COGNITIVE LINGUISTIC STUDIES IN CULTURAL CONTEXTS 6

Language Structure and Environment

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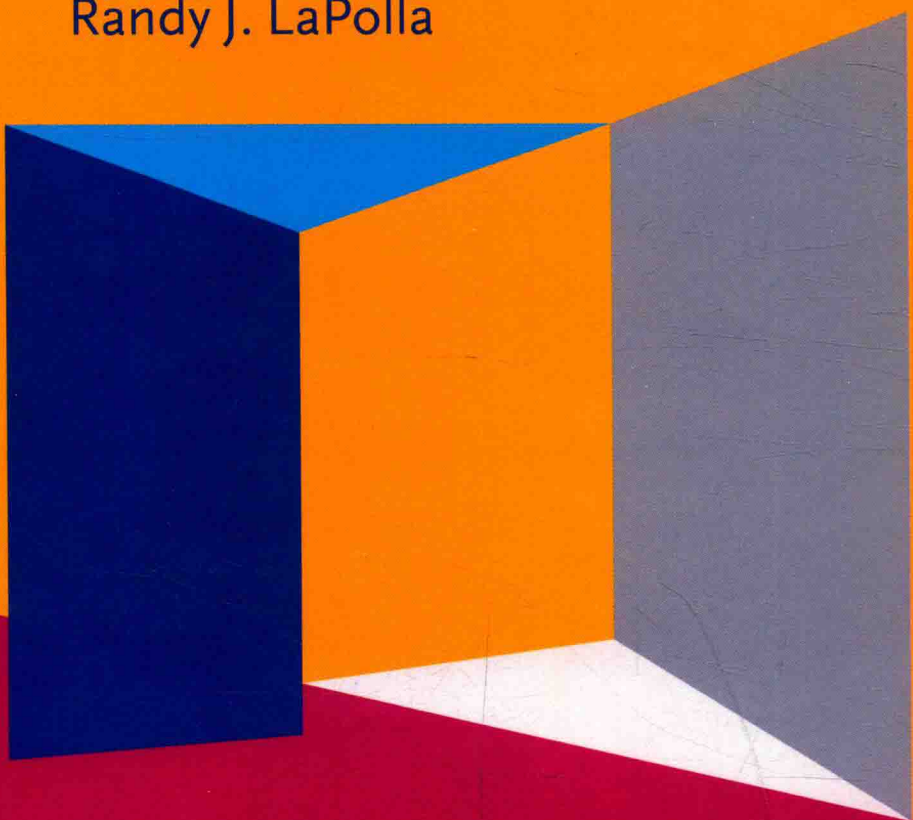

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Language Structure and Environment

Social, cultural, and natural factors

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Language Structure and Environment

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Volume 6

Language Structure and Environment. Social, cultural, and natural factors
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CHAPTER 1

The influence of social, cultural, and natural factors on language structure

An overview

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This book is an attempt to give an overview of how language interacts with its environment, or better, how actual linguistic structure is formed, changed and influenced by different aspects of the human environment. The focus is mainly on effects of the extra-linguistic environment on the actual grammatical structure of languages; we will leave influences on other linguistic subsystems such as phonology, the lexicon, and discourse structure to the efforts of other researchers.

The underlying assumption of this entire volume is that linguistic structure is not only shaped by how speakers interact with each other and with the world they live in, but also by external forces that are outside the control of individual speakers or speech communities. One might call it natural selection in grammar, were it not for the fact that it is not entirely clear whether biological and linguistic change operate along the same real-world principles, or whether any correspondences are much more superficial.

1. Introduction

The general idea set out in this book is that language structure is influenced by the environment in which it is used. This idea is not original in itself and, to some, might appear trivial. Indeed, as Gumperz & Levinson (1996:1) courageously remark at the very outset of an edited volume:

> Every student of language or society should be familiar with the essential idea of linguistic relativity, the idea that culture, *through* language, affects the way we think, especially perhaps our classification of the experienced world.

Putting aside directionality (language influencing culture or vice versa), two things are worth pointing out.

1.1 Non-autonomous syntax

First, if the idea of the extra-linguistic environment shaping linguistic structure were self-evident, one would expect it to have become more popular in linguistics. Instead, we find the following categorical statement in a work on generative phonology:

> There is no correlation whatsoever between phonological structure (or for that matter, any matter of linguistic structure) and the environment. [...] Studying the structure of a language reveals absolutely nothing about either the people who speak it or the physical environment in which they live. (Kaye, 1989, p. 48)

The idea is also diametrically opposed to what since the 1950s has been an influential tenet in linguistic theory, especially in the generative tradition, namely the autonomy of syntax. There are different interpretations of what this concept exactly means, but all imply that syntax is best explained in isolation from other linguistic subsystems, function and usage.[1] While this usually does not negate the importance of semantics or pragmatics in the understanding of language in general, it does imply that "a formal grammar can in principle be selected [...] on the basis of a preliminary analysis of data in terms of formal primitives excluding the core notions of semantics" (Chomsky, 1977, p. 42). In other words, meaning, actual language use and the extra-linguistic context are inconsequential for an understanding of the grammatical structure of language.

As Croft (1995, pp. 490–491) points out, the autonomy of syntax is often seen as a consequence of that "undeniable fact of all languages", the Saussurian concept of the arbitrariness of the sign, which does indeed imply at the very least a certain degree of disconnect between linguistic form and its function within a non-linguistic context. However, the evolution of arbitrary form-function combinations does not exclude the existence of direct environmental pressure, either in language or in other communicative systems. To give one example, alarm calls in various monkey species all evolved in response to acute danger in the immediate environment, but their exact vocalizations are to a large extent random (for instance, there is no iconic relationship between the sound structure and the predator indicated).

One of the reasons why the idea of autonomous syntax is so attractive is undoubtedly because it prevents theoretical models from becoming too complicated: Chomsky (2002, pp. 52–53) implies as much in saying that it is unreasonable to demand from a grammar that it accurately represents language use in context, because this would lead "into a maze of more and more elaborate and complex analytic procedures that will fail to provide answers for many important questions

1. See e.g. the Autonomous Syntax Principle in (Radford, 2009, p. 31): "No syntactic rule can make reference to pragmatic, phonological, or semantic information."

about the nature of linguistic structure." This might explain why even in frameworks formulated in opposition to generative linguistic theory the non-linguistic context is often largely excluded from grammatical description and interpretation, not necessarily by axiomatic fiat, but certainly as a pervasive working assumption.

A good example is Croft (2003), a well-known and in many ways excellent introductory work to linguistic typology, which describes typology in opposition to generative theories of language as a functional approach to language, that is, a linguistic approach that espouses "the view that linguistic structure should be explained primarily in terms of linguistic function" (Croft, 2003, p. 2). Croft (2003, pp. 13–14) recognizes the importance of semantic and pragmatic factors in determining cross-linguistically valid grammatical categories, but extra-linguistic categories are not discussed at all, and the book focuses strongly on structural explanations of cross-linguistically valid grammatical patterns. There is nothing inherently wrong with this (any theory needs to limit its subject matter in certain ways); it merely illustrates that autonomous approaches to syntactic structure are not a phenomenon exclusive to generative grammar. Even in reactions against the idea of the autonomy of syntax, such as Anderson (2006), the term is usually interpreted in its original, narrow sense, namely the absence of theoretically relevant interactions between grammatical structure *and semantics or pragmatics*. The extra-linguistic environment itself is of no real concern in his discussion.

The studies in this book show that such views and attitudes are increasingly untenable: an ever-growing mountain of evidence suggests that there are plenty of complex interactions between language and its environment, and that in certain cases these interactions have a measurable influence on the development of grammatical structures. One of the first and foremost goals of this volume is to illustrate that it does not make sense to investigate the structure of a language in an artificially imposed isolation from the environmental factors that have a significant influence on its development and evolution. In other words, we will provide evidence here that grammar, and language in general, is non-autonomous.

1.2 Linguistic relativity

Secondly, the idea at the basis of this volume is compatible with that of linguistic relativity, but there are important differences. The concept of linguistic relativity was originally formulated by Whorf, but probably most eloquently expressed by Edward Sapir, who stated that "language does not exist apart from culture, that is, from the socially inherited assemblage of practices and beliefs that determines the texture of our lives" (Sapir, 1921, p. 221).

Many interpretations exist about the exact nature and scope of linguistic relativity; Gumperz & Levinson (1996c) and Lucy (1997) both provide excellent overviews of the historical development, and diverse interpretations of the concept.

Sidestepping a theoretical quagmire, we will here assume a so-called weak interpretation of linguistic relativity, which implies that culture exerts an influence on but does not fully determine linguistic structure, and further assume that the interaction between culture and language is bidirectional. It is debatable whether either of these assumptions was made by Whorf, and especially the latter will be contentious to at least a portion of linguists and anthropologists that are presently working on linguistic relativity.

Lucy (1997, p. 294), for instance, states that "[l]anguage embodies an interpretation of reality and language can influence thought about that reality" and that "[l]inguistic relativity proposals emphasize a distinctive role for language structure in interpreting experience and influencing thought." In contrast, the contributions to this volume are not interested in how language influences our experience of reality, but rather the opposite, how external reality leads to certain grammatical features. One could argue that some circularity is implied in linguistic relativity and that when language influences our perception of reality, this perceived reality in return suggests or implies certain restrictions on specific grammatical patterns. However, this is an observational implication and has little to do with real-world causality. We are here not merely interested in observed correlations between grammatical structure and reality without regard to causal direction; our aim is to investigate how external real-world factors can *trigger or influence* the development of certain grammatical features in a language.

During the last decades, the idea of linguistic relativity, with some modifications, was rediscovered by a number of linguistic subfields that study the interaction between culture, language and cognition, such as sociolinguistics, ecolinguistics and ethnosyntax (see *Related fields* below). Gumperz & Levinson (1996b, p. 9) also relate linguistic relativity to a broad interpretation of Peirce's concept of indexicality as the relationship between sign, communicative participants, and the communicative context.[2] This is what makes linguistic relativity relevant to understanding functional approaches to language, which in all their variety all start from the assumption "that the communicative situation motivates, constrains, explains, or otherwise determines grammatical structure" (Nichols, 1984, p. 97). Often, this communicative situation is interpreted narrowly in terms of communicative intent: linguistic structures are explained in terms of the needs or desires of speakers to communicate certain pieces of information in certain situations.

2. The traditional interpretation of indexicality is often narrow and only applies to deixis. On the other hand, Enfield (2004, pp. 10–11) talks of social indexicality as a creative force enforcing social identity and leading to grammatical innovation.

Though obviously relevant to the topic of this book, both interpretations of the extra-linguistic context are much more restrictive than how we defined it above. In the case of the original Sapir-Whorf hypothesis and its modern incarnations, this context is assumed to be human culture; in modern functional theories of language, it is the communicative setting and its influence on communicative intent. Both are subsumed in our definition of the extra-linguistic context, but our basic assumption will be that every single element in the extra-linguistic environment, be it cognitive, social, cultural, biological or physical, should be treated as a potential factor of influence on the structure of languages. Some of these factors might be consciously observed or even constructed by the speakers of these languages as communicative goals or as part of the socio-cultural setting, but others might be imperceptible to the language users, for instance because they exert their influence on evolutionary time scales or in an indirect fashion.

2. Related fields

In this section we will first set out to what extent the general idea behind this book, that grammatical structure is directly influenced by the extra-linguistic environment, is similar to or different from existing approaches to linguistics. Although the modern study of language in its environmental context goes back at least to Sapir's (1912) article, it was especially in the last half century that a number of subfields in linguistics, both small and not so small, have arisen that study various interactions of language and the non-linguistic environment. In terms of their research subjects, the boundaries between these disciplines are not always equally clear, but each started from its own distinct source and has its own unique point-of-view of how language should be analysed.

2.1 Functional grammar

The foundations for functional linguistics were laid in the Prague School of linguistics in the first half of the twentieth century. As Nichols (1984) points out, there is considerable variety in how the concept *function* is actually interpreted, but in general, functional (or functionalist) theories of language seek to explain the development and use of linguistic phenomena in terms of their socio-cultural and discursive function.

It is obvious that in such frameworks, any adequate explanation of grammatical structure needs to take into account the influence of the extra-linguistic context, although interpretations of the exact nature and scope of this context may vary. For instance, Dik (1987) has an instrumentalist view on language as a tool

"in the establishment of complex patterns of social interaction" (Dik, 1987, p. 83), realized through the interaction of syntax, semantics and pragmatics that can be encoded in a formal-logical model. On the other hand, in Halliday's Systemic-Functional Grammar, linguistic structure arises from environmentally imposed constraints on a speaker's creative potential and takes the form of "systematic relations [...] between semantic system networks and behaviour patterns on the one hand and between semantic networks and the lexicogrammar on the other" (Davidse, 1987, pp. 47–49).

The two examples illustrate that in practice, many contemporary functionalist theories tend to focus on the interplay between semantic and pragmatic function on the one hand and grammatical structure on the other, abstracting away from the actual interaction between linguistic and non-linguistic information networks in favour of a system-internal, purely linguistic interpretation. As mentioned before, such approaches are generally compatible with the assumptions at the basis of the present volume, and some contributors to this volume would identify themselves as functionalist linguists.

However, relationships between language and the communicative context only form a small subset of the relationships between grammatical structure and the non-linguistic environment that we are interested in here. While generally compatible with the general tenets of functional linguistics, the contributions in this volume tend to emphasize the interactions between grammatical structure and the outside world, rather than intra-linguistic relationships between syntax and pragmatics (see LaPolla, this volume, for an in-depth discussion).

2.2 Sociolinguistics

Though relatively young – the term itself goes back to the work in the early 1960s (see Hymes, 1974, p. 193) – sociolinguistics is a relatively mature field, both in terms of the variety of its research matter and the amount of research published. Sociolinguistics studies the interactions between language and society. What this exactly pertains to is a subject of healthy debate. For Hymes (1974, pp. 195–197), there are "three main orientations": (1) attitudinal studies, investigating social attitudes toward certain linguistic phenomena (e.g. work on language standardization); (2) variational studies, investigating the influence of the social context on language variation (e.g. dialect; and (3) functional studies, investigating the social functions of linguistic expressions (e.g. discourse analysis). It is mainly the second strand that is of interest to us here, to the extent that it focuses on socially conditioned variation of grammar (rather than, for instance, phonology, a popular subject in some early studies). The influence of geo-social and societal factors on grammatical variation (dialectal or sociolectal) is discussed in the contributions in Section 2 of this book.

Some principles of sociolinguistics are of general relevance to the work presented in this volume, whether it is explicitly sociolinguistic in nature or not. All sociolinguists have an explicit interest in actual language use in context rather than the structuralist insistence on a fundamental separation between competence and performance. Labov (1972, p. xiii) goes as far as to say that it is simply not possible to investigate language outside its social context, a sentiment we here support unequivocally. It makes as little sense to study the abstract formal structure of a language in isolation from its context of use or from its developmental pathway as it does to do so with an abstract Mondriaan painting. A formal analysis of such artwork might record in excruciating detail the dimensions, position, and colour of each square, the materials of which it is made, and transformation rules that allow us to mathematically derive this particular painting from its predecessors, but this would be utterly meaningless. The work only gets meaning in its historical background (the abstract movement that evolved out of expressionism), the artistic evolution of the painter (from impressionism over cubism to strict non-representationalism), and its intended meaning in a particular social-artistic context (an expression of the abstract beauty of the laws of the universe; see Gombrich, 2006, p. 451, fig. 381).

Sociolinguistics has traditionally also had a strong interest in empirically grounded research, often with an experimental component. This type of research can be quantitative or qualitative, but in both cases it tends to derive results from verifiable and falsifiable data sets, unlike formalist theories of language, which traditionally are focused more on introspection.[3] A similar concern about the nature of evidence is reflected in most if not all contributions to this volume.

2.3 Ecolinguistics

Einar Haugen, credited in Fill & Mühlhäusler (2001) with founding ecolinguistics, defines the field as "the study of interactions between any given language and its environment" (Haugen, 2001, p. 57) and delineates this environment very specifically as human society. In this light, it is not entirely clear whether ecolinguistics should be considered a linguistic subdiscipline in its own right, or rather a particular attitude towards sociolinguistics.

3. Even recently, when Featherston (2007, p. 272) pleaded for an increased use of empirical data in generative syntax and remarked that "a significant number of linguists are still, in spite of all the warnings to the contrary, using as the basis of their work what we might call linguist's judgements", Fanselow (2007, p. 354) responded that there are no sound methodological reasons that "would require the exclusion of linguists' judgments from syntax research."

Another problematic aspect of ecolinguistics is that the exact boundaries of its research subject are not entirely clear. Nicholas Ostler, whose popular monograph on the influence of empire building on the development of languages (Ostler, 2006), a topic squarely within the scope of ecolinguistics, expresses his reservations rather directly in a review of Fill & Mühlhäusler (2001)'s overview volume: "Ecolinguistics is not a discipline, and hardly even a subject, despite the bold claim of the editors" and "cannot be seen as any sort of probative or empirical science" because it is internally inconsistent. A more charitable interpretation would be that ecolinguistics is a highly diversified field with a small number of general topical trends. In his seminal article, Haugen put great importance on language variation and contact, multilingualism, and standardization. This instigated an avalanche of research into dialect variation, writing systems, pidgins and creoles, and the like. Especially in variational linguistics and creole studies, the influence of the non-linguistic environment on language development is still very salient, and from time to time the term *ecology* sticks up its head in this context (e.g. Mufwene, 2001; Ansaldo, 2009).

The work of other linguists and anthropologists followed a rather different path and reinterpreted *environment* and *ecology* in a different, more literal fashion. They gradually focused more on the relationship between biological and linguistic diversity (see e.g. Maffi, 2005). Not uncommonly, ecolinguistics developed an ideological undertone, with a focus on raising awareness of and preventing linguistic and cultural extinction (Haugen, 2001, p. 60). For instance, Maffi (2005, p. 601) believes ecolinguistics should have "a focus on the relationships between linguistic, cultural, and biological diversity, their global overlapping distributions, and the common threats they are facing."

What these research strands have in common is that (1) they all investigate the relationship between language – or languages – and its environment, however that might be defined exactly, (2) rather than investigating linguistic properties *per se*, they tend to focus on the global structure and diversity of languages, and (3) they do this from a linguistic, anthropological and/or philosophical point-of-view. The first characteristic also underlies the research in this volume. With regard to the second and third, our interests diverge. All of the contributions in this volume are focus on the grammatical structure of language, and are strongly inspired by observation of language use or empirical linguistic research. We have aimed at a balance between theory and practical studies, and our contributors are as much interested in the development of grammatical micro-structure under pressure of the environment (e.g. particular grammatical categories such as evidentiality; see Michael, this volume), as we are in environmental influence on languages in their entirety (Trudgill, this volume; Nichols, this volume).

2.4 Ethnosyntax

Ethnosyntax is an approach to grammatical analysis influenced by linguistic anthropology. It is defined in Enfield (2004:3) as "the study of connections between the cultural knowledge, attitudes, and practices of speakers, and the morphosyntactic resources they employ in speech." He goes on to explain that the field has been interpreted narrowly as the study of direct influences of culture on linguistic structure, but that other linguists also subsume the study of general pragmatic effects such as typicality under its objects of study. This focus on cultural praxis sets the field apart from sociolinguistics, which tends to have an interest in relations between language and social factors outside the speaker's control (such as gender, social class, population size, etc.).

Wierzbicka (1979), who coined the term, uses it most definitely in a narrow sense, and takes the idea as a starting point for her work on Natural Semantic Metalanguage, a semantic framework aimed at constructing a coherent and formalized set of cross-linguistically valid semantic primes (see e.g. Wierzbicka, 1996). Interestingly, this interest in formalization and semantic universals sets her apart from ensuing ethnosyntacticians who envisage the field, with its strong relativist tendencies, as an antidote to formalist and universalist theories of language and, as a result, view her work with some suspicion.

This anti-universalist agenda is clear in more polemical works associated with the ethnosyntax program, such as Everett (2005). In his description of Pirahã, a language isolate spoken in the Brazilian Amazon, he notes the absence of linguistic features often considered to be basic to any human language, such as a counting system, colour terms, and – most controversially – grammatical embedding and recursion, two pillars of formal linguistic theory. He connects this to the general world view of the Pirahã people, and argues this implies that cross-linguistically, "some of the components of so-called core grammar are subject to cultural constraints" (Everett, 2005, p. 622). His article invoked a strong – and sometimes even emotional – response, not in the least because it attacked some of the basic assumptions of formal theories of languages (see Pullum, 2012, for a popular discussion of this poisonous dispute). Most notably, Nevins, Pesetsky, & Rodrigues (2009) set out to refute all or most of Everett's claims and state that "there is no evidence from Pirahã for the particular causal relation between culture and grammatical structure" (Nevins et al., 2009, p. 355). While they do not deny that culture exerts an influence on linguistic structure, it is clear that they would rather minimize its role in grammatical theory.

In general, most work in this relatively small field has been altogether less controversial. Typical research topics include kinship systems (e.g. Evans, 2003), gendered language (Chafe, 2004), and deictic systems (Levinson, 1996). One of

the more fascinating peripheral interests of ethnosyntax is in how our description of grammatical structure might be influenced by our academic training and cultural background (Enfield, 2004, p. 12). This is the subject of Easton & Stebbin's contribution to this volume, who discuss how preconceptions instilled by linguistic tradition might have a profound effect on how we conceptualize the linguistic structure of languages that do not belong to that same tradition.

The general assumptions and goals of ethnosyntax, as they are set out in Enfield (2004, p. 12), are fully compatible with the research presented here, and some of the contributions in this volume squarely take an ethnosyntactic view on grammatical analysis (see Burridge, this volume, and Easton & Stebbins, this volume). One point of difference is that we assume it to be likely that certain extra-linguistic factors beyond the realm of culture exert a direct influence on grammatical structure without the mediation of cultural praxis. An obvious example is the contribution of Nichols, this volume, who describes how geographical altitude influences the diversification of language.

It will be clear that most of the research fields mentioned above focus primarily on the interaction between languages and the socio-cultural reality in which they are spoken. To a degree, our journey in this book will lead us through this familiar terrain – it is after all meant to function as a broad overview. However, as we have mentioned repeatedly above, it is our explicit intention to go beyond the usual suspects and investigate less obvious connections between language and environmental parameters. As mentioned in the previous paragraph, we also do not take it as a given that interaction between grammar and the extra-linguistic environment is necessarily mediated through culture. The intermediary function of culture is probably common, but is likely not universal and has to be established for each individual interaction between language and the environment. The next section gives a broad classification of the types of environmental parameters which existing research has identified as being potential factors of influence on grammatical structure.

3. Relevant environmental parameters

One of the goals of this volume is to catalogue – however tentatively – the different environmental parameters that are relevant as potential influences on grammatical structures. Within the confines of a single monograph, it would be impossible to give a complete overview, so we will here list major categories of extra-linguistic factors that have been reported to directly influence linguistic structure in general, and grammar in particular. We will indicate in which part of this volume they are discussed.