

The theoretical and descriptive development of lexical semantics

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1 Introduction

Existing treatments of the history of linguistic semantics, such as Nerlich (1992) and Gordon (1982), concentrate on the analysis of the views of individual authors or separate periods rather than on the general lines of development that characterize the development of semantics. Counterbalancing such more or less atomistic (but clearly indispensable) analyses of individual views and separate stages in the development of the discipline, I earlier published a number of articles (specifically, 1988a and 1988b) that tried to present a rational reconstruction of the overall progression of linguistic lexical semantics. In these articles, I concentrated particularly on the way in which the development of lexical semantics was pushed forward by competing theoretical conceptions of word meaning.

In the present paper, I will have a look at the history of lexical semantics from a slightly different angle: I will reconsider the classification into different theoretical approaches, taking into account the developments that occurred in the course of the 1990s, and I will then consider the way in which these various theoretical traditions concentrate on different empirical domains. At the same time, I would like to show that these shifts in descriptive emphasis fit together in an encompassing conception of the empirical domain of lexical semantics: it can be shown, I suggest, that the various theoretical approaches that may be distinguished in the history of the discipline gradually occupy and fill out the potential range of investigation that could ideally be associated with lexical semantics. A similar view of the empirical development of lexical semantics was presented in Geeraerts (1999). In comparison, the picture in the present article is a more comprehensive and more synthetic one. As I will inevitably have to deal with quite a number of different approaches, I will, for the sake of succinctness, assume a basic familiarity with most of them. The various approaches will be briefly presented, but it is obviously beyond the scope of the present contribution to do so in much conceptual or bibliographical detail.

2 Theoretical currents in the history of lexical semantics

For starters, I would like to suggest that four major theoretical currents shape the development of lexical semantics: prestructuralist semantics, structuralist and neostructuralist semantics, generativist and neogenerativist semantics, and cognitive semantics. (These currents, by the way, involve linguistic semantics only: psycholinguistic or philosophical approaches to semantics are not included in the overview.)

2.1 Prestructuralist semantics

Prestructuralist diachronic semantics dominated the scene from roughly 1870 to 1930. This does not mean, to be sure, that there is no form of lexical semantics before 1870. It is only by the middle of the 19th century, however, that research into word meaning establishes itself as a distinct subdiscipline of the new science of linguistics. At the level of individual researchers, prestructuralist diachronic semantics is represented by Bréal and many others, like Paul, Darmesteter, Nyrop, and (at the end of the relevant period) Carnoy and Stern. A systematic treatment of the main figures and currents may be found in Nerlich (1992).

At the methodological level, the type of semantic research meant here may be characterized by the following three features. First, in line with the overall nature of 19th century linguistics, the orientation is a diachronic one: what semantics is interested in, is change of meaning. Second, change of meaning is narrowed down to change of word meaning: the orientation is predominantly semasiological rather than onomasiological (or grammatical, for that matter). Third, the conception of meaning is predominantly psychological, in a double sense. Lexical meanings are considered to be psychological entities, that is to say, (a kind of) thoughts or ideas. Further, meaning changes (the main domain of research for prestructuralist semantics) are explained as resulting from psychological processes. The general mechanisms that are supposed to underlie semantic changes and whose presence can be established through the classificatory study of the history of words, correspond with patterns of thought of the human mind. A concept like metonymy is not just a linguistic concept, it is also a cognitive capacity of the human mind.

2.2 Structuralist and neostructuralist semantics

The origins of structuralist semantics are customarily attributed to Trier (1931), but while Trier's monograph may indeed be the first major descriptive work in structuralist semantics, the first theoretical and methodological exposé of the new approach (which, needless to say, took its inspiration from De Saussure) is to be found in Weisgerber (1927). Weisgerber criticizes prestructuralist historical semantics precisely on the three characteristic points mentioned above. First, the study of meaning should not be atomistic but should be concerned with semantic structures. Second, it should be synchronic instead of diachronic, and third, the study of linguistic meaning should proceed in an autonomously linguistic way. Because the meaning of a linguistic sign is determined by its position in the linguistic structures of which it is a part, linguistic semantics should deal with those structures directly, regardless of the way in which they may be present in the individual's mind. Because the subject matter of semantics consists of autonomous linguistic phenomena, the methodology of linguistic semantics should be autonomous, too.

The realization of this attempt to develop a synchronic, non-psychological, structural theory of semantics depended on the way in which the notion of semantic structure was conceived. In actual practice, there are mainly three distinct definitions of semantic structure that have been employed by structuralist semanticists. More particularly, three distinct kinds of structural relations among lexical items have been singled out as the proper methodological basis of lexical semantics. First, there is the relationship of semantic similarity that lies at the basis of semantic field analysis, inaugurated by Trier and ultimately leading to componential analysis in the work of anthropological linguists such as Goodenough (1956) and Lounsbury (1956), and, apparently independently, in the

work of European structuralists such as Pottier (1964). Second, there are unanalysed lexical relations such as synonymy, antonymy, and hyponymy; these were for the first time systematically selected as the methodological basis of structural semantics by Lyons (1963). Third, syntagmatic lexical relations were identified by Porzig (1934) under the name of 'wesenhafte Bedeutungsbeziehungen'; they later reappeared as selectional restrictions in the neostructuralist kind of semantics that was incorporated into generative grammar by Katz and Fodor (1963).

The contemporary descendants of structuralist semantics (which may be termed 'neostructuralist' to distinguish them from the original approaches) link up with these three distinct interpretations of the notion of lexical structure. First, lexical field theory in its original form is most explicitly further developed by Coseriu and his followers (Coseriu & Geckeler 1981). The approach does not, however, seem to generate a lot of new work anymore, and its own advocates admit to a certain stagnation (Geckeler 1993).

Second, the relational approach has been further developed by Cruse (1986); in his most recent work (2000), however, the structuralist origins of his approach are attenuated by the impact of cognitive semantics. A consequent elaboration of the relational perspective is to be found in the work of Melçuk and his collaborators (1988, 1996), whose purpose is to identify a universally valid set of relations that allows for the description of all semantic associations between lexical items in the vocabulary of any given language. The approach is not a purely theoretical one: it involves the preparation of a number of formalized dictionaries (Melçuk 1984). In addition to Melçuk's work, a major descriptive achievement based on a relational conception of lexical structure is the WordNet project (Fellbaum 1998). WordNet is an online electronic lexical database organized on relational principles, which now comprises nearly 100,000 concepts.

Third, following the lead provided by Firth (1957), the syntagmatic conception of lexical relations developed into a highly productive tradition of collocational analysis (where 'collocations' are, roughly defined, sets of regularly co-occurring words). Many different specific methods of collocational analysis exist, and there is no single name that can be mentioned as the leading figure in this form of semantics. In the present context, it may be sufficient to mention the incorporation of collocational analysis in the framework developed by Halliday (Halliday & Hasan 1976), together with the highly successful incorporation of the approach into lexicography (among many others, see Sinclair 1987, Moon 1998). Because a collocational analysis naturally involves a description of the facts of lexical co-occurrence in actual language use, this approach links up directly with corpus linguistics (which, as we shall see, is an important point for the overall line of the present article).

2.3 Generativist and neogenerativist semantics

All through the second half of the 1960s and the major part of the 1970s, the neostructuralist, generativist model of lexical-semantic description introduced by Katz and Fodor (1963, later developed by Katz, specifically in Katz 1972) formed a reference point for studies in lexical semantics. The appeal of Katzian semantics was at least partly due to its incorporation into generative grammar; it profited from the superior position that the generative paradigm occupied in linguistic theorizing in the period in question. Intrinsically (i.e. as a theory of lexical semantics), Katzian semantics combined a culmination of the structuralist approach with two characteristics that were intimately connected with its incorporation into generative grammar. First, Katz took over the Chomskyan requirement that linguistic analyses be rigidly formalized. In particular,

componential analysis in the Katzian model was at the same time a method of descriptive analysis and a formal apparatus that seemed indispensable to comply with the requirement of algorithmic formalization imposed by Chomskyanism.

Second, Katzian semantics took over the mentalistic self-conception of Chomskyanism. By defining the subject matter of semantics as the competential 'ability to interpret sentences' of the language user, semantics came to share the promises of explanatory adequacy that constituted so much of the appeal of generative grammar.

Third, Katzian semantics brought together the three types of semantic relations that could lie at the basis of structuralist semantic theories. In the first place, paradigmatic similarity relations along the lines of lexical field theory showed up in Katz and Fodor's adoption of componential analysis. In the second place, syntagmatic restrictions on the combination of words were captured in selectional restrictions (such as that the direct object of *eat* has to refer to something edible). And in the third place, the paradigmatic lexical relations highlighted by Lyons (1963) were not discussed in the 1963 article, but in 1972 (apparently as a result of the publication of Lyons's book), Katz pointed out explicitly that semantic theory should be concerned with lexical relations such as synonymy, antonymy, and hyponymy.

In short, Katzian semantics was a singular combination, within the framework of generative grammar, of a basic structural semantic methodology, a mentalist philosophy of language, and a formalized descriptive apparatus. The further development of lexical semantics was characterized by two tendencies. In each case, semantics moved away from the structuralist pole of the Katzian synthesis towards one of the other two poles. On the one hand, the demands of formalization diminished the structuralist influence in semantics in favour of logical approaches to meaning analysis. On the other hand, attempts to take the mentalist position of Katzian semantics seriously led to a straightforward psychological, cognitive orientation in semantic studies. For reasons to be explained, the former approach can be called 'neogenerativist'; it will be described presently. The latter, cognitive approach is introduced in the next section.

In the context of an historical overview of lexical semantics, the evolution towards logical semantics basically means a shift of emphasis from lexical semantics to sentential semantics. Truth conditions are the primary point of interest of logical semantics, and truth conditions are properties of propositions, not of individual words. Thus, Thomason's statement that a semantic theory need not specify the way in which items such as *walk* and *run* differ in meaning (1974: 48) is typical for the shift in interest from lexical relational structures to sentential structures. As a result of this shift in interest, the logical approach to lexical semantics initially remained somewhat of a minor tradition – within the field of lexical semantics, that is.

In the 1990s, however, Pustejovsky (1995) gave a new impetus to the Katzian ideal of a formalized semantic representation by basing it on a logical rather than a featural formalism. At the same time, he goes way beyond the Katzian approach by emphasizing the necessity of building a lexicon that is truly generative - in the sense that it does not just consist of an enumeration of word senses, but incorporates the possibility of formally deriving new readings from stored ones. In this sense, Pustejovsky's approach (which links up closely with Jackendoff's) is a 'neogenerativist' one: it develops the Katzian ideal of a formal semantic representation by introducing semantic flexibility and a logical formalism.

2.4 Cognitive semantics

The Katzian approach is characterized by a specific tension between theoretical starting-point and actual methodology. Using psycholinguistic data could be the ultimate consequence of the mentalist position of Katzian semantics; if semantic descriptions do indeed have psychological reality, it should be methodologically acceptable to use all kinds of psychological evidence. On the other hand, there are two other aspects of Katz's position that opposed this methodological extrapolation of the mentalist stance. Both the generative notion of competence and the structuralist attempt to develop an autonomous method for linguistic semantics led to reluctance with regard to the use of psychological data. In the light of Weisgerber's charges against psychological approaches in semantics, it can be established that Katz's mentalism is not a straightforward methodological position: it characterizes the object of the investigation as something that is psychologically real, but it apparently does not influence the method used to study that object. That method remains structural, in the sense that it is based on static relations between linguistic elements, rather than on actual psychological processes.

However, other linguists than Katz himself actually pursued the non-autonomous methodological approach that could be derived from the Katzian position. Linking up with existing work on natural language categorization and meaning representation as carried out in psycholinguistics and artificial intelligence, this kind of research opens up the field of lexical semantics to the more general question 'What does an adequate model of man's use and knowledge of meaning look like?'. To the extent that researchers in psycholinguistics and artificial intelligence generally do not estimate that the linguistic capacities of man can be studied in isolation from his other cognitive capacities, the autonomist methodological ideal of structuralism is abandoned, not just by using psycholinguistic data, but more generally by incorporating the study of natural language semantics into cognitive science at large. In linguistic semantics, this cognitive reorientation has led to the school of Cognitive Linguistics of which Lakoff (1987) and Langacker (1987, 1991) are the leading figures.

Cognitive semantics has proved itself to be a highly productive paradigm for linguistic research. As far as lexical semantics is concerned, it is perhaps the most productive of the current approaches, as will become clear in section 3.2. (see Violi 1997 for an introduction and further refinements, and compare Ungerer & Schmid 1996). Among the major conceptual contributions of cognitive semantics to the study of lexical meaning, the following should be mentioned.

- The *prototypical theory of categorial structure* developed in psycholinguistics by Eleanor Rosch is taken as the basis for models of the internal structure of natural language categories (see Taylor 1995, Geeraerts 1997, Mangasser-Wahl 2000). (Although it is impossible to elaborate the point in the present context, I should add that I see the Wierzbickian approach to semantics - see Wierzbicka 1996, Goddard 1998 - as one of the variants of the prototype-theoretical conception.)
- Along the lines of Lakoff and Johnson (1980), a renewed interest in metaphor has led to a new wave of research into the epistemological role of cognitive models and their experiential background. *Conceptual metaphors*, as sets of related metaphorical expressions with the same source and target domain, are defined as metaphorical conceptions that transcend the boundaries of individual lexical items. This type of research has further developed into new investigations of semantic structuring at large and metonymy in particular (Panther & Radden 1999).

- Fillmore's *scenes-and-frames* approach to semantics takes its starting-point in the assumption that the human conceptual apparatus does not consist of isolated concepts, but is organized into larger, internally structured wholes. These larger chunks of knowledge, comprising coherent sets of human beliefs, actions, experiences, or imaginations, are called 'scenes'. 'Frames', on the other hand, are the linguistic means available to refer to (aspects of) the scene. Frame theory has proved a stimulating framework for the description of verbal meaning, both theoretically and lexicographically: see Fillmore (1977), Fillmore & Atkins (1992, 2000).
- The background of the *basic level hypothesis* (see Berlin 1978) is the ethnolinguistic recognition that folk classifications of biological domains usually conform to a general organisational principle, in the sense that they consist of five or six taxonomical levels, one of which is the 'generic' level. To the extent that the generic level is the core of any folk biological category, it is the basic level. The generic level, in other words, is the most salient one within the taxonomy: within the lexical field defined by the taxonomy, the generic level specifies a set of preponderant items. The basic level thus embodies a set of naming preferences: given a particular referent, the most likely name for that referent from among the alternatives provided by the taxonomy will be the name situated at the basic level.

2.5 An overview of the developments

Given this bird's eye overview of the traditions that have dominated the course of development of lexical semantics, Figure 1 suggests a schematic representation of the relevant lines of development. Each of the boxes in the figure represents one of the approaches identified above. While the vertical axis is basically a historical one, the bottom line of the figure charts the approaches that are currently around.

The lines connecting the boxes indicate the relationships between the approaches. The double arrow between prestructural historical semantics and structural semantics indicates that the latter is a reaction to the former. The single arrow between structuralist semantics and generativist semantics emphasizes the methodological continuity between both; as described above, though, generativist semantics also adds some crucial new features to the study of the lexicon. A similar relationship links generativist semantics to neogenerativist semantics: there is a fundamental continuity, but there is also much that is new in Pustejovsky's approach. The relationship between structuralist and neostucturalist semantics is a somewhat more straightforward line of development, while the relationship between generativist and cognitive semantics is rather one of contrast (hence the double arrow).

Two additional features of the development sketched in the figure should be highlighted.

First, the approach inaugurated by Katz appears to have had a pivotal function in the history of lexical semantics: it summarizes the structural approach, but at the same time, the two innovations that it added to a more traditional structuralist methodology eventually led to forms of semantics that went far beyond the initial structuralist position. The shift towards neogenerativist semantics on the one hand and toward cognitive semantics on the other is a consequence of the attempt to take, respectively, the formalized and the mentalist character of Katzian semantics seriously.

Second, as I have explained at greater length elsewhere (1988a), the cognitive approach is to a large extent a return to the questions and interests of the prestructuralist tradition of diachronic semantics. For one thing, the cognitive revival of diachronic semantics links

up with the gigantic amount of historical work done in the prestructuralist stage of the development of lexical semantics. Further, cognitive semantics and traditional historical semantics share, by and large, a psychological conception of meaning. And finally, both approaches start from an encyclopaedist conception of meaning, in the sense that lexical meaning is not considered to be an autonomous phenomenon, but is rather inextricably bound up with the individual, cultural, social, historical experience of the language user. On these three points, then, there is a basic methodological contrast between Prestructural and cognitive semantics on the one hand, and structuralist semantics (and its immediate neostructuralist descendants) on the other.

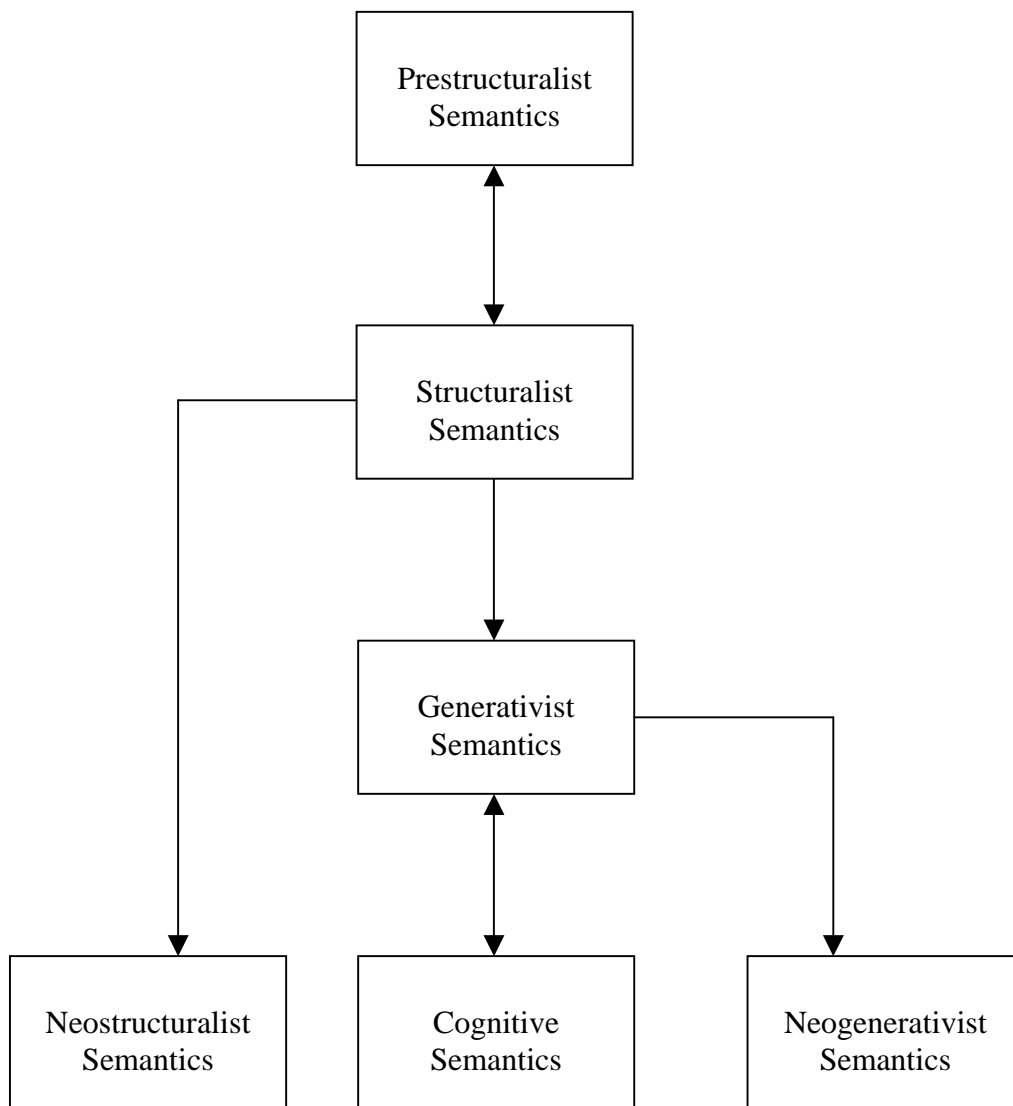


Figure 1
Main lines in the history of lexical semantics

Against the background of this fundamental methodological distinction, the neogenerativist approach shares with cognitive semantics an interest in the flexibility and dynamism of meaning. Pustejovsky's work, as we mentioned above, is very much concerned with the mechanisms of polysemy, just like a lot of Cognitive Semantic work. However, the Pustejovskian approach is reluctant to adhere to what is, in contrast, one of the basic assumptions of cognitive semantics, viz. the encyclopaedic nature of meaning – the idea that it is hardly useful for the analysis of natural language to adhere to a strict distinction between the level of linguistic meaning *stricto sensu* and the level of world knowledge. By maintaining the distinction, formalized semantics of the Jackendoff/Pustejovsky school remains close to the tradition of structural semantics. (For a good illustration of the consequences of accepting or rejecting the distinction, see the discussion between Taylor 1996 and Jackendoff 1996.)

In short, the history of lexical semantics is characterized by a succession of different theoretical approaches that are related by lines of similarity and extrapolation as well as mutual opposition. As a basic underlying distinction, we may single out the contrast between an encyclopaedist approach on the one hand, and a more restrictive approach on the other.

3 The empirical scope of lexical semantics

Given the main traditions of lexical semantics as identified in the previous paragraph, what has been their contribution to lexical semantics in terms of the empirical field of research covered? Answering that question requires a conceptual map of the field of lexical semantics, and such a map, I believe, should be based on two fundamental distinctions: the distinction between *semasiology and onomasiology*, and the distinction between *the qualitative and the quantitative aspects* of lexical structures. Once the conceptual map has been set up, we can chart the contribution that was made by the various theoretical currents as described above.

3.1 A conceptual map of lexical semantics

Before we can go on to present the distinction between semasiology and onomasiology, and that between the qualitative and quantitative aspects of lexical structure, it should first be pointed out that these dimensions do not in themselves exhaust the possibilities for distinguishing between different forms of doing lexical semantics. At least two additional distinctive dimensions would have to be included to get a truly comprehensive picture: the distinction between *diachronic semantics and synchronic semantics*, and the distinction between *referential and non-referential types of meaning*. These two additional dimensions cross-classify with the three basic ones and with each other: one can study onomasiological changes, for instance, or changes of non-referential meaning. The reason for not including them, then, is one of practice rather than principle: in order to get a first picture of the field, I think it may be acceptable to start off with those dimensions that relate to the core area of lexical semantics, viz. the synchronic (rather than diachronic) structure of referential (rather than non-referential) meanings. Also, the dimensions that are not explicitly included in the classification are quantitatively less important in actual lexical semantic research: diachronic semantics was a dominant field of investigation only in the first stage of development of lexical semantics, and non-referential types of meaning (like the emotive or stylistic value of words) have never occupied a central position within the actual research activities of lexical semanticists.

Let us now have a closer look at each of the core dimensions. The distinction between onomasiology and semasiology is a traditional one in Continental structural semantics and the Eastern European tradition of lexicological research, but it has hardly found its way to the canonical English terminology of linguistics. It does not appear, for instance, in most standard textbooks of linguistics. Essentially, it equals the distinction between *meaning* and *naming*: semasiology takes its starting-point in the word as a form, and charts the meanings that the word can occur with; onomasiology takes its starting-point in a concept, and investigates by which different expressions the concept can be designated, or named.

Traditionally, the onomasiological perspective leads to an investigation into lexical structures, i.e. to the study of semantically related expressions (as in lexical field theory, or the study of the lexicon as a relational network of words interconnected by links of a hyponymical, antonymical, synonymous nature etc.). However, studying the designations of a particular concept also opens the way for a contextualized, pragmatic conception of onomasiology, involving the actual choices made for a particular name as a designation of a particular concept or a particular referent. This shift of perspective involves a shift from an investigation of *structure* to an investigation of *use*. The structural conception deals with sets of related expressions, and basically asks the question: what are the relations among the alternative expressions ? The pragmatic conception deals with the actual choices made from among a set of related expressions, and basically asks the question: what factors determine the choice for one or the other alternative ?

Such a perspective automatically leads to a 'quantitative' approach: some onomasiological choices will be more frequent than others. Turning the shift of perspective the other way round, these differences in the probability of occurrence of certain expressions will be reflected on the structural level: we can then say, for instance, that certain expressions occupy a dominant or central role within the set of available expressions. More concretely, what are the different types of investigation that relate to the qualitative and quantitative aspects of onomasiology ?

The *qualitative* onomasiological question takes the following form: what kinds of (semantic) relations hold between the lexical items in a lexicon (or a subset of the lexicon) ? The outcome, clearly, is an investigation into various kind of lexical structuring: field relationships, taxonomies, lexical relations like antonymy and so on.

The *quantitative* onomasiological question takes the following form: are some categories cognitively more salient than others, that is, are there any differences in the probability that one category rather than another will be chosen for designating things out in the world ? Are certain lexical categories more obvious names than others ? This type of quantitative research is fairly new. The best-known model to date is Berlin & Kay's basic level model, which involves the claim that a particular taxonomical level constitutes a preferred, default level for categorization (see above). In Geeraerts, Grondelaers & Bakema (1994), the quantitative approach to onomasiology is generalized: it is shown that onomasiological preferences do not attach to taxonomical levels (as suggested by the basic level hypothesis) but to individual categories. At the same time, corpus-based methods are introduced for determining the factors that influence actual lexical and categorial choices in language use.

The distinction may be further illustrated by extrapolating it to semasiological structures. Qualitative aspects of semasiological structure involve the following questions: which meanings does a word have, and how are they semantically related ? The outcome is an investigation into polysemy, and the relationships of metonymy, metaphor etc. that hold

between the various readings of an item. Quantitative aspects of lexical structure, on the other hand, involve the question whether all the readings of an item carry the same structural weight. The outcome, obviously, is an investigation into prototypicality effects of various kinds. Needless to say, the qualitative perspective is a much more traditional one in semasiological lexicology than the quantitative one, which was taken systematically only recently, with the birth and development of prototype theory.

The overall picture of the field of lexical semantics that emerges from the foregoing is charted in Figure 2.

	SEMASIOLOGY	ONOMASIOLOGY
'Quality': <i>investigating structure (elements & relations)</i>	senses and semantic links among senses (metaphor, metonymy etc.)	semantic relations among lexical items (fields, taxonomies, networks etc.)
'Quantity': <i>investigating use and differential weights within structures</i>	prototypicality as involving salience phenomena, core versus periphery	differences in cognitive salience between categories, basic level phenomena and entrenchment

Figure 2
A conceptual map of lexical semantics

3.2 The contribution of the traditions

The next step to take involves the recognition that each of the major areas in the overview presented in the previous paragraph is typically covered by a specific theoretical tradition from the history of lexical semantics. Each of the three major traditions mentioned in the first paragraph focuses specifically on a particular area of the conceptual map. The *prestructuralist tradition* of diachronic semantics, to begin with, deals predominantly with the 'qualitative' aspects of semasiology – with processes like metaphor and metonymy, that do not just function as mechanisms of *semantic* extension, but that constitute, at the same time, the synchronic links between the various readings of a lexical item. *Structuralist semantics*, on the other hand, focuses on 'qualitative' phenomena of an onomasiological (a structural onomasiological) kind, such as field relations, taxonomical hierarchies, and lexical relations like antonymy. *Cognitive semantics*, finally, shifts the attention towards the 'quantitative' aspects of lexical structure: all forms of prototypicality effects in the semasiological realm, and basic levels on the onomasiological side.

This overview of the different descriptive focus of the various traditions of lexical semantics also shows how the conceptual map presented in Figure 2 got gradually filled out by different theoretical approaches with different descriptive priorities. There is a historical progression, in fact, from 'qualitative' semasiology to 'qualitative' onomasiology, and hence to an interest in 'quantitative' phenomena on the semasiological as well as on the onomasiological level. The actual historical development from prestructuralist semantics over structuralism and generativism to cognitive semantics thus constitutes a gradual extension of the descriptive scope of lexical semantics.

The overview of the descriptive preferences of the major traditions of lexical semantics is summarized in Figure 3.

	SEMASIOLOGY	ONOMASIOLOGY
'Quality': <i>investigating structure (elements & relations)</i>	prestructuralist semantics	structuralist semantics
'Quantity': <i>investigating use and differential weights within structures</i>	cognitive semantics	cognitive semantics

Figure 3
Dominance of the theoretical traditions within the empirical scope of lexical semantics

In order to avoid misunderstanding, it is important to strike a note of warning: the figure charts dominant domains of activity rather than strictly confined fields. The various traditions, that is, are certainly not *restricted* in their activities to the empirical areas mentioned in the overview. Let us consider some important nuances with regard to each of the major traditions.

First, prestructuralist semantics does not have an exclusively semasiological orientation. Onomasiological considerations may enter the classification of types of semantic change wherever necessary. The notion of analogical changes of meaning, in particular, presupposes an onomasiological perspective. 'Analogical change' is the general name for semantic extensions that copy the meaning of another, related word. Analogical changes can be subclassified on the basis of the associative onomasiological link that exists between the expression that is subject to the semasiological extension, and the expression that furnishes the model for the extension. In cases of semantic loans, for instance, the associative link between the source expression and the target has a semantic character. In cases of ellipsis (when a word takes over meanings from a syntactically complex expression of which it is a part), the relationship between the two expressions involved in the analogical change is syntagmatic rather than semantic.

Second, structuralist semantics does not have an exclusively onomasiological orientation. By focussing on distinctiveness as a basic phenomenon to be considered in lexical semantics, it generally proclaims the primacy of onomasiological phenomena over semasiological phenomena. The research strategy of componential analysis, for instance, is basically to derive the semasiological description of the meaning of individual lexical items from an analysis of the onomasiological relations that the item in question entertains with other items in the same lexical field. Semasiological analysis, in short, is far from absent from the structuralist approach, but depends on an initial onomasiological analysis.

Third, in the generativist and neogenerativist approaches that grew out of structuralism, the semasiological orientation is even more outspoken. Katz's componential analysis of *bachelor*, for instance, focuses on the distinctiveness of the various readings of a lexical

item among each other, rather than on the distinctiveness of the items in a lexical field. And Pustejovsky's interest in regular polysemy and the dynamism of meaning has an obvious semasiological orientation.

Fourth, cognitive semantics is not restricted to prototype theory and basic level research. Specifically, there are at least two important contributions that cognitive semantics has made to the structural onomasiological perspective (both of which have been mentioned above): on the one hand, the development of the Fillmorean frame model of semantic analysis, and on the other hand, the introduction of generalized metaphor research in the line of Lakoff & Johnson. Both approaches are in fact extensions of the set of lexical relations studied within the realm of onomasiology. On the one hand, conceptual metaphors involve onomasiological sets of metaphorically related expressions. On the other, the typical perspective of Fillmorean frame semantics is of a metonymical kind (cp. Koch 1999). To consider an example, studying verbs like *buy* and *sell* by bringing buyers and sellers and goods and prices into the picture, equals studying the 'referential syntagmatics' of a lexical item: the way in which the referent of the item (in this case, a particular commercial transaction) occurs in reality in temporal and spatial and functional conjunction with other entities, locations, processes, activities, or whatever.

Given these nuances with regard to the picture drawn in Figure 3, we now have a fairly accurate idea of the contribution made by the various traditions of research to the overall domain of lexical semantics. In Figure 4, the major nuances are incorporated into the picture presented by Figure 3.

	SEMASIOLOGY	ONOMASIOLOGY
<i>'Quality': investigating structure (elements & relations)</i>	<i>prestructuralist semantics:</i> mechanisms of semantic change <i>neogenerativist semantics:</i> regular polysemy	<i>structuralist semantics:</i> - taxonomies and lexical relations - lexical fields - syntagmatic relations and collocations <i>cognitive semantics:</i> - conceptual metaphors and metonymies - frames
<i>'Quantity': investigating use and differential weights within structures</i>	<i>cognitive semantics:</i> prototype theory	<i>cognitive semantics:</i> basic levels and entrenchment

Figure 4
The contribution of the traditions to the development of the field

4 Competition and convergence

Essential to the topic of the present paper is the recognition that there is empirical progress in the development of the discipline. The actual historical development from prestructuralist semantics over structuralism and generativist semantics to cognitive semantics constitutes a gradual extension of the descriptive scope of lexical semantics. This form of empirical progress constitutes a nuance with regard to the historical picture that was painted before: while the *theoretical* development of lexical semantics is characterized by *shifts and oppositions*, the *empirical* development is characterized by at least some degree of *complementarity and accumulation*.

In the context of the present volume, it seems legitimate to ask whether this empirical complementarity may lead to a convergence of the various theoretical approaches. I would venture the suggestion that such a process of convergence - if it will take place at all - could find a focal point in a pragmatic, usage-based perspective to lexical semantics. Three observations lie at the basis of this suggestion.

First, the currently most productive offshoot of structuralist semantics (the corpus-based analysis of collocational patterns) involves a shift from an analysis of structure as such (the initial approach of structuralism) to an analysis of patterns of actual language use. In structuralist parlance, this constitutes a shift from the level of *langue* to the level of *parole* - or, if one likes, a pragmatic shift towards a usage-based perspective.

Second, a somewhat similar shift characterizes the interest in regular polysemy of Pustejovskian neogenerativist semantics. Regular patterns of polysemy distinguish between stored meanings - meanings that have to be included in the mental lexicon - and derived meanings - meanings that can be determined through the operation of rules for regular polysemy and contextual interpretation. This constitutes a shift from an interest in semantic representations as such to an interest in semantic representations as the basis of semantic interpretations - and the process of interpretation is obviously to be situated at the level of usage.

And third, although the overview presented above makes clear that the major conceptual contributions to the 'quantitative' perspective have so far come from cognitive semantics, it is equally clear that this area of research is far from exhausted. Investigations into the actual onomasiological choices made by language users and the factors influencing such choices have only started to emerge, so that a continuing interest from the side of cognitive semantics for this field of investigation is far from unlikely.

In various guises, then, a *pragmatic turn* characterizes many of the contemporary approaches to lexical semantics. The usage-based aspects of lexical semantics would therefore seem to be a primary starting-point for exploring the possibility of theoretical convergences - or, as the case may be, for establishing fundamental incompatibilities.

Bibliographical references

- Berlin, B. 1978. Ethnobiological classification. In E. Rosch & B.B. Lloyd (eds.), *Cognition and Categorization* 9-26. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Coseriu, E. & H. Geckeler 1981. *Trends in Structural Semantics*. Tübingen: Gunter Narr Verlag.
- Cruse, A. 1986. *Lexical Semantics*. Cambridge: Cambridge University Press.
- Cruse, A. 2000. *Meaning in Language*. Oxford: Oxford University Press.
- Fellbaum, C. (ed.) 1998. *WordNet. An Electronic Lexical Database*. Cambridge, Mass.: MIT Press.
- Fillmore, C.J. 1977. Scenes-and-frames semantics. In A. Zampolli (ed.), *Linguistic Structures Processing* 55-81. Amsterdam: North Holland Publishing Company.
- Fillmore, C.J. & B.T.S. Atkins 1992. Towards a frame-based lexicon: the semantics of *risk* and its neighbors. In A. Lehrer & E. Kittay (eds.), *Frames, Fields and Contrasts* 75-102. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Fillmore, C.J. & B.T.S. Atkins 2000. Describing polysemy: the case of *crawl*. In Y. Ravin & C. Leacock (eds.), *Polysemy. Theoretical and Computational Approaches* 91-110. Oxford: Oxford University Press.
- Firth, J.R. 1957. *Papers in Linguistics 1934-1951*. London: Oxford University Press.
- Geeraerts, D. 1988a. Cognitive grammar and the history of lexical semantics. In B. Rudzka-Ostyn (ed.), *Topics in Cognitive Linguistics* 647-677. Amsterdam: John Benjamins Publishing Company.
- Geeraerts, D. 1988b. Katz revisited: aspects of the history of lexical semantics. In W. Hüllen & R. Schulze (eds.), *Understanding the Lexicon* 23-35. Tübingen: Niemeyer.
- Geeraerts, D. 1997. *Diachronic Prototype Semantics*. Oxford: The Clarendon Press.
- Geeraerts, D. 1999. Hundred years of lexical semantics. In M. Vilela & F. Silva (red.), *Actas do 1º Encontro Internacional de Linguística Cognitiva* 123-154. Porto: Faculdade de Letras.
- Geeraerts D., S. Grondelaers & P. Bakema 1994. *The Structure of Lexical Variation. Meaning, Naming, and Context*. Berlin: Mouton de Gruyter.
- Geckeler, H. 1993. Strukturelle Wortfeldforschung heute. In P.R. Lutzeier (ed.), *Studien zur Wortfeldtheorie. Studies in Lexical Field Theory* 11-21. Tübingen: Niemeyer.
- Goddard, C. 1998. *Semantic Analysis*. Oxford: Oxford University Press.
- Gordon, W.T. 1982. *A History of Semantics*. Amsterdam: John Benjamins Publishing Company.
- Goodenough, W. H. 1956. Componential analysis and the study of meaning. *Language* 32, 195-216.
- Halliday, M.A.K. & R. Hasan 1976. *Cohesion in English*. London: Longman.
- Jackendoff, R. 1996. Conceptual semantics and cognitive linguistics. *Cognitive Linguistics* 7: 93-129.
- Katz, J.J. 1972. *Semantic Theory*. New York: Harper and Row.
- Katz, J.J. & J.A. Fodor 1963. The structure of a semantic theory. *Language* 39, 170-210.
- Koch, P. 1999. Frame and contiguity. In K.U. Panther & G. Radden (eds.), *Metonymy in Language and Thought* 139-167. Berlin: Mouton de Gruyter.
- Lakoff, G. 1987. *Women, Fire, and Dangerous things. What Categories Reveal about the Mind*. Chicago/London: The University of Chicago Press.
- Lakoff, G. & M. Johnson (1980). *Metaphors we Live by*. Chicago/London: The University of Chicago Press.
- Langacker, R.W. 1987. *Foundations of Cognitive Grammar I. Theoretical Prerequisites*. Stanford: Stanford University Press.

- Langacker, R.W. 1991. *Foundations of Cognitive Grammar. Volume 2: Descriptive Application*. Stanford: Stanford University Press.
- Lounsbury, F. 1956. A semantic analysis of Pawnee kinship usage. *Language* 32, 158-194.
- Lyons, John 1963. *Structural Semantics*. Oxford: Blackwell.
- Mangasser-Wahl, M. 2000. *Von der Prototypentheorie zur empirischen Semantik*. Frankfurt: Peter Lang Verlag.
- Melçuk, I. 1984. *Dictionnaire explicatif et combinatoire du français contemporain*. Montréal: Les Presses de L'Université.
- Melçuk, I. 1988. Semantic description of lexical units in an explanatory combinatorial dictionary: basic principles and heuristic criteria. *International Journal of Lexicography* 1, 165-188.
- Melçuk, I. 1996. Lexical functions: a tool for the description of lexical relations in a lexicon. In L. Wanner (ed.), *Lexical Functions in Lexicography and Natural Language Processing* 37-102. Amsterdam: John Benjamins Publishing Company.
- Moon, R. 1998. *Fixed Expressions and Idioms in English. A Corpus-based Approach*. Oxford: Oxford University Press 1998
- Nerlich, B. 1992. *Semantic Theories in Europe 1830-1930. From Etymology to Contextuality*. Amsterdam: John Benjamins Publishing Company.
- Panther, K.U. & G. Radden 1999. *Metonymy in Language and Thought*. Berlin: Mouton de Gruyter.
- Porzig, W. 1934. Wesenhafte Bedeutungsbeziehungen. *Beiträge zur Geschichte der Deutschen Sprache und Literatur* 58, 70-97.
- Pottier, B. 1964. Vers une sémantique moderne. *Travaux de Linguistique et de Littérature* 2: 107-137.
- Pustejovsky, J. 1995. *The Generative Lexicon: A Theory of Computational Lexical semantics*. Cambridge, Mass.: MIT Press.
- Sinclair J. 1987. *Looking up*. London and Glasgow: Collins.
- Taylor, J. 1995. *Linguistic Categorization. An Essay in Cognitive Linguistics*. Oxford: The Clarendon Press (2nd edition).
- Taylor, J. 1996. On running and jogging. *Cognitive Linguistics* 7: 21-34.
- Thomason, R. (ed.) 1974. *Formal Philosophy. Selected Papers of Richard Montague*. New Haven: Yale University Press.
- Trier, J. 1931. *Der deutsche Wortschatz im Sinnbezirk des Verstandes. Die Geschichte eines sprachlichen Feldes*. Heidelberg: Winter.
- Ungerer, F. & H.J. Schmid 1996. *An Introduction to Cognitive Linguistics*. London/New York: Longman.
- Violi, P. 1997. *Significato ed esperienza*. Milano: Bompiani.
- Weisgerber, L. 1927. Die Bedeutungslehre: ein Irrweg der Sprachwissenschaft? *Germanisch-Romanische Monatsschrift* 15, 161-183.
- Wierzbicka A. 1996. *Semantics: Primes and Universals*. Oxford: Oxford University Press.