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## Opening Commentary: Language in Cognition and Culture

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Linguists want to know: What is language like? Why is it like that? Why do only humans have it? When cognitive linguists ask these questions, two core commitments are implied. The first is that our answers to these questions should not only appeal to human cognitive capacities, but also strive to account for language in terms of *more general cognition* before they posit language-dedicated cognitive capacities. The second is that our answers should both explain and appeal to facts of language as it occurs in usage, as captured by the adages of a *usage-based* approach: Grammar is Meaning, Meaning is Use, Structure Emerges from Use. The key to understanding language through a cognitive linguistics lens is to see that these two commitments are intimately related.

### 1.1 More General Cognition

Langacker (1987: 13) uses the phrase “more general cognition” in contrast to the kinds of cognition implied by language-dedicated faculties or modules that nativist accounts of language propose (Chomsky 1965: 25; cf. Hauser, Chomsky, and Fitch 2002, Chomsky 2011). A parsimonious account of language would be in terms of cognitive abilities that humans are known to possess for reasons independent from language. For example, there is “the ability to compare two events and register a discrepancy between them” (Langacker 1987: 6). These are aspects of our general intelligence for interpreting and reasoning about physical domains like space, quantities, and causality. Are such abilities necessary for language? Are they sufficient? Our quest to answer these questions must be guided by the knowledge that while other species may have some of what is necessary for language, they do not have what is sufficient.

Cognitive linguistics research has explored ways in which aspects of more general cognition can support the learning and processing of

language (Lakoff 1987, Croft 2001, Tomasello 2003, Goldberg 2006, *inter alia*). This has led to the discovery of principles of conceptual structure which provide people with ways to represent or construe the things, events, and states we wish to talk about. These principles also allow people to productively elaborate those representations in creative and expressive ways. They provide generative resources for setting up conceptual correspondences, typically between target ideas (concepts to be communicated) and source ideas (concepts used as means for communicating). The principles are amply illustrated in this handbook, and many references herein. They include analogy, metaphor, metonymy, gestalt thinking, image schemas, conceptual blends, idealized cognitive models, and more.

We can note two key properties of the aspects of more general cognition that have been most widely relied on in cognitive linguistic research. First, they are primarily relational. Second, they are primarily non-social.

### **1.1.1 Primarily Relational**

What does it mean to say that the elements of more general cognition relied on in cognitive linguistics are primarily relational? It means that they provide ways of describing relations between concepts, whether the scope of conceptual relation is an isolated linguistic expression or an entire semiotic system. This makes these aspects of more general cognition especially suitable for capturing conceptual relations within an atemporal/synchronic frame. There are of course other frames, dynamic temporal-causal frames including not only the diachronic frame, but also the microgenetic, ontogenetic, phylogenetic, and enchronic frames (Enfield 2014: 9–19; cf. Bybee 2010, see below). Research approaches related to cognitive linguistics, such as psycholinguistics, tend to work within dynamic frames; for example, focusing on language production or comprehension (in a microgenetic frame) or language learning (in an ontogenetic frame). Cognitive linguistics is increasingly well linked to fields like psycholinguistics thanks to the efforts of interdisciplinary-minded researchers in both psychology (e.g. Tomasello 2003) and linguistics (e.g. Goldberg 2016; see also Hurford 2007, 2011).

These collaborations are promising to extend the boundaries of what we understand “more general cognition” to mean. And there are further aspects of more general cognition that have important connections to language, but are yet to be explored within the purview of cognitive linguistics proper. A particularly promising area is bounded rationality, the toolkit of fast and frugal heuristics that balances simplicity and economy with functional efficacy (Gigerenzer, Hertwig, and Pachur 2011). Cognitive scientists have begun to explore ways in which this aspect of more general cognition sheds new light on the pragmatics of language

(Barr and Keysar 2004). Such work suggests that cognitive linguistics will enrich its account of imagistic thinking by looking at it in the light of heuristic thinking.

### 1.1.2 Primarily Non-social

What does it mean to say that the aspects of more general cognition widely studied in cognitive linguistics are primarily non-social? It means that they focus more on how we interpret, conceive, and reason about physical phenomena such as space, quantities, and causality, than on interpersonal phenomena in the social domain.

Our species is the only one with language. What makes this possible? A challenge for cognitive linguistics, given its emphasis on more general cognition, is that so much of our general cognition is shared with other species. Why do they not have language too? To answer this, we must pinpoint what it is about our specific forms and combinations of more general cognition that other species lack. To be clear: Proposing that the cognition involved for language is unique to our species does not entail that this cognition is specifically linguistic. No other species should be capable of the same kind, or perhaps degree, of cognitive capacity in the relevant forms of thinking. Is this because we have unique capacities for analogy, imagery, metaphor, metonymy, and pragmatic inference, among other principles?

There is good reason to think that what really makes language possible is our social cognition (Enfield and Levinson 2006a). A recent comparative study of cognition in the great apes argues that general intelligence – as measured using tests in physical domains of space, quantities, and causality – does not greatly distinguish humans from our closest relatives such as chimpanzees. “Supporting the cultural intelligence hypothesis and contradicting the hypothesis that humans simply have more ‘general intelligence,’ we found that the children and chimpanzees had very similar cognitive skills for dealing with the physical world but that the children had more sophisticated cognitive skills than either of the ape species for dealing with the social world” (Herrmann et al. 2007: 1360). The conclusion? Sociocultural cognition makes the difference for language. Humans are especially attuned to other minds, and to the cultural construction of group-specific, conventional systems of meaning and practice as shared frameworks for communication and joint action. This is what makes it possible for human populations to foster the historical development of complex systems of shared cultural tradition, of which language is one form.

This does not detract from the demonstrated importance for language of non-social aspects of more general cognition, including those that are clearly shared by other species. Hurford (2007, 2011) has argued that the core principle of predicate-argument organization in the syntactic

organization of language – any human language – is based on properties of brain function and anatomy that are shared with many other species. Many species display these same basic properties of neural organization and cognitive processing (specifically, the integration of a ‘where’ system with a ‘what’ system, supplying the essential ingredients of argument-predicate relations). So why do other species not have language? Hurford’s answer is that they do, it is just that they don’t make it public. This in turn means that conceptual structure does not enter the public domain, and so it is impossible for cultural processes of symbolic community-wide conventionalization, and subsequent grammaticalization, to get started (Bybee 2010, Hurford 2011, Enfield 2015).

## 1.2 Language Usage

As one of a set of functionalist approaches to language, cognitive linguistics does not just analyze linguistic structure, “it also analyzes the entire communicative situation: the purpose of the speech event, its participants, its discourse context”; it maintains “that the communicative situation motivates, constrains, explains, or otherwise determines grammatical structure” (Nichols 1984: 97). This orientation is well grounded in insights dating back to Wittgenstein (1953), Zipf (1949), and beyond. Embracing the idea that language is a tool for thought and action, cognitive linguistics is *usage-based* (Barlow and Kemmer 2000). In this way a strong focus on conceptual representation is increasingly often complemented by close attention to the dynamic, causal, utilitarian underpinnings of language and its structure.

In a usage-based model, “the process of language use influences the structure of the representation” (Croft and Cruse 2004: 326–27). Taken together, the three key concepts invoked here – use, influence, and structure – imply a causal conception of language. It is not enough to describe a piece of language structure, a linguistic (sub)system, or a pattern of variance in language. We must ask why it is that way. One way to answer this is to find what has shaped it. “Everything is the way it is because it got that way,” as biologist D’Arcy Thompson is supposed to have said (cf. Thompson 1917). Bybee echoes the sentiment in relation to language: “a theory of language could reasonably be focused on the dynamic processes that create languages and give them both their structure and their variance.” Seen this way, linguistic structure is “emergent from the repeated application of underlying processes” (Bybee 2010: 1). The aim is to explain structure by asking how structure is created through use.

The goal of unpacking the key concepts of use, influence, and structure – and the relations between these – points to new horizons in cognitive linguistics. Many of these horizons are explored in this handbook, as the reader will find. Here I will only remark that if we are going to map those

horizons systematically and with clarity, a central conceptual task is to define the temporal-causal frames within which we articulate our usage-based accounts (see Enfield 2014: 9–21). Some of those frames are well established: In a microgenetic frame, sub-second dynamics of psychological processing, including heuristics of economy and efficiency, provide biases in the emergence of structure in utterances; in a diachronic frame, population-level dynamics of variation and social diffusion provide biases in a community's conventionalization of structure; and in an ontogenetic frame, principles of learning, whether social, statistical, or otherwise, provide biases in the individual's construction of a repertoire of linguistic competence in the lifespan. Then there is the phylogenetic frame, through which our evolved capacities provide the defining affordances for our species' capacity for language.

If there is less charted territory, it is in the enchronic frame, the move-by-move flow of interlocking, action-driven, forward-going sequences of linguistic action and response in social interaction (Schegloff 1968, Clark 1996, Schegloff 2007). By orienting to the enchronic frame, recent work in descriptive linguistics has begun to analyze linguistic structures in terms of their distribution in relation not only to morphosyntactic units, or units of discourse, but also to structural units that can only be observed and defined in data taken from dialogue (Enfield 2013; cf. also Du Bois 2014). Gipper (2011) sheds new light on the analysis of multifunctionality in evidential marking by comparing the functions of Yurakaré evidentials in differently positioned utterances in conversation; she finds that evidentials can have quite distinct functions depending on whether they occur in initiating utterances (e.g. questions, new assertions) versus responsive utterances (e.g. answers to questions, expressions of agreement). A different kind of outcome from orienting to the enchronic frame in research on language and cognition is that it requires us to confront and explain phenomena that are clearly linguistic but that have hardly been on the map in any form of linguistics until now; key examples include repair (Schegloff et al. 1977, Hayashi, Raymond, and Sidnell 2013) and turn-taking (Sacks et al. 1974, Roberts, Torreira, and Levinson 2015), both of which have significant implications for our understandings of the language-cognition relationship (Dingemanse et al. 2015, Levinson and Torreira 2015). Without the usage-based approach that cognitive linguistics advocates, these implications would remain out of sight.

### 1.3 Conclusion

The challenge now is to further enrich our understanding of the causal influence of use on structure in language, and thus to see better how it is that only human cognition supports language. A first move is to broaden the scope of the key ideas – influence, use, and structure – with a concerted

and systematic approach to discovering how the multiple causal-temporal frames of language use operate, both in themselves and in relation to each other. Like the rest of cognitive linguistics, this work is as much about culture as it is about language, for language is not only a form of culture – being a local and historical cumulation of social practice – but it is our main tool for constructing culture itself.