely essential to determine whether the features adopted for a given prototypical meaning are constitutive on the level of *purely linguistic* semantics (i.e. on the level of autonomous language-specific "meanings" and "concepts"), and whether they really are necessary to describe the prototypical meanings. As far as the verbs *to lie* and *to climb* are concerned, "cognitive" analyses do not answer the question whether the meanings of these words are "opposed" to other meanings (of other lexemes in English); as a matter of fact, we do not even know on what grounds the prototypical features are obtained. Apparently, we have to do with autonomous concepts. Yet, as far as the verb *to lie* is concerned, it is clear that not all the features proposed by Coleman and Kay are

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[8]   I use the term "nomenclature" to refer not only to names of animals and plants (on the level of the "species"), but also to most names of artefacts, etc.

equally indispensable. In fact, *to lie*, considered as a common concept, only means 'to present as true something that one considers to be false'. The question whether we have to do with objective falsehood, is, of course, completely irrelevant. It is possible that this is beyond the speaker's knowledge, because a person could be claiming something which he considers false without knowing that, actually, it is the truth. Furthermore, the speaker does not necessarily intend to deceive the interlocutor, he could just as well be aiming to help him; in any case, if the feature 'deceiving the interlocutor' is relevant at all, then it can only be *included* in 'to present something as certain'. All this clearly reveals that the analysis of Coleman and Kay must be rejected because it is circular: after having assumed more features than necessary, the authors show that not all features appear to be necessary.

It is relatively easy to show that in many cases certain features do not apply if more features than truly necessary are adopted for the corresponding general meaning. Let us take the verb *to climb*. Evidently, in interpreting the sentence *The monkey is climbing down the flagpole* the feature 'ascending' is excluded because of the explicit determination *down*. From the point of view of language-specific meaning, this means that the meaning of the verb *to climb* as such implies neither the specification 'up' nor the specification 'down', but solely 'on a vertical or inclined plane'. Moreover, when the direction is not explicitly specified, the verb *to climb* is automatically understood in the direction 'up'. In many languages, this is perfectly common. In German for example, *steigen* means 'to ascend' or 'to descend'; however, used without specific determination the verb always means 'to ascend'. In French, *âgé* means 'of a certain age', but without further specification the word is used to refer to 'old' as opposed to 'young' (cf. lexemes as *alto* 'high', *largo* 'long', *ancho* 'wide', *hondo* 'deep', *grande* 'large', etc. in Spanish).

As for the verb *to climb*, the reason why the feature 'clambering' is interpreted as 'by means of hands and feet or paws', is that one thinks of human beings and certain animals in the first place. Yet, this choice is quite arbitrary. In fact, it would seem much more plausible and correct to specify 'by means of extremities' without excluding the extremities of, say, a snail; after all the verb *to climb* applies to animals without paws and to plants as

well. As a consequence, it is a serious mistake to claim that the feature 'clambering' is lacking in *The snail is climbing up the flagpole*.

What has been said thus far is true of analytical semantics in general. With respect to structural semantics, however, some important additions must be made. For structural semantics, the "meaning" that is realised in a particular use, in an act of designation, is never the *signification* as such – the intralinguistic semantic entity – but always a particular *variant* of that entity (just like the actually realized speech sound is not the phoneme itself, but a variant). And a variant offers, by definition, more features than the corresponding functional entity. Moreover, structural semantics aims at delimiting the functional entity on the level of the *language system*, i.e. on the only level where the functional entities constitute a structure of idiomatic units, proper to a particular language. On the other hand, structural semantics also accounts for the fact that language is not only a "system" but also encompasses a level of *normal language use*. On the latter level, a particular variant turns out to be, in certain contexts, the "normal" variant, so that it constitutes an "invariant" of normal language use. It is important to stress that, unlike structural semantics, the general theory of NSC in the United States of America and some other countries usually ignores the distinction between functional entities and variants as well as the distinction between the systematic level of language and the level of normal language use. This is, of course, a simple corollary of the fact that the American theory of NSC deals with *concepts* as well as *intralinguistic meanings*.

Ever since the very inception of their theory, structural semanticists have been studying both the systematic level of language and the level of normal language use, aiming to establish the *types of variants* on each level. As I said before, determining language-specific meanings, i.e. the semantic entities of a particular language resulting from specific oppositions within that language, is the first and foremost task of structural semantics. Proceeding from the level of the system, structural semantics focuses furthermore on normal language use and aims at determining types of semantic variants in exactly the same way as the functional entities of a language are established in grammar and phonology. In the course of the "cognitive turn", most critics of structural semantics have

proved unaware of these distinctions, and therefore their analysis is restricted to the level of normal language use. As a consequence, using the concept of prototypical meaning, they arbitrarily identify *and* confuse the "normal" variant (with its host of features) with the meaning of the term as such (as is the case, for example, in the aforementioned analyses of the verbs *to lie* and *to climb*). Under such circumstances, of course, one comes across cases where the "meaning" seems to be reduced in features. But the truth is that in *all* cases we are dealing with one and the same semantic entity on the level of the historical language system, the difference being that in certain cases the variant has fewer features than the "normal" one.

4.2.2.2 The central concern of cognitive-based criticism against the theory of NSC, however, is to show that analytical semantics fails to delimit meaning adequately because it lacks the required "flexibility" for such a purpose. Moreover, analytical semantics cannot explain the phenomenon called "referential vagueness" (or "vagueness of reference"), nor "marginal cases" and "fuzzy boundaries" between categories. In fact this criticism, too, is ill-founded. Analytical semantics, and structural semantics in particular, states explicitly that the kind of vagueness concerned is of a referential order, i.e. that it concerns designation and objects referred to ("things", "persons", "events", etc.), *not* intralinguistic meanings. It is the boundaries between objective categories that (normally) are imprecise and fuzzy, *not* the boundaries between mental categories (concepts and meanings *stricto sensu*). Moreover, from the point of view of structural semantics, the fact that we are able to determine objective "fuzziness" is rendered possible precisely, and exclusively, *because* on an intuitive level of linguistic knowledge, we have at our disposal "discrete" and well-delimited concepts and meanings.

Undoubtedly, "marginal cases" – taking this term in its current sense – do exist, and must therefore be accounted for. Yet marginal cases are not the "atypical" members of the kind of categorization proposed by prototype semantics! Usually, they are what can be called "fixations" on the level of normal language use, either facts of "repeated discourse" or particular restrictions grounded in speakers' "encyclopedic" knowledge about the

objects of the external world. Obviously, difficulties with respect to such cases are due to their great variety, not to the analytical focus of a theory. As far as the "atypical" cases of a category – the examples of vacillating categorization as well as the "fuzzy" boundaries of categories – are concerned, it should be stressed that it is rationally and theoretically quite legitimate to argue, as prototype theory does, that "referential vagueness" proper to the level of designation can be interpreted as semantic vagueness on the level of word meanings as well. In that case, the heterogeneity and the fuzzy boundaries on the referential level would have to be considered as a peculiarity to be attributed to concepts and meanings as well. The question is whether this hypothesis is tenable.

It is certainly true that all designation should be thought of as a kind of "categorization": a particular referent is allocated to a particular category. Yet, this should not be regarded as somehow "modifying" or "constituting" a mental category (a meaning or a concept), let alone as a case of vacillating categorization. Designation always consists of subsuming "objects" under pre-existing linguistic concepts and meanings. For that reason, it is particularly important to understand exactly what structural semanticists mean when they claim that *signification* (the intralinguistic semantic entity) and *designation* (or reference) belong to different levels.[9]

I use the term "signification" to refer to a strictly mental entity that is part of a broader "designational knowledge", understood as a set of "conditions" for virtual designations. Such a set can only be homogeneous and "discrete" (cf. § 4.2.3.). By contrast, I use the term "designation" to refer to "things-meant" (A. Gardiner ²1951) and their properties, which are often heterogeneous and "continuous" (gradient, non-discrete). Designating, then, consists of "referring" objects of designation to significations. A salient feature of designation is indeed its multiplicity, as a variety of – possibly quite diverse – objects can be "referred" to one and the same signification. Although rather trivial, it seems that precisely this fact has been overlooked in recent discussions.

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9   Obviously, in terminology and nomenclatures the "meaning" of terms only coincides with designation as far as designation determines meaning (instead of the other way around). In such cases, the delimitation of the designated object *precedes* the act of "naming" (cf. § 4.2.3.).

In view of the distinction between signification and designation, it is reasonable to say that language imposes certain limits on "things-meant". However, these limits are of a purely mental kind. This means that they do not eliminate continuity on the level of "things-meant" (and their properties), on the contrary: the limits of language reveal the continuity of the referents, the latter becoming obvious because of the former. Yet language does not "classify" every "thing-meant" with all its particularities, it does not "name" everything within the heterogeneous field of referents. The significations of a language must be considered as mental "models" or "moulds", sets of conditions for the classification of the entities in the external world. Designation, the use of a particular word and its particular meaning, is simply the way in which a particular referent is "introduced" into one of these models or moulds. Although the process of designation may seem automatic, it always involves "interpreting" something on the basis of a particular meaning. Furthermore, each referent is introduced into the model or mould to which it is "best adapted". It is of course possible that a particular "thing-meant" has not been "categorized" yet, or that a speaker simply ignores or has forgotten the category that applies to it. In such cases the object may be introduced into a model or mould to which the referent more or less accidentally does not fully correspond, and/or for want of a more adequate model or mould. This implies that the object is being "referred" to a particular signification although it does not present all the features required by that signification. This rather common phenomenon may be called "emergency categorization".

The important thing to note, however, is that this kind of categorization *does not change the signification*. The model or mould itself is not affected by it. It is a type of designation that could lead to a real change of signification only if it becomes sufficiently generalized and regularized in normal language use. "Semantic change" always means that the *entire* signification of a term changes, and this is not to be identified with somehow "reducing" signification in some marginal zone. In traditional linguistics, the type of semantic change I am referring to is called meaning "extension". In fact, extending the designational area implies *restricting* the signification of the term, because the number of distinctive features is reduced or certain features

are functionally "faded". It is possible, for example, that a restriction of this sort applies to a verb like *to climb*, if we assume that the meaning of the verb initially implied the feature 'by means of hands and feet or paws'. On the other hand, if using the verb *to climb* in *The snail climbs up* seemed in some way exceptional and unusual today, then we would be dealing with an example of "emergency" designation, and hence a metaphorical use of the verb *to climb*, without any change of signification whatever.

By means of what I call "emergency categorization", it is possible to account for cases of rather unusual, reticent inclusion as well as explain certain doubts speakers may occasionally experience when confronted, in the process of designation, with particular objects – doubts, that is, as to whether a given object corresponds to signification *x* or to signification *y*. Contrary to what some scholars seem to believe, such doubts have nothing to do with significations, but only with the "designandum", i.e. the "thing-meant" and its properties. As I said earlier, significations are the models or moulds with which the object can be said to be "compared". It should be noted that in prototype semantics, too, the concept of comparison is used, although in a different sense: "marginal cases" are compared with prototypical significations, which are stable. From the point of view of structural semantics, however, another important possibility must be taken into account. Words with apparently "imprecise" significations that present, in particular contexts, reduced "meanings", might in fact be the *neutral terms* of corresponding distinctive oppositions. (It will not come as a surprise that the American theory of NSC ignores the peculiar phenomenon I call "neutralisation" – just like prototype theory does.) A neutral term usually has two linguistic *valeurs* (this term from F. de Saussure is particularly appropriate here): a neutral one and a specific one. The former is generic in kind, corresponding to the total semantic space covered by a particular opposition, while the latter is strictly oppositional. Consider the word *day*. If the oppositional signification (*day* in opposition to *night*, 'day$_2$') is regarded as prototypical, then the neutral signification (the *valeur* of *day* used to refer to a period of 24 hours, i.e. 'day$_1$' meaning 'day$_2$' + 'night') is automatically a reduced "meaning".

Given these explanations, we can now return to G. Kleiber's claims about, for example, *chair* (cf.

§ 2.2.3) and assess the particular fallacy in his reasoning. The answer is clear: the alleged "fuzzy" boundaries exist between the types of objects called *chair, arm chair, stool*, etc., not between the significations 'chair', 'arm chair', 'stool', etc.! This has some important consequences. If someone uses the word *chair* to refer to objects lacking certain features, e.g. 'with four legs', the first thing a semanticist ought to do is to examine whether *chair* is used in this way only occasionally or indeed constantly.

If the objects concerned are already "categorized" and commonly called *chairs*, then we have to distinguish between two possibilities. One possibility is that the feature 'with four legs' is not distinctive, and hence the proposed definition would simply be incorrect (something which is indeed rather common!) and have to be rejected, even within the framework of analytical semantics.[10] The other possibility is that *chair* is the neutral term for at least one part of the lexical field "seat", in the sense that all "seats" meant for a single person and not identifiable as "armchairs", "stools" etc., can be called *chair*. In this case, the features adopted by Pottier apply to the general *valeur* of the word, not to some prototypical *chair*.

On the other hand, if the objects concerned are novel and have not yet been "categorized" (in which case they cannot be said to be constantly called *chairs*, the members of the linguistic community only being inclined to refer to them by means of the word *chair*), then the fact that they are called *chairs* may illustrate the aforementioned phenomenon called "emergency categorization".

At any rate, in none of the three cases can the signification of the word *chair* on the level of the historical language be said to be affected, in any reasonable sense, by the variation on the level of designation.

4.2.3 It is important to clarify some problems concerning the delimitation of categories and the differences between i) "objective" categories of designated referents and ii) "mental" categories (i.e. significations and concepts) that cannot be considered simple representations or images of the referents. This will permit us to fully appreciate

the alleged "shortcoming" of traditional semantic theory of not realising that categories are not homogeneous.

The fact that categories have a "gradient" structure and are internally heterogeneous, is something we realize "intuitively". As a matter of fact, being a part of our daily experience it is rather a truism, and certainly no semantic theory has ever failed to pay attention to it. However, gradient and homogeneous categories must not be confused. On the one hand, it is indeed a characteristic feature of mental categories (significations and concepts) that they are homogeneous. "Objective" categories, on the other hand, are – and *can be* – gradient as well as heterogeneous. Gradience and heterogeneity are, for that matter, features of classes of referents which are themselves categorized by means of significations and concepts. In analytical semantics, the fact that classes of referents are gradient has always been beyond any doubt. However, analytical semantics cannot accept the hypothesis that significations and concepts too are internally heterogeneous and gradient, and this refutation has been supported by a number of valuable arguments. Furthermore, structural (and analytical) semantics regard gradience as a phenomenon not only of secondary importance but one that is preceded already by the constitution and delimitation of the classes as such. As a matter of fact, objective gradience can be accounted for only *because* classes of referents do not coincide with mental categories: the very discreteness and homogeneity of significations and concepts allows us to assert the gradience of the classes that we identify by means of them. This is evident from the fact that there have to be "guidelines" enabling a comparison with one *internal* configuration or another; if this were not the case, we would be confronted with a chaos without limits.[11] Therefore, it would be erroneous not to distinguish between objective classes on the one hand and mental categories on the other, and to attribute to the latter the gradience that is found in the former. At any rate, this kind of error is avoided in analytical semantics, whereas it is rather typical of its critics.

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[10] It should be noted, however, that in Pottier's analysis there is no feature 'with four legs'; the feature adopted by Pottier is 'sur pied' ('with one or more legs') – which is, of course, something else altogether!

[11] Note moreover that gradience itself is nothing but a metaphor, an image – a construct of the mind necessary for comparing classes of "things" with "meanings" and "concepts", whose nature is homogeneous. Yet a class of "things" never really exists in the world as a unique and continuous conjunction, with a "prototype" in its centre and "atypical examples" at its periphery.

It is of course true that knowledge of the gradient nature of objective classes of referents is apparent in actual "language use". What is important, however, is to distinguish clearly between ὀνομάζειν, *naming* objects, and λέγειν, *speaking about* objects. Indeed, the definitions proposed by analytical semantics for significations and concepts deal with naming things, not with the way people speak about them. Analytical semantics stresses the fact that when we speak about things, we use not only significations and concepts, but also the knowledge we have about the things themselves. Thus, we can readily admit that robins and sparrows are far better examples of "birds" than ostriches and chickens are. Yet this assertion does not apply to the concept *bird*, but only to the class of "birds", as robins and sparrows correspond better to what is widely known as members of that class. To put it more succinctly: it is possible to say that *x* has more of a bird than *y*, and such a statement depends upon the features one is inclined to attribute to what one would call a "real" bird; but, above all, both *x* and *y* have to be "birds"!

4.2.4 The distinction between *linguistic knowledge*, in the sense of *idiomatic knowledge* on the level of the lexicon, and *knowledge of objects* ("*things*", "*persons*", "*events*", etc.) corresponds to the distinction between *naming* and *saying* (or *speaking about* something; see Coseriu 1985). This difference is equally important for the so-called "minimalism" of analytical semantics as it is for the problem of those features that, although being pertinent ("relevant") in one way or another, do not constitute a part of the "definition" of a category. From the point of view adopted by the theory of NSC, it is certainly not an error or a shortcoming to exclude such features from the definition of conceptual significations. On the contrary, it is perfectly coherent to consider them as "encyclopedic data" which, rather than being part of concepts *stricto sensu*, merely correspond to what we call "usual knowledge of things" (i.e. the outer world in the widest sense). This does not mean, however, that the theory of NSC is unable to account for properties that are, on the level of "things-meant", pertinent and distinctive though linguistically irrelevant. Eventually, how ascetic or generous a semantic theory of NSC is depends in each case on the particular historical language being scrutinized. For example, in considering 'to

move with something', the theory will be ascetic with respect to languages such as Spanish and Portuguese, because in these languages a semantic distinction is drawn between *llevar – traer* and *levar – trazer*, respectively. The analysis will even have to be more ascetic for Italian and Catalan, as these languages (on equivalent levels in the language system, that is, and in similar stylistic registers) have only the verb *portare* and *portar*, respectively. For French, on the other hand, a theory of NSC will be rather generous as it has to reflect the considerable lexical richness of this language, which distinguishes between *porter, apporter, emporter* and *mener, amener, emmener*, viz. for each series the neutral term, the term for 'in the direction of the speaker', and the term for the opposite direction 'away from the speaker'. Similarly, the meaning of 'to give' is rendered by the verb *dar* in Spanish, whereas in Japanese at least four kinds of 'giving' have to be distinguished. For any semantic theory that proposes to establish the structure of the significations of a particular language, it would be a very serious mistake to arbitrarily include in the definition of a given lexeme aspects that are not functional in the language at issue. Clearly, this would imply presenting a non-linguistic aspect as a linguistic one, i.e. as an element constitutive of the structure of the "idiomatic" content of that particular language. In the kind of semantic theory I propose, the constant and distinctive properties of "things" are non-pertinent unless they can be shown to be functional in the intralinguistic distinctions drawn within the language under discussion.

Yet, we are told that features excluded from the scope of analytical semantics are "linguistically pertinent". Moreover, in his article, G. Kleiber adds that this kind of pertinence is "generally" acknowledged – without, however, referring to any literature. I assume, therefore, that Kleiber is not referring to linguists, or, at any rate, to linguists familiar with the genuine and current concept of "pertinence" as it is being used in truly "functional" linguistics, from which the concept originally emanated. In the kind of "functional" linguistics I am referring to, a feature on the expression side is said to be linguistically pertinent if it corresponds to a difference on the content side (with the exception of synonymy, i.e. syncretism of content). Conversely, a feature on the content side is said to be pertinent if it corresponds to a difference on the

expression side, excepting cases of homophony, i.e. syncretism of expression, see Coseriu (1981b, 199-204). Thus, from a "functional" point of view pertinence coincides with distinctiveness in a particular language. Therefore, in "functional" semantics too, features that are pertinent are said to constitute linguistic meanings ("significations"). According to prototype semanticists, the test involving the conjunction *but* reveals just this kind of pertinence (cf. § 2.2.5.). Yet, the truth is that this test cannot reveal anything about linguistic pertinence; as a matter of fact, it is useless even as to homophones.

For one thing, it is certainly unusual to state *It is a bird, but it flies* whereas a sentence like *It is a bird, but it does not fly* is perfectly normal (cf. § 2.2.5.). But this does not prove that the feature 'being able to fly' is linguistically pertinent in the signification of *bird*! In fact, it merely shows that we know that most "birds" are able to fly. This can be seen from the simple fact that exactly the same test can be applied not only to linguistic pertinent features, but to *all* features that are part of our common experience, that is to say: to every aspect of what I have called our "usual knowledge of things" (cf. § 4.2.4.): *It is a horse, but it is intelligent – It is a horse, but it is not intelligent; It is a donkey, but it is stupid – It is a donkey, but it is not stupid; It is a fox, but it is cunning – It is a fox, but is not cunning*. Consider the following sentences with the word *brother: He is my brother, but he loves me – He is my brother, but he does not love me; He is my brother, but he looks like me – He is my brother, but he does not look like me; He is my brother, but I know him – He is my brother, but I do not know him; He is my brother, but I know where he lives; He is my brother, but I do not know where he lives; We are brothers, but we share the same surname – We are brothers, but we do not share the same surname*. The question is, of course, whether all these features – usually, brothers "like each other", "resemble each other", "know each other", etc. – should be included in the lexicographical definition of *brother*, and, if this were the case, whether something equivalent would hold for the definitions of *father, son, grandfather, grandchild*, etc. as well...

It is important to note that the restrictions revealed by the *but*-test belong to a much more general phenomenon: the way in which "discourse" is structured. Generally speaking, it is un-

usual to state explicitly what can normally be expected as being the case, or what can be said to be normal, common knowledge of the objects in our world. Usually we talk about those aspects of objects (including "things", "events", "persons", "facts", etc.) that are special or that differ from what we consider to be "normal". As a consequence, many common properties of objects we encounter in the world can be said to possess a certain kind of "pertinence", but then this pertinence must be located on the level of *discourse* (i.e. the production of *texts*) rather than *languages* (i.e. historical language systems) (see Coseriu 1970 and 1985). Such common properties, then, do not constitute features of significations, but features of discourse. The fact is often overlooked that in the interpretation of language in discourse, the "designational" knowledge speakers have about objects in the external world plays a major part. Hence, a semantic theory in which linguistic and non-linguistic properties are identified or simply confused with each other, cannot ascertain how extralinguistic knowledge contributes to the constitution and interpretation of texts. This can only be done by structural semantics, because only this type of semantics is able to identify and to delimit the distinctions that are "idiomatic", i.e. functional and constitutive in a particular historical language, resulting in the delimitation of "intralinguistic" functions as opposed to "extralinguistic" knowledge.

Note furthermore that whereas a particular objective feature is not an "encyclopedic" item just because it is "natural", "encyclopedic" items are not universal and unique conjunctions, either. In fact, what appear to be "encyclopedic" items are a host of various types of conjunctions that differ from language to language. Moreover, features that are not pertinent in one particular language may be pertinent in another, and vice versa. All this is subject to detailed empirical investigation.

4.3.1 To sum up, significations (intralinguistic meanings) are not heterogeneous in their internal structure, they do not have fuzzy boundaries, and they display neither a "centre-periphery" structure nor areas of transition from one signification to another. Heterogeneity and gradience apply to the objects of designation, to what we refer to when we speak, *not* to the linguistic meanings that constitute the framework underlying that designa-

tion in language use. Moreover, designational heterogeneity and gradience can only be conceived of on the basis of genuine linguistic meanings that are homogeneous and well-delineated. The difficulties one may encounter in deciding whether something is *x*, *y* or *z*, are difficulties in *separating* "things", not difficulties in *distinguishing* "meanings". Difficulties like these have to do with the application of meanings, not their structure or configuration. They occur because the properties of things are "continuous", whereas linguistic meanings are "discrete" and, for that matter, διακριτικὸν τῆς οὐσίας.

There are numerous ways in which languages differ in establishing concepts. For example, what in Dutch and German is conceptualized as *levensgevaar* and *Lebensgefahr* ('danger of life'), corresponds to *danger de mort* and *peligro de muerte* ('danger of death') in French and Spanish; and what in English is a *wisdom tooth* (as in Dutch, *verstandskies*, German, *Weisheitszahn*, French, *dent de la sagesse*, etc.) is a 'judgement tooth' in Spanish (*muela del juicio*) and a 'tooth of the mind' (*măsea de minte*) in Rumanian. Furthermore, linguistic meanings can be applied metaphorically and metonymically, resulting in secondary and derived meanings.

Another aspect that should be stressed is the fact that lexical meanings do not represent a scientific "taxonomy", a unique classification of reality. Rather, they represent simultaneous and different classifications that cross one another, causing interference between meanings in designation. Therefore, one and the same object can be subsumed under a series of different significations, depending on the point of view taken. In addition, expressions (Saussure's *signifiants*) can be polysemous (or "homophonous"). Yet, as already pointed out by Aristotle, "polysemy" does not mean *one* single though heterogeneous and imprecise meaning, but, rather, *several* unitary as well as delineated meanings that correspond to only one *signifiant* (see Coseriu 1979).

In the scope of this article, however, perhaps the most important thing to stress is the following: whenever words are used in discourse, language use is constantly determined not only by the idiomatic knowledge one possesses of one's language, but also by the knowledge one has of the designated objects. Therefore, when talking about "meaning", failure to distinguish rigorously between these two types of knowledge is bound to cause serious confusions.

4.3.2 It should be remembered that for 30 years there has been general agreement among scholars working in the tradition of European structural semantics about the issues expounded in § 4.3.1. Unfortunately, many colleagues in the United States appear to have little or no knowledge of the fundamental distinctions and well-founded views held in this tradition. This is true not only of scholars that claim to reject the distinctions I made in the previous sections of this article, but also of linguists that have been propounding – although on other premises – ideas analogous to those I have been commenting upon in this article. What distresses me most, however, is that many young students accept, enthusiastically and hastily it seems, extremely ill-founded views and erroneous criticisms, and that they are prepared to orient themselves to dubious claims about language and linguistics, based on theoretically biased questions in which even the most basic preliminaries of structural semantics seem to be of no importance.

5. The problem of reference

5.1 One could be inclined to think that prototype semantics, accepting fuzzy boundaries between categories, provides an explanation for the phenomenon called "referential vagueness", thus solving the problem of the delimitation of categories. Yet, quite the opposite is true: prototype semantics does not explain "referential vagueness" at all. Because objective classes are identified with mental categories, prototype semantics is forced to attribute to the latter the vagueness of the former, thus ignoring the fact that the kind of vagueness the theory is concerned with only applies to reference – it belongs to designated objects, not to significations. For example, the gradience between "day" and "night" is not between the meanings of the words *day* and *night*, only between the objective phenomena "day" and "night" (see Coseriu 1981a, 102-103). Gradience is characteristic of objects and their properties, not of significations and their semantic features! Therefore, only a semantic theory considering significations as discrete entities and taking care not to confuse meaning and reference, is able to explain possible "referential vagueness", because only this kind of theory can account for the fact that something is not necessarily "either *x* or *y*" but possibly "both *x* and *y*", i.e.

something at the intersection of *x* and *y*. The concept of discrete significations is indeed a prerequisite if one is to determine vagueness at the designational/referential level – and that is precisely what prototype semantics has in mind! As a matter of fact, the claim that significations have imprecise and vague boundaries – a claim based on the observation that the designated objects have such boundaries – is a *contradictio in terminis*: it boils down to stating that they are discrete and non-discrete at the same time.

There can be no doubt that "referential vagueness" is a very common phenomenon. However, prototype semantics does not explain the phenomenon, it merely observes that such a phenomenon exists. Exactly the same holds for "marginal cases". Prototype semantics does not – and cannot – provide an explanation for such cases. Rather, the theory *assumes* their existence, obviously based on the fact that it collapses linguistic significations with designated objects. Unless the claim that "marginal cases" present no difficulties in prototype semantics – because they are to be regarded as a simple corollary of the general theory, they *have to* exist, the "atypical members" of a category being the "exceptions that confirm the rule" (cf. § 3.2.2.) –, unless this claim were meant ironically (which it clearly is not), it boils down to proclaiming as laudable scientific merits a striking lack of rigour and an obvious methodological weakness.

5.2 Like "referential vagueness", gradience – I would prefer to speak of "internal heterogeneity of categories" – is something very common and general. Yet, the cognitive explanation is, once again, unacceptable, for a number of reasons. First of all, the kind of heterogeneity to which the term "gradience" is applied concerns categories that are pre-constituted and pre-delimited; the term does not refer to categories in the course of being constituted that are not yet delimited or present fuzzy boundaries. Secondly, it is the classes of designated objects that are heterogeneous, not the corresponding mental categories (or "significations"). In the third place, as I pointed out before, gradience itself – in so far as it has to be distinguished from heterogeneity – is a construct of the mind, the result of a mental activity in which the types of designated objects that have many properties (and are considered prototypical) are ordered in a certain way; on the level of meanings, these objects

correspond to variants, above all the many-featured variant. Of course, if understood in this way, the concept of gradience requires mental categories once again to function as "guidelines" – and to be perfectly homogeneous.

Next, let us consider cases of so-called "reticent (or: limited) inclusion" (cf. § 3.2.2.). First of all, such cases cannot serve as evidence of the alleged gradient organisation of mental categories; as a matter of fact, they cannot even reveal the gradience of the objective categories. Generally speaking, utterances like *A swallow is something like a sparrow* ("but it is not a sparrow"), *A bat is something like a bird* ("but it is not a bird"), *This war was a party in the first place*, etc. are occasionally used to "metaphorically" approximate or identify objects which are regarded as belonging to different categories; this is often done for didactic purposes. Normally, the aim of such utterances is certainly not to signal the atypical character of certain examples of one category. Of course, from a sentence like *This war was a party in the first place* it does not follow that the objective categories "war" and "party" – nor the corresponding mental categories (i.e. the meanings of) *war* and *party* – are thought to be identical. On the other hand, "typical" examples of a class are indeed unlikely to appear in cases of "reticent inclusion" (e.g. *A sparrow is more a bird than something else*). Yet, this is not a privilege of the "typical" examples of the class, because the same is true of "atypical" examples as well, if the objects have already been categorized. In Spanish, for example, one cannot say *Un pollito es más que nada una ave* ('A young chicken is a bird in the first place'); and my French informants hold the same opinion as to *Un poussin est plus un oiseau qu'autre chose* ('A young chicken is more a bird than anything else').

What do cases of so-called "preferred interpretation" (cf. § 3.2.3.) tell us about gradience? First of all, it would indeed be rather odd for a person who says *If I were a bird!* to be referring, in his imagination, to a young chicken, an ostrich, or a penguin. But is it correct to claim that this person imagines being a robin, a sparrow, a swallow, or still another prototypical "bird"? It seems much more plausible to say that someone who says *If I were a bird!* is referring to a generic "bird", i.e. a "bird" that is not only able to fly but with several more properties that many members of the category share. This means that the prototype, contrary

to what the genuine theory of prototypes claims, would coincide with almost the entire category. In this case, the category would consist of an "extensive" generic prototype and only very few "marginal cases", rather than a central prototype and a considerable number of atypical examples which are connected with each other through a gradient relation of family resemblance. What is more, so-called "preferred interpretation" is not restricted to a generic or "prototypical" interpretation. Rather, it depends on the situational context as well as on the linguistic cotext, and it corresponds to what can normally be expected on a particular occasion. For example, when someone says of a person in Rumanian – especially in rural places – that he *are multe păsări* ('has many birds'), *dă la păsări* ('feeds the birds'), or that he *creşte păsări* ('breeds birds'), without further specifications, then everyone understands that this person keeps poultry; nobody thinks of a person keeping swallows, sparrows, or robins.

5.3   It will be clear by now why the alleged "maximilism" of prototype semantics (as opposed to the so-called "minimalism" of analytical semantics) should be criticized. Features that are "linguistically pertinent without being necessary" are common properties of objects in the external world. But being pertinent though not necessary on the level of designation does not mean that these features are also pertinent on the level of a particular historical language! Moreover, the question whether features are pertinent on the lexical level of a language or not cannot be answered by means of the logical-linguistic arguments some prototype theorists have proposed.

What is called "tacit inference" (or "reasoning by default", cf. § 3.2.4.) is undoubtedly a phenomenon of considerable logical interest. Yet, in this kind of reasoning more can be inferred than just linguistically pertinent features. As is the case with every reasoning ἀπὸ κοινοῦ (i.e. based on shared features), "tacit inference" covers the whole domain of current experience, ranging over our entire common knowledge of "things" in the world, i.e. everything we consider – though possibly on arbitrary grounds – to be valid "in general" (that is to say, valid in most cases, ὁ ἐπὶ τὸ πολύ in Aristotelian logic) without necessarily being valid in *all* cases. For example, without further specifications *X is a bird* will yield the feature 'able to fly', as most

"birds" we know have the ability to fly. But this is not the only feature that can be inferred from *X is a bird*. In addition, there are features like 'laying eggs', 'having feathers', 'having a beak', which seem to be necessary for the concept of "bird", as well as features like 'making nests', 'able to make sounds, to chirp, etc.', 'probably eating worms (besides other things)', etc. which do not seem to be conceptually pertinent. Of course, the feature 'able to fly' is not necessary for the definition of the concept "bird"; yet, it is obvious that it will not be missing in the definition of the word *bird* in a lexicon, as it constitutes an important feature of the most common examples of the category of "birds" that we know.[12] In other cases, "tacit inference" is much less substantial. What are, for example, the features inferred in sentences like *X is a Russian* or *X is a German*? Furthermore, it should be stressed that considerable differences emerge if one compares *X is a bird* and *If I were a bird*! In the latter case, the range of inference includes the knowledge of what a human being could wish to be, including "If I had wings!", "If I could fly!", but probably not including "If I had a beak!", "If I had feathers!", and "If I could lay eggs!". In many cases, "tacit inference" is not restricted to pertinent features, while in other cases definitional features may be excluded. Generally speaking, therefore, "tacit inference" is not concerned with definitional features of meanings but with "pertinent though not necessary features" of objects.

Generic assertions are even more based on extralinguistic knowledge than cases of "tacit inference", and they have very little to do with "pertinence", be it conceptual or linguistic. Assertions like *Spanish are loyal; Catalans are merchants; Russians drink too much; Englishmen are phlegmatic; Turks smoke too much*, etc. are, evidently, highly subjective, stereotypical characterizations of peoples, not definitions (note, however, that *all* could be added to all these assertions). No one would include such features (and they are virtually infinite in number) in the semantic descriptions of *Spanish, Catalan, Russian, Englishman*, and *Turk*, although on the level of "discourse" they can all be "pertinent" in one way or another.

12   In the definition of *bird* in *Collins Cobuild English Dictionary* (1995, 155), for example, the ability to fly is presented as a frequent feature yet not a necessary one: "A *bird* is a creature with feathers and wings. Female birds lay eggs. Most birds can fly."

Let us now consider the principle of "prototypical approximation" (for a detailed discussion of the "principle of specified deviation", cf. § 4.2.4. about the test with the conjunction *but*). Once again, this principle is indeed significant, yet only in view of designation, not meaning, as it concerns our knowledge of objects and of what we consider to be "normally" the case in the external world. Without further specifications, the German verb *reiten* (in English *to ride*) is interpreted as 'to ride a horse'. Of course, the reason is not that 'to ride a horse' is the "prototypical" kind of riding; the reason is that we usually ride horses, and such an interpretation of the verb holds for all communities in which people use to ride horses. On the other hand, in communities where people usually ride donkeys or camels, 'to ride a donkey' or 'to ride a camel' respectively will be the normal interpretation of the corresponding verbs "*to ride*", and 'to ride a horse' will have to be specified.

Yet one should always be careful when considering the "absolute" use of a word, because it may be motivated in different ways. For example, in "absolute" use, the Spanish verb *poner*, the German verb *legen*, the English verb *to lay*, etc., when referring to a chicken (*La gallina pone; Das Huhn legt; Hens lay*), are interpreted as 'to lay eggs', as this is the kind of "laying" that can be expected from a chicken. But while this is the "prototypical" kind of "laying" if one considers chickens (and other birds), it is certainly not "laying *par excellence*" in Spanish, German, and English! If in each case the "absolute" use of a word would be determined by means of a semantic prototype, we would have to conclude that in our communities the prototype of *to drink* is 'to drink alcoholic beverages', as *to drink* is used without further specifications in this sense (*Smith was drinking too much; Thank you, I do not drink*), whereas reference to water or other sorts of beverage, even to a single alcoholic beverage, usually has to be specified properly (*Smith always drinks water; I do not drink wine, I only drink beer*).

According to Kleiber, the "principle of prototypical approximation" can be invoked in explaining so-called "associative textual anaphor". However, objections can be raised against this view that are the same as those already mentioned. It is indeed possible to say *Nous arrivâmes dans un village. L'église était fermée* or *We arrived at a village. The church was closed* (cf. § 3.2.4.), but this

does not imply that the feature 'having one (and just one) church' can be said to be the meaning – or, for that matter, the "prototypical signification" – of the word *village*. In fact, the feature merely belongs to our knowledge of the common properties of villages in certain countries. Interestingly, the same associative anaphor can relate to Spanish *aldea*, Italian *villagio* (or *paese*), Rumanian *sat*, German *Dorf*, Dutch *dorp*, etc. On the other hand, most of these words from different languages can, without any change of meaning whatsoever, also be used to designate African or Asian villages that do not possess a church. Obviously, in those cases the anaphorical *L'église était fermée (The church was closed)* will be excluded. Another restriction applies, for example, to Quebec. Here too the anaphor will often be impossible as many villages in Quebec have two churches, one Catholic and another Anglican or Protestant. And, finally, in France one can hear people saying *Paris est un village*; yet, for nobody this sentence means that Paris only has one church.

As is evident from the above discussion of *reiten (to ride)* and *village*, the alleged "semantic prototypes" cognitive semantics operates with are no facts pertaining to historical languages (Fr. *langues*) nor to linguistic competence (Fr. *langage*). Rather, they are facts of "objects" in the external world, they belong to human culture as well as to common human experience, and encyclopedic knowledge.

5.4   Thus, instead of being "a great progress in lexical semantics" (G. Kleiber), prototype semantics turns out to be the exact opposite of such a progress. The way prototype semantics deals with meaning is a serious regression in this field of linguistic research, unparalleled in the recent history of the discipline. There are three main reasons for this. In the first place, it is a strange peculiarity of the theory of prototype semantics that it only repeats – though in a sometimes new, seemingly scientific way – a notorious error in the study of language. Prototype semantics fails to make the distinction between meanings (significations) and designated objects; the fact that this theory cannot make clear what "contents" belong to historical languages (and, conversely, what "contents" do *not* belong to them), is particular obvious in the way the theory deals with problems of common inferences and the interpretation of language use

and texts. Secondly, prototype semantics resorts to concepts like "fuzzy boundaries" and "gradient meanings" that are characteristic of the kind of semantics presented by laymen; the semantic distinctions and lexical structures in historical languages are completely ignored. In the third place, in lexicography prototype semantics has proved to be an invitation to all kinds of arbitrary statements, as can be seen from the fact that the number of definitions can be increased at will. Moreover, all sorts of linguistically irrelevant properties of designated objects are presented as linguistically "pertinent" semantic features, resulting eventually in descriptions of objects instead of coherent descriptions of significations (and corresponding semantic relations in language). Obviously, this has some serious consequences in the field of applied semantics and of first and second language acquisition as well.

Does this criticism boil down to the statement that prototype semantics is altogether pointless? It does not, provided that we are aware of the fact that this theory is not concerned with linguistic meanings but with our knowledge of objects ("things", "persons", "events", "classes", etc.). As I pointed out earlier, this kind of knowledge plays a major part in language use, especially in interpreting words in discourse, but not in the interpretation of languages. Consequently, prototype semantics is not dealing with the same object as structural semantics, it focuses on *other* problems – and least of all on the problem of lexical meaning.

6. The problem of categorization

6.1 Obviously, being unable to tackle the real problems of semantics, prototype semantics cannot replace genuine linguistic semantics. What is the reason for this failure? The answer to this question is not that significations and designated objects are simply identified with each other, because this is merely a methodological corollary of a much more general theoretical assumption. The true reason is that prototype semantics pretends to convert the general theory of prototypical categorization into a linguistic theory of semantics, with the ultimate purpose to validate the basic assumptions of that general theory of categorization. However, this purpose is essentially contradictory, as the theory of categorization simply cannot be

converted in a linguistic theory of semantics. As a matter of fact, the field of linguistic semantics is very unsuited indeed to any verification of such assumptions precisely because of the discrete and homogeneous nature of linguistic meanings (cf. § 4.2.2.2.).

6.2.1 I will not enter into the discussion here whether Aristotle was right when he claimed that natural "species" are "discrete"; in fact, this is a problem for biology. Nor is this the place to dwell on the question whether Aristotle conceives of classes of artefacts in exactly the same way as natural "species". From the linguistic point of view, the essential point is that we must have discrete and homogeneous meanings at our disposal if we want to determine "fuzziness", gradience and heterogeneity at the level of objective classes of "things". If we consider this aspect of the problem, it is beyond doubt that Aristotle was aware of the fact that meanings must be discrete and homogeneous (see *Metaph.*, Γ, 1006a, 29ff., 1006b, 3ff.; *Soph. El.*, 165a, 6-8; *De Anima*, 430a). Moreover, he showed that meanings are of a purely ideational kind, because being a *lógos semantikós* language precedes the distinction between existence and non-existence. For example, Aristotle points out that the Greek word τραγέλαφος (a compound combining the Greek words for 'billy goat' and 'deer') has a meaning (σημαίνει μέν τι), although the compound word does not correspond to anything that exists. This is equally true of a word like ἄνθρωπος 'man', as the meaning of the word does not imply the existence of what is called "ἄνθρωπος" (see *De Interpr.*, 16a, 17-18; 16b, 27-29; cf. Coseriu 1979). The conclusion, then, is clear: the world of meanings is an *ordered* one, and this world is not to be mistaken for the chaotic and continuous world of "things". It is of course an abstraction when we speak of the world of "things" as being *not yet ordered* by language.

6.2.2 It is not in the scope of this article to discuss at length the complex problem of how "categories", and consequently concepts, are constituted. One aspect of this problem, however, should be stressed. The distinction between the constitution of categories on the basis of essential features of objects on the one hand, and of categories via analogical extension, with a prototypical centre as a starting point, on the other hand, simply makes no sense.

First of all, we can safely say that it is theoretically impossible for concepts to be constituted in either of these two ways. Secondly, there is also empirical evidence for such a radical refutation. Thirdly, if something should be constituted in this way, the result would certainly not be concepts but merely image schemata of classes, i.e. – again – *objects*.

Obviously, the "cognitive" argument is circular: for concepts to be constituted the way prototype semantics suggests, these very concepts must already be present as a basis for the corresponding mental operations, or for the association with prototypes. Consider, for example, the case of analogical extension. For this to take place, the prototype of "bird" *must already be* "bird", and not simply "robin", because what is added *per analogiam* is not "something like a robin" or "examples of a robin", but "another example of 'bird'"! The point is not the extension of the example "robin", but the inclusion into the category (the 'genus', so to speak) "bird". The essential step, therefore, is not the step from "robin" to "sparrow", "swallow", "finch", "blackbird", "raven", etc., but the step from "robin" to "bird"! Or, to put it more theoretically, what is essential is not inference of *the general* but intuition of *the universal*. The latter level is the level of "virtual" concepts of being (Germ. *Sein*) that enable man to refer to objects, "things", "events", etc. (Germ. *Seiendes*).

In other words, prototype semantics is doomed to failure: to be able to "categorize", categorization must already have taken place. There can be no doubt that, in the individual psychological process in which mental schemata corresponding to (natural or other) "species" are constituted, features can be attributed to concepts (and, ultimately, to significations) that are actually no part of their definition, on the basis of the fact that they only appear to be of a "general" nature, i.e. common to all *known* specimens of the "category". Yet, with the proper extension of the field of designation such features are being eliminated as they turn out to be not necessary; actually, the speaker notices that the same significations can also be applied to objects lacking them. Consequently, they should be eliminated from the significations on the level of a particular historical language.[13] From this it is clear that the progressive formation

("extension") of an objective category (and of the corresponding "mental representation"), with one centre as a starting point or another, has nothing to do with meaning proper, meaning (or signification) representing the intuitive unity of a "category", not its "real" heterogeneity. But the outcome of the above discussion is even more negative. The only argument in favour of a "prototypical" meaning is that there are "pertinent" features that do not apply to the entire category, such as the feature 'being able to fly' to the category "bird". This kind of "pertinence", however, does not concern the *naming* of objects, as it is not the reason why a "bird" is called *bird*. Furthermore, it is impossible to identify one particular prototype on the basis of this single feature, because most specimens of the category "bird" fly. Consequently, the "prototypical" simply coincides with the "generic"!

6.3.1 All this clearly shows that it would be untenable to classify prototype semantics as a "semantic" theory proper. It is certainly much more appropriate to speak of a psychological theory concerned with the internal delimitation and configuration of "species" that can be found in the external world. As such, the theory obviously lacks the necessary basis to deal with problems concerning the delimitation and structure of linguistic meanings. Yet, there can be no doubt that even within the psychological context of the theory as well, the status of a "prototype" is a very dubious one. On the one hand, we can readily admit that for many intuitively constituted "categories" "optimal" or "typical" examples of corresponding classes can be pointed out. We have, for example, only to look at the way definitions are introduced among children, in various communities: "What is a bird? A bird is, for example, a robin." Yet again, this is a convincing argument for the view that prototypes are of secondary importance relative both to the categories themselves and to the significations representing the primary unity of the latter.[14] On the other hand, the prototypes cognitive semantics operates with are no part of historical languages and, consequently, cannot function as meanings in different linguistic communities. At best, they are prototypes of "objects"

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[13] The intuitive constitution of concepts and the distinction between *generality* and *universality* is discussed in more detail in Coseriu (1981b, 53-56).

[14] On p. 42 of his article (1988), G. Kleiber makes the right observation – not without irony, perhaps: "Pour être un 'meilleur oiseau', il faut évidemment déjà être oiseau".

corresponding to domains of extralinguistic experience, and hence they may turn out to be identical in different linguistic communities. But then again, they may just as well be very different (even for speakers of one and the same language) in different cultural domains and/or different periods of cultural evolution. For example, the elephants of Pyrrhus and Hannibal were called *boves*, the Latin word for cows and bulls, by the Romans. And it is very probable that at one time in history a sparrow was the typical example of *avis* for many Romans, as can be seen from the fact that the Spanish, Portuguese, and Rumanian word for 'bird (in general)' – *pájaro*, *pássaro*, and *pasăre*, respectively – go back to the Latin word *passer* 'sparrow'. The Ancient Greeks used the word στρουθοί for 'sparrows', whereas ostriches were called στρουθοὶ μεγάλοι 'great sparrows'. During the Middle Ages it seems that the Greeks thought of the hen as the bird *par excellence*; in modern Greek ὀρνίθι means 'hen', but it goes back to the ancient Greek word ὄρνις 'bird'. Finally, although certain "candidates" appear to be, within the field of common experience, particularly suited to conversion into typical exemplars, this does not suffice for becoming prototypes of a certain class unless the corresponding category has previously been constituted linguistically. Thus, Macedonian possesses the word *pul'*, and although its meaning is comparable to the meanings of the Spanish word *pájaro* and the Portuguese word *pássaro*, the Macedonian language lacks a word for 'bird (in general)', nor does it have a word for birds not included in the class called *pul'*.

6.3.2 One might wonder whether the prototypes cognitive semantics argues for would be more valuable if the "real" types (e.g. robin, swallow, etc.) were reinterpreted by means of "conjunctions of prototypical features". Such is not the case, however, on the contrary: from the point of view of prototype semantics itself this would be a crucial flaw, as the prototypes would turn out to be not of a prototypical but of a generic kind (cf. § 6.2.2.). Therefore, it is extremely important to be aware of the result of such a shift. If prototypes are no longer considered to be the "generative" elements of categories, if it is agreed that they correspond only to the configuration of categories, and if we admit, finally, that strictly definitional features (necessary for the delimitation of one category from all other

categories) are not prototypes and *vice versa*[15] – then the basic assumption of prototype theory has been refuted. This does not only show, once again, that prototypes are of secondary importance with respect to the constitution of categories, and that they are identifiable only because categories already exist that are pre-constituted and pre-delimited on the basis of necessary features. Furthermore, it implies that the conjunctions of prototypical features are being disjointed and lose their general features. But, above all, it means that prototype semantics apparently cannot be an "alternative to checklist theories of meaning". Rather, the theory turns out to be just a variant of the theory of NSC – a variant, though, based on the observation that our extralinguistic knowledge of designated "objects" plays a crucial role in the interpretation of the words that are used in discourse.

The point just discussed is particularly important because it reveals the dilemma prototype semantics, in its current form, is faced with. If the assumption that prototypes are the "generative" elements of categories is maintained, the theory can only be a kind of cognitive psychology, not a semantic theory, and many categories are bound to stay beyond its scope (in fact, this holds of all categories that cannot be "reified"). If, on the other hand, the theory purports to be a semantic theory, the basic assumption about prototypes must be dropped. This would imply first of all that prototypes have only a very modest role left to play, and, secondly, that the theory has to refrain from proposing a general account of "categorization" *opposed*, in any reasonable sense, to analytical semantics. Yet, in the latter case the theory cannot be a theory of linguistic meanings unless it distinguishes between conceptual definitions on the one hand and idiomatic definitions of word meanings (based on oppositions at the level of historical languages) on the other, and unless the idiomatically structured lexicon is separated from the lexicon not structured in this way.

7. Concluding remarks

7.1 It has been pointed out previously (cf. § 4.2.4.), but it must be repeated at the end of this

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[15] Actually, it is *impossible* to integrate prototypical conjunctions into definitional features – although this is precisely what G. Lakoff (1986a) tries to achieve.

article: the observation that prototype semantics turns out to be a "semantics of things" (instead of being a semantic theory of linguistic meanings) does not mean that reference to objects and extralinguistic knowledge should be excluded from either linguistic semantics or linguistic theory in general. The point is that prototype semantics is inadequate because significations and designated objects are identified (and, consequently, confused) with each other – *not* because the theory deals with "things" in the external world rather than with meanings. Prototype semantics fails to be an all-encompassing theory of lexical semantics because its aim is just that: to replace "classic" semantic theory. However, the proponents of prototype semantics do not realize that they are dealing with "things" instead of meanings, and that they ignore the distinction between designated objects, on the one hand, and the idiomatic level of meanings, i.e. the primary semantic level *par excellence*, on the other hand. The failure of prototype semantics, therefore, is twofold.

As a matter of fact, a coherent "semantics of things" dealing with explicit as well as implicit facts of reference, and with the entire range of extralinguistic knowledge, is just as indispensable to linguistics as lexical semantics. A well-founded *sachbezogene Semantik* (not a *Sachsemantik*) is indeed necessary for a full comprehension of linguistic activity. Undoubtedly, a particular historical language is what is realized in the first place in actual speech, and it is impossible to speak without the meanings of a language and the idiomatic oppositions on which they are founded. But, as I explained earlier (cf. § 4.2.4.), people do not speak solely on the basis of such idiomatic oppositions, but on the basis of extralinguistic knowledge as well, i.e. the constant – though often implicit – reference to "objects".[16] Needless to say that a well-defined "linguistics of objects" should not envisage to *replace* a genuine linguistic theory of languages. Moreover, it is not a kind of linguistics that "joins", as it were, the latter theory with respect to a coherent description and interpretation of one and the same idiomatic knowledge. Rather, a "linguistics of objects" is an auxiliary discipline of general text linguistics, for it can only be concerned

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[16] My own point of view about a "linguistics of objects" is expounded in Coseriu (1978, 120-121, 146-147), (1981a, 195-206), and (1981b, 211-212).

with interpreting and documenting "things" by means of the extralinguistic knowledge speakers possess and make use of in discourse.

7.2 If the word "cognitive" refers to the structure of the primary intuitive knowledge found in language, i.e. to the ways different languages structure the "world", requiring that we distinguish between the primary, idiomatically structured and the secondary, not idiomatically structured lexicon – then the only kind of semantics that can be properly called "cognitive" is structural semantics (in the sense of the European tradition). To the extent that prototype semantics aims to be "cognitive", it cannot be a semantics, because it deals with the structure of the "species", the objects referred to in designation, not with meanings or significations. To the extent that prototype semantics aims to be a "semantics" (being a discipline that is concerned with linguistic entities of content), it cannot be "cognitive", because it completely ignores the linguistic knowledge represented by the meanings of a particular language and only considers their application in designation, thus muddling up the linguistic knowledge of meanings and the knowledge speakers/hearers have of the objects ("things", "events", etc.) in the external world.

<div align="right">

(Translated from the Spanish by
K. Willems and T. Leuschner)

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