Cognitive Linguistics, Second Language Acquisition, and Foreign Language Teaching

edited by

Michel Achard
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Introduction: Cognitive Linguistics, Language Acquisition, and Pedagogy

Michel Achard and Susanne Niemeier

The cognitive linguistics movement consists of different theories that share at least two important conceptions about linguistic organization. The first one, most thoroughly investigated in Langacker's Cognitive Grammar (Langacker 1987, 1991) emphasizes the inherent symbolic function of language. The second one states that the cognitive processes that enable speakers to understand and produce language represent the acute specialization of more general cognitive abilities (Tomasello 2000). This volume investigates the relevance of the cognitive linguistics view of language to the fields of second language acquisition and pedagogy. In this introduction, we briefly present some of the most important concepts of cognitive linguistics; the different papers then apply these concepts to specific issues of second language learning and teaching.

1. The Symbolic Function of Language

In the cognitive view, the purpose of linguistic inquiry is to describe its semiotic function, that is, the symbolic association between a meaning and a phonological form. The lexicon, morphology, and syntax form a continuum of symbolic structures that cannot easily be separated into discrete compartments. Consequently, the grammar of a language can be described as "a structured inventory of conventional symbolic units" (Langacker 1987: 73). Each symbolic unit is composed of a semantic and a phonological pole. Grammatical constructions (the rules) represent a specific kind of symbolic structure. They take the form of templates that sanction the use of actually occurring expressions. These templates are also symbolic, and thus meaningful, even though their meaning is more abstract than that of actually occurring expressions.

Symbolic units constitute the totality of the grammar of a language. The only units that can be invoked to describe a linguistic system are: i) semantic, phonological, or symbolic units which are (part of) occurring expres-

sions, ii) schematizations of permitted structures, iii) categorizing relations between permitted structures (Langacker 1987: 488). Let us consider the word "cat" as a phonological example. It is composed of the occurring expression [kæt]. One schematization over that occurring expression is of the type [CVC], and the categorizing relation existing between the occurring expression and the schema is one of instantiation: [CVC] → [kæt]. The three units described here constitute the only types of constructs which can be posited for the representation of any level of linguistic construction. This "content requirement" (Langacker 1987) rules out purely grammatical constructs, i.e., elements which are given no phonological or semantic value (diacritics, traces, filters, etc.). It also implies that rules cannot be different in nature from the expressions they describe. They can only be schematizations of actually occurring expressions. In a cognitive grammar, the rules and their instantiations cohabitate without fear of reduplication because they represent different facets of a speaker's linguistic knowledge.

2. The Nature of Meaning

Because linguistic expressions are inherently symbolic, the investigation of their meaning (the content of their semantic pole) represents a major field of studies in cognitive linguistics. Researchers are most specifically interested in assessing the role of human experience in providing the basic meaning and intentions coded in natural language. Meaning is equated with conceptualization, or, to be more specific, in the human interpretation of the world. It is subjective, anthropocentric, and reflects dominant cultural concerns and culture-specific modes of interaction as well as features of the world as such (Lakoff, 1987, Langacker 1991, Wierzbicka 1988).

In Cognitive Grammar (one of the cognitive linguistics models where the semantic theory is best articulated), a linguistic expression is characterized semantically relative to one or more knowledge structures called "cognitive domains" (Langacker 1987: 147–166). The notion of cognitive domains shares important similarities with Fillmore's frames (1982), Lakoff's Idealized Cognitive Models (ICM's) (1987), and Wierzbicka's cultural scripts (see Goddard this volume). Some domains are irreducible: they pertain to our experience of space, time, the different senses, emotions, etc. Most linguistic expressions are, however, characterized with reference to complex domains. Any knowledge system or conceptualization can function as a domain for the characterization of a linguistic expression, regardless of its possible complexity or abstractness. Presumably such structures

are ultimately grounded in the set of cognitively irreducible domains alluded to above, but this relationship may be quite indirect, and a particular expression must be described in terms of structures that occupy appropriate positions in hierarchies of conceptual elaboration. In particular, different folk models that pertain to our conventional conception of certain concepts can be used as cognitive domains relative to which the meaning of linguistic expressions is characterized. To take an example, the domain of time in general, as well as the way we socially learn to subdivide it into years, months, and weeks, is necessarily activated when the word "Tuesday" is used. Similarly, the whole system of kinship relations is the background against which the meaning of the word "father" gets characterized.

The meaning of an expression represents the conceptualizer's desire to construe the relevant cognitive domains in a specific way. One particular (and crucial) dimension of construal concerns her ability to impose a "profile" on a "base", which derives the semantic value of a linguistic expression. The base consists of those facets of active cognitive domains that are directly relevant to the expression, hence necessarily accessed when the expression is used. The profile is a sub-region within the base. It is that sub-region that the expression designates and thus makes prominent within the base. It is important to bear in mind that the particular profile imposed on a base is a consequence of the way in which the conceptualizer construes the scene, and not an inherent property of that scene. As an example, the conception of a wheel constitutes the base relative to which the meaning of the word "rim" is characterized. The outer edge of the wheel constitutes the specific sub-structure "rim" profiles.

Cognitive linguistics embraces a semantic theory based on the ideas of family resemblance and complex categories (Rosch 1977, Lakoff 1987 among others). A fixed expression is often polysemous. It has a variety of

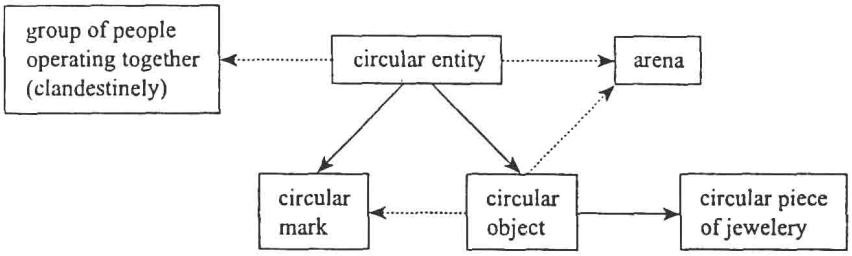

Figure 1. Ring: semantic network of a complex category

related senses that form a complex category which can be represented as a network. For instance, a portion of the semantic network of the noun *ring* is given in Figure 1 (based on Langacker 1988a: 52).

A particular meaning can stand in two types of relations to another: extension and elaboration. In Figure 1, the solid arrows represent elaboration relations, and the dashed arrows represent extension relations. An entity elaborates another entity when it is fully compatible with it, but is construed with a greater degree of precision. An entity represents a semantic extension from another entity if it is not completely compatible with it, but nonetheless assimilated to it on the basis of perceived resemblances. The type of representation of a complex category illustrated in Figure 1 is not only valid for lexical items. Other linguistic expressions are amenable to the same type of characterization, namely, organized around a central prototype, with extension and elaboration relations linking that prototype to other instances of the category.

Metaphorical extensions represent specific cases of semantic extension. The study of metaphor represents an important part of cognitive linguistics research because it directly links language to the speaker's conceptual system (Lakoff and Johnson 1980, Kövecses 1986, Lakoff 1987, Gibbs and Steen 1999 among many others). Because "metaphor is pervasive in everyday life, not just in language, but in thought and action" (Lakoff and Johnson 1980: 3), language represents a privileged entry point into our conceptual system. In the cognitive view, metaphorical concepts are systematically organized into coherent systems, and these systems are reflected in the metaphorical expressions used in language. The social implications of this view are important. Since metaphors are largely culture specific, learning the metaphors used in a given language provides invaluable insights into the way in which the speakers of that language act and think.

3. A Usage-based Model

The methodology of cognitive linguistics is "usage-based" in that it is primarily concerned with the characterization of language as it is spoken and understood, as well as with the dynamics of its use (Langacker 1988b, 2000, Barlow and Kemmer 2000, Tomasello 2000). Langacker (1987: 494) describes usage-based models as follows: "Substantial importance is given to the actual use of the linguistic system and a speaker's knowledge of its use; the grammar is held responsible for a speaker's knowledge of the full

range of the linguistic conventions, regardless of whether those conventions can be subsumed under more general statements". The usage-based approach constitutes a "non-reductive approach to linguistic structure that employs fully articulated schematic networks and emphasizes the importance of low level schemas" (Langacker 1987: 494).

3.1. Learning in a UBM

The goal of a usage-based-model is not to achieve mathematical elegance, but to depict the complexity of language use. Consequently, it is composed of an eclectic array of expressions at different levels of complexity, abstraction, and generality. Individual lexical items cohabitate in the system with idioms, conventionalized idiosyncratic collocations, and fully productive grammatical constructions (Tomasello 2000). Tomasello argues that usage-based models constitute strong theoretical frameworks for the description of child language acquisition because they do not demand that a child's grammar be identical to the adult system. He expresses his proposal for a usage-based view of L1 acquisition as follows (from Tomasello 2000: 237–238, emphasis in the original):

> The proposal would thus be that the child initially learns individual, item-based linguistic constructions (e.g., verb island constructions), and if there are patterns to be discerned among these different item-based constructions in adult usage, she could then make abstractions and create inheritance hierarchies of constructions. In this view of language and its acquisition, therefore, there is continuity **not** of structures – adults control a more diverse and abstract set of constructions than do children – but there is continuity of process in the sense that the processes of learning and abstraction are the same wherever and whenever they are applicable... This general approach is **usage-based** in the sense that all linguistic knowledge – however abstract it may ultimately become – derives in the first instance from the comprehension and production of specific utterances on specific occasions of use.

In a usage-based model, the goal of child language acquisition research is to characterize the steps by which the child's inventory of conventionalized units comes to resemble the adult's. It predominantly involves the investigation of the development of the cognitive abilities (making analogies, combining structures, drawing inferences, to name just a few) that allow children to eventually master the adult system.

3.2. Second Language Acquisition and Teaching

In a fundamental way, the task of the second language researcher is quite similar. L2 learners are also attempting to master the specific array of symbolic units that represents the linguistic conventions of the target language. The learner's interlanguage resembles a child's grammar in that it is also composed of an assortment of eclectic constructions at various levels of systematicity, abstraction, and productivity. The difference between the two comes from the conditions under which the L2 speaker comes to learn native conventions. Developmental issues are obviously less critical, at least in the case of adult learners who already control their native system of linguistic conventions. Rather, the emphasis of research shifts to the retraining that needs to take place in order to learn a new set of symbolic units. In a developing L2 system, the target units are in direct competition with the native ones because they both represent alternative ways of construing the same reality. L2 learning can therefore be viewed as a gradual process by which the target system gains more and more differentiation and autonomy from the native one. This autonomy is complete when the learner exercises full control over two separate sets of conventionalized linguistic impressions.

Three papers in this volume investigate the factors that enhance this differentiation, as well as the specific aspects of the native inventory that influence the learning of the target language conventions. In their attempt to isolate the factors that facilitate the learning of English prepositions by Dutch native speakers, Lowie and Verspoor investigate the importance of the (semantic and phonological) similarity of the prepositions in both languages versus the input frequency of the English prepositions learners are exposed to at different stages of their linguistic development. Waara analyzes the acquisition by Norwegian speakers of the various kinds of argument structures associated with the English verb "get". Her use of the concept of a usage-based model shows that the constructions representative of learners' interlanguage include conceptual blends, elements directly transferred from Norwegian grammar, as well as overgeneralizations of their developing English system.

The competition between the native and target systems can also be investigated at a more local level. With respect to specific conceptual domains, different languages illustrate different systematic construal choices by their speakers. The coding of motion events represents an interesting example. Talmy (1985) showed that the components of "motion", "figure", "ground", "cause", "manner", and "path" compose the conceptual structure of complex motion events. He further showed that different languages package these

components in different ways. In satellite-framed (S-framed) languages, the verb conflates "motion" with "manner" or "cause", and "path" is expressed separately by a satellite (a preposition, for instance). In verb-framed (V-framed) languages, the verb conflates "motion" and "path", and "manner" or "cause" are coded in a separate satellite. This typology has constituted the base for a large number of recent studies of motion constructions in linguistics (Talmy 1991, Slobin 1996, 2003), and first language acquisition (Berman and Slobin 1994, McNeill 2000). In this volume, Cadierno uses Talmy's typology as well as Slobin's notion of "thinking for speaking" (Slobin (1991) to show how speakers of Danish (a S-language) learning Spanish (a V-language) as a second language learn to express motion events in a language that differs typologically from theirs. She illustrates the process by which Danish speakers retrain themselves to attend to specific details of the events in order to describe them in a way consistent with the linguistic conventions of the Spanish language.

In addition to being a valid framework for the description of systematic L2 learning patterns, the cognitive linguistics model also offers important contributions to second language pedagogy because the kinds of generalizations it posits to describe linguistic organization can easily be made explicit, and thus incorporated into classroom practices. Eight papers in this volume show that instruction structured around cognitive linguistics principles helps solve some difficult problems in various areas of second language teaching ranging from curriculum development to the teaching of specific lexical items.

As mentioned earlier, one of the most important tenets of the model is that the language faculties constitute highly specialized uses of more general cognitive faculties. For example, Langacker (1987, 1991) and Talmy (2000) have demonstrated the linguistic relevance of our capacity to impose a figure / ground organization on a conceptualized scene. In this volume, Grundy argues that the figure / ground gestalt undermines the discrete-item-syllabus assumption upon which second language instruction generally rests.

The recognition of the centrality of meaning to linguistic organization provides pedagogical insights to second language teachers on several levels. First, the symbolic character of a linguistic system, and thus the absence of a strict delineation between the lexicon, morphology, and syntax, provides interesting methodological possibilities for grammatical instruction in a second language. In this volume, Achard argues that the symbolic nature of grammatical constructions (and therefore their semantic import) affords a kind of grammatical instruction perfectly congruent with the goals and practices of the communicative models of language instruction. This is

highly desirable because of the notoriously difficult integration of the teaching of grammar in communicative classrooms.

Secondly, the very constructs relative to which the meaning of linguistic expressions is characterized constitute potent teaching guides, because they provide the necessary social context to learn difficult, often culture-specific concepts. Three papers in this volume explore the benefits of making these constructs explicit for the teaching of vocabulary. At the curricular level, Niemeier assesses the relevance of the kind of cultural and linguistic relativity commonly associated with most cognitive linguistics models to foreign language teaching methodology. On a more specific level, Goddard presents the "structural scripts" approach to the teaching of ethnopragmatic knowledge. This technique makes use of Wierzbicka's semantic metalanguage to describe the lexical semantics of specific concepts, as well as the communicative norms of a given community in simple, cross-translatable terms. Goddard illustrates the pedagogical power of these scripts by analyzing some aspects of the cultural pragmatics of English and Malay. Boers is concerned with expanding learners' vocabulary using metaphor awareness. He argues that learners retain the meaning of a metaphorical expression better if they can be made aware of its motivation. He also shows that the optimal success of metaphor awareness critically depends on the careful selection of the kind of vocabulary presented, as well as the cognitive style and motivation of the students.

Finally, the radial category approach to polysemy provides invaluable help to teach specific lexical items. Because the peripheral senses of an expression are related to the more central ones by perceived similarities between them (semantic extension), they are "motivated" by those central senses. In this volume, three papers investigate how making this motivation explicit can enhance the retention of the more peripheral senses of a lexical item. The basic idea is that teachers can guide their students through the paths of semantic extension and emphasize what the peripheral senses share with the more central ones in order to facilitate their learning. Athanasiadou illustrates this methodology by showing how the non-temporal uses of the expressions "when", "as long as", "since", "as soon as", and "while" are motivated by their specific temporal senses. She further argues that being aware of the relation that exists between the temporal and non-temporal senses helps students to learn the more difficult non-temporal senses. Csábi shows that the Hungarian students who have explicitly been shown the semantic connection between the central senses of the English verbs "hold" and "keep" and their more peripheral and idiomatic counterparts retain the latter senses better. Finally, Tyler and Evans present an in-depth analysis of

the polysemous "over" where the multiple senses associated with the preposition are organized in a connected network of related meanings. Tyler and Evans further argue that their approach enables teachers to rely on the well-known meanings of the central senses to gradually move on to the most peripheral ones, thereby strengthening their semantic motivation.

The second language research program inspired by cognitive linguistics is still in its infancy, and a lot of the results presented here are preliminary. However, it is our hope that the different chapters of this volume will help establish the cognitive linguistics model as a valuable framework for the investigation of second language learning and teaching phenomena, and provide the methodology to further extend the research.

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