

1 The Cognitive-Functional Approach

Overview

This first chapter offers an overview of the essentials of the cognitive-functional view adopted in this book and situates the approach in the wider field of language studies. In the course of this it also introduces the general theoretical issues of concern in this book.

Section 1.1 formulates the basic insights underlying the cognitive-functional approach and the principles drawn from these for developing a theory of language. Section 1.2 situates this perspective in the field of functionalist and cognitive approaches in current linguistics. It highlights the importance in language research of an active concern with conceptualization and of assuming a dynamic relationship between conceptual and linguistic structures and processes, and it points out the different practices in this regard in the two strands. Section 1.3 presents the rudiments – a blueprint – of a model called Functional Procedural Grammar, which will serve as our guide and blackboard throughout this book, and which will be elaborated later on the basis of the findings and discussions in the course of the investigations.

1.1 Basic Principles

1.1.1 *Language as a Cognitive System for Communication*

Let us first summarize in a nutshell the essence of the cognitive-functional approach (discussed more elaborately in Nuyts 1992, 2001a), as the theoretical perspective underlying this study.¹ The starting point is the realization that understanding language inevitably means accounting for two elementary facts about its nature. They are both essential for the characterization of the phenomenon of language and should therefore be taken as the basis for all aspects of the

¹ The labels ‘cognitive-functional’ and ‘cognitive-pragmatic’ are gaining popularity in current linguistics, but they are used to refer to quite different and sometimes even hardly compatible approaches. A prominent example of an approach often called ‘cognitive-pragmatic’ yet fundamentally different from the present is Relevance Theory (e.g. Sperber and Wilson 1986, Carston 2002). The present approach should not be confused with any of the other approaches sailing under this flag.

scientific concern with it, from the level of the analysis of individual linguistic phenomena up to the level of the development of a general theory and model of language and language use. These two facts, and their most direct implications, are:

- *A functional system:*

Language is a functional system, primarily meant to allow communication among humans. Hence the linguistic system must be organized and operate such that it can be used for that purpose.²

- *A cognitive system:*

Language is a highly complex type of systematic purposeful behavior produced by the human organism. Hence it must be caused by a sophisticated cognitive apparatus, which is somehow implemented in the brain.

These facts are not unrelated, however: they are two sides of the same coin. They concern complementary, equally important, gestalt characteristics of one and the same phenomenon. Hence they should go hand in hand in setting the goals for and in guiding the development of a theory and a theoretical model of language use. In other words:

- *A functional and cognitive system:*

Language is a behavioral system for communication among humans. Hence it must be caused by a cognitive apparatus that is organized and operates such that it can serve this purpose.³

A theoretical model of language must reveal how this works. This is what a cognitive-functional approach aims to do.

² Language is used for other, what may be called noncommunicative, purposes as well, such as artistic language play or talk to self. But these are secondary uses. From the perspective of phylogenesis and ontogenesis, and even in terms of real-time performance, they are derived from the basic communicative use. Some have argued that language is also used for the purpose of thought (cf., e.g., Chomsky 1975, Harman 1975, Dascal 2002, 2003, or, very recently, Everett 2012; see also Dascal 1996). Yet this claim is highly questionable, as argued in Nuyts (2012b) (see also Sections 2.3 and 7.1). Whatever one's view on these issues, however, the basic fact remains that language is also, and very heavily, used for communicative purposes, hence must be built such that it is suited for this kind of usage. (See Nuyts 1993a, 2012b.)

³ This is a fact irrespective of the question of the origins of the cognitive systems at stake. There are compelling reasons to assume that the characterization 'be organized' in the previous discussion is not only a state description, but also a resultative description: the cognitive systems for language most probably emerged due to, and in their evolution were molded by, pressure from the functional needs of communication, phylogenetically and ontogenetically (cf. Nuyts 1992, Hurford 2007, Tomasello 2008). This is not the only imaginable scenario, though. No matter how unlikely it sounds, in principle one could assume that preexisting cognitive systems at one moment were found suitable for the purpose of communication and were put to use for it. Even in the latter scenario, however, the systems must be suitable for, hence must be shaped and function such that they allow, this kind of usage. The correlate between the function and the system is inevitable and must be accounted for by a model of the cognitive systems for language use.

The use of the term ‘facts’ to refer to these basic tenets is deliberate: it concerns straightforward, commonsense observations about language. Hence making a point of them may seem trivial. It is not, however, if one considers that through the history of language research there have been scholars and traditions that have disregarded or even explicitly denied either or both of them,⁴ and if one observes that few research traditions live up to the full range of demands that the combination of the two facts imposes on the scientific study of language (see Section 1.2).

1.1.2 *The Principles of Depth and Dynamism*

The cognitive-functional perspective as characterized in the preceding section defines in very broad terms what a theory and model of language should assume and be about. This characterization is pre-theoretical. It only sets the stage from where the development of a plausible theory and model can start. The combined fact that language is a functional and a cognitive system has numerous consequences and implications, which considerably narrow down the possibilities for such a theory/model.

Two fairly immediate consequences are particularly relevant in view of the current state of the art in language research. It still concerns very general, phenomenological and prototheoretical concepts. In principle, they appear to be accepted fairly widely in current language research, at least among scholars who adhere to the basic tenets of language as a cognitive and a functional system. But they are probably not accepted by all such scholars, and/or not all scholars who accept them are fully aware of, or agree on, their implications for linguistic theorizing and modeling. They are cornerstones of the present approach, however, and they determine the way the linguistic phenomena at stake in this book are analyzed. For ease of reference, they will be called ‘principles,’ a label that renders the fact that they should be considered basic guidelines and evaluation criteria for developing a theory/model of language. Specifically, they will be called the ‘principle of depth’ and the ‘principle of dynamism,’ respectively. Here is a brief preliminary definition. (A more detailed view of what they involve will gradually emerge in the course of this study. See also Nuyts 2001a: 5–21 for elaborate discussion.)

The Principle of Depth

Language – and ipso facto the cognitive machinery dealing with linguistic structures – is not an isolated, stand-alone system. Language is a means to communicate, and communication is a matter of transferring information (in a

⁴ Two examples that immediately come to mind are the Bloomfieldian structuralist tradition, which denied the cognitive reality behind linguistic behavior, and the Chomskyan generative tradition, which denied the functional nature of language. Both concern paradigms that have dominated the field of linguistics for considerable periods in its history.

very broad sense) between human minds.⁵ Consequently the linguistic systems in cognition must inevitably closely interact and collaborate at least with the (in metaphorical terms) ‘deeper’ cognitive systems responsible for making sense of the world and for handling acquired information and knowledge about it – in other words, the cognitive systems for conceptualization and thought (defined as reasoning with conceptual knowledge).⁶ For language research this means that one cannot afford to concentrate exclusively on linguistic form and how it is handled by the linguistic systems in cognition. One is forced to also actively deal (at least) with how the mind handles information and meaning, and how the linguistic systems relate to and interact with the conceptual systems doing this.⁷ This is the only way to ensure that one achieves a balanced theory of all subsystems involved in communicative behavior.

The Principle of Dynamism

Communicative activity, hence language use, is a dynamic phenomenon in many respects. Communication is a complex problem solving activity involving several different, often conflicting concerns, such as pursuing one’s intentions, adjusting to the hearer and the communicative setting, and dealing adequately with the information (world knowledge) relevant for the interaction (cf. Nuyts 1993a). Moreover, communicative situations all differ, some only minimally, others substantially, and each time the communicator has to readapt to the new and changing circumstances. Hence the cognitive apparatus for language use, as a device used to perform the communicative acts, is inevitably a highly context-sensitive, flexible and adaptive usage system. Using the system is, in itself, not selfevident either, however: communicating is often hard labor, not only in terms of interpreting the situation correctly and deciding how to act adequately, but also in terms of getting the shape of the linguistic acts right in view of what one wants to communicate, and how one wants to do this. Hence this can go wrong (and in practice it often does go wrong, to varying degrees) in the sense that, in spite of an adequate assessment of the situation and of what to do, speakers do not always

⁵ Communication is much more. It is a way for speakers to pursue their wider intentions, to build and maintain social structure, etc. These facts are not incompatible with the fact that communication is a matter of information transfer, though. They concern the role of communication at a higher level of analysis; It is through the transmission of information, or through making meaning, that communication serves these higher, more fundamental, purposes. See Nuyts (1993a, 1994).

⁶ The conceptual systems are metaphorically deeper in the sense that they, or their output, only surface in human behavior through the mediation of symbolic systems such as language, or only result, without really surfacing, in motor action. Hence, from a scientific observational perspective, they are only indirectly accessible.

⁷ There are yet other – albeit from a theoretical perspective maybe not equally critical – cognitive systems that need to be taken into account in order to achieve a full-fledged theory of the cognitive systems involved in linguistic behavior, though. An obvious one is the gestural, which also closely interacts with the linguistic systems in language use (cf. McNeill 1992, 2000, Kendon 2004).

manage to translate the communication plan adequately into linguistic acts.⁸ In other words, coding conceptual meanings into linguistic forms (and vice versa) is not a self-evident process. It must be worked out dynamically, time and again on every communicative occasion, and it is fallible.

1.2 Functional Linguistics, Cognitive Linguistics, and the Cognitive-Functional Approach

As indicated in Section 1.1.1, the observations that language is a system for communication and that it is a cognitive system are quite trivial and common sense. Accordingly, the claim that an adequate theory of language should take these facts seriously and aim to account for them is not particularly new. Each of them, and the combination of the two, is accepted (or at least proclaimed to be accepted, see below) as basic in many frameworks in language research. Within linguistics, this is notably true in most approaches going under the labels of ‘functional linguistics’ and ‘cognitive linguistics.’⁹ So what is new under the sun?

As also mentioned in Section 1.1.1, the fact that one acknowledges these observations does not necessarily mean that one also agrees on, or is even aware of, let alone adequately implements, all their implications for language research, including those covered under the principles of depth and dynamism. Differences in the interpretation/application of these observations are no doubt responsible for the fact that until today there remains a divide – and often even tension – between cognitive linguistics and functional linguistics, in spite of the many commonalities between the two strands (see Nuyts 2007a for in-depth discussion; and see below).¹⁰ The present cognitive-functional approach has affinities with certain views and theories within each of these strands. But it also deviates from the mainstream in each in a number of respects, as a result of

⁸ Fortunately, the hearer is a highly adaptive and context-sensitive system too, and therefore often manages to interpret non-adequate linguistic acts, even if only probabilistically.

⁹ Large parts of functional linguistics used to be a-cognitive, and there are still many functionalist scholars who do not care about cognition. (E.g. this appears to a large extent true for Halliday’s 1994 systemic linguistics, in spite of Halliday and Matthiessen 1999.) Yet, no doubt in part due to the influence of cognitive linguistics, in recent years cognitive awareness among functional linguists has increased rapidly (which does not mean it is sufficient now, though; see below). There are also quite a few functionalists who have explicitly taken a cognitive perspective all along (e.g. Chafe 1970, 1980, 1994, Givón 1979, 2001, or Wierzbicka 1980, 1996, to give just a few examples).

¹⁰ There is interaction between the two strands, and a significant number of scholars bridge the gap between them, blurring the differences. For instance, most older generation European cognitive linguists have their roots in European functionalist schools and have adopted cognitive linguistics later in their careers, thereby creating a blend between the two traditions. In the American homeland of cognitive linguistics, the situation is comparable for, for example, Bill Croft. It is remarkable, though, that scholars in this situation usually call themselves cognitive linguists, not functional linguists. Maybe they do so because the label ‘cognitive linguistics’ has become more fashionable. But it probably also reveals the feeling that there are two opposing camps, and that one has to choose between them.

a different assessment of how to achieve a balanced account of both the cognitive and the communicative-functional dimension of language, in combination.¹¹ (As indicated, the principles of depth and dynamism are critical in this regard.) That is what is new under the sun.

Let us elaborate a bit further on the position of the present approach relative to the functional and cognitive linguistic traditions, since this matter is crucial to understand the perspective on empirical and conceptual phenomena taken in this book. Both traditions are quite heterogeneous, each covering a spectrum of often very divergent approaches, theories and models, functional linguistics even more so than cognitive linguistics (see Nuyts 2007a for discussion). Hence global statements about them are bound to be overgeneralizations, to which there are numerous and sometimes important exceptions. If we nevertheless force matters into very unsubtle strawman positions, the main element dividing the two strands appears to be a historically grown difference in focus on the basic tenets mentioned in Section 1.1.1. The difference is, not surprisingly, signaled by the names of the two strands. Although cognitive linguistics fully accepts a functionalist orientation, it emphasizes more the cognitive dimension. And while a considerable part of functional linguistics accepts a cognitive orientation, it pays more attention to the functional dimension.¹² This difference in focus has consequences for what both strands do, and how they do it.

A major consequence of the cognitive focus in cognitive linguistics is the central concern, probably for the first time in the history of the discipline of linguistics, with semantic structure, and specifically with how humans conceptualize the world and make meaning.¹³ Investigating language in this strand to a large extent means dealing with the question of how the linguistic surface renders conceptual structure, and what one can learn from language use about

¹¹ The present approach has roots in functional linguistics, and was especially inspired and influenced by Dik's (1978, 1997) theory of Functional Grammar (later developed or converted into Functional Discourse Grammar by Hengeveld and Mackenzie 2008). In spite of many elements of convergence, however, it differs considerably from Dik's theory, mainly due to disagreements over the issue of the cognitive status of grammar, and what it implies.

¹² It is significant that some functionalist theories explicitly postulate the criterion of psychological adequacy as a requirement for a plausible grammar model (e.g. Functional Grammar, cf. Dik's 1997: 12ff., and Role and Reference Grammar, cf. Van Valin and LaPolla 1997: 5ff.; see also Butler 2003, 2008, 2009), yet sometimes formulate this criterion in a way that betrays less than full commitment to understanding the cognitive infrastructure behind language use. In Functional Grammar, for instance, this criterion is formulated as the requirement that a model "should relate as closely as possible to psychological models" of language (Dik 1997: 13), and it is considered sufficient if a grammar only approximates a production or an interpretation model. (A comparable position is adopted, e.g., in Hengeveld and Mackenzie 2008: 1–2, 37ff.) This suggests that language psychologists do deal with cognitive structures and processes, but linguists do not, or at least not directly. From the present perspective, this view is misguided.

¹³ This concerns the situation in empirical linguistics, and it refers to empirical semantics. Formal semantics (if it is considered part of linguistics; many would consider it part of language philosophy) is much older.

conceptualization. Metaphor Theory (e.g. Lakoff and Johnson 1980, 1999, Lakoff 1987), Mental Space Theory and Blending Theory (e.g. Fauconnier 1985, 1997, Fauconnier and Turner 2002) and Talmy's (2000) conceptual semantic theory are prime examples. There is also concern with grammatical structure as such, the traditional domain of linguistics. It is significant, however, that the most typical cognitive linguistic grammar theory, Langacker's Cognitive Grammar (e.g. Langacker 1987, 2008), is at least as much a semantic theory as it is a theory of language structure (it basically reduces grammatical structure to conceptual structure). Closer to traditional linguistic approaches to grammar are the different versions of Construction Grammar, such as Goldberg's (e.g. 1995, 2006) and Croft's (e.g. 2001). They are heavily inspired by Fillmore's (e.g. 1988, Fillmore et al. 1988) original version of Construction Grammar, which most scholars, including Fillmore himself, would not (have) count(ed) as part of cognitive linguistics. Nevertheless, these different grammatical frameworks share a few characteristics with the semantically oriented cognitive linguistic approaches (see below).

The focus on the functional dimension in functional linguistics, on the other hand, leads to an emphasis in this tradition on the question of how language is organized in view of its functioning in communication. Hence it predominantly concentrates on the analysis of language structure and what it does in interaction: the types of grammatical patterns existing in languages, and how they relate to and function in view of the dynamics of communication, including the speaker's and hearer's knowledge and intentions and the discursive context. Meaning, and the nature of the information being communicated, does play a role, and this sometimes even leads to a direct concern with the definition and delimitation of semantic categories, most notably in the domain of what is often called tense-aspect-mood/modality marking. Even then, this concern is usually part of an analysis of structural categories, such as systems of grammatical morphemes (auxiliaries, for instance). In general, meaning as such is not a real focus of attention, and reflections on it are usually subsidiary to the concern with linguistic structure and its interactive dynamics. The nature of conceptualization and how language relates to it, in particular, is not an issue in functional linguistics (important exceptions apart). In more or less all functional linguistic grammar models, for example, concern with meaning representation stops at the level of sometimes fairly shallow lexical semantic representations characterizing a language's lexical elements and their argument structure.¹⁴ Some models do leave a space for conceptual structure (e.g. Functional Discourse Grammar, cf. Hengeveld and Mackenzie 2008: 6),

¹⁴ Unless indicated otherwise, the notion of a 'lexical semantic' representation or structure will be used in a broad sense in this book, to refer to the lexically based semantic representation of linguistic units of variable size (i.e. at the sentence level, typically the organization of the clause in terms of arguments and satellites or adjuncts and everything pertaining to it, such as semantic

but in practice this remains an empty space. Most models do not even mention the concept of conceptualization, however.

At face value the situation as sketched here would seem a matter of harmless or even beneficial complementarity between the two strands. Taken together they would appear to cover more or less all that needs to be covered. So maybe we will ultimately only have to put their findings together to achieve a comprehensive account of language as a cognitive system for communication. To some extent this may be the case. But in some respects it is not, for the situation sketched above is a potential cause for problematic views or attitudes, in both traditions. An exclusive, one-sided focus on specific dimensions of the multifaceted phenomenon of language holds the danger of leading to biased analyses of these dimensions, and consequently to a problematic theory of language. It is significant that, no doubt as a result of the difference in focus, approaches within both strands sometimes develop theoretical concepts and models that turn out to be hard to understand and digest for scholars from the other strand. (Whence the continuing subliminal or often even explicit tensions between them.) Some such concepts really are problematic if seen in a more comprehensive perspective. It is typically (though not exclusively, see below) in such matters that the cognitive-functional approach deviates from either or both strands, in an attempt to do full justice to both the cognitive and the communicative dimensions of language, simultaneously.

There are three, in part related, points of divergence between the cognitive-functional approach and the cognitive linguistic and/or functional linguistic strands that are particularly important to understand the analyses offered in this book, and that will surface as explicit points of discussion on several occasions. Two of them concern issues on which cognitive and functional linguistics differ fairly systematically. Each pertains to another of the two principles specified in Section 1.1.2: one issue, mentioned explicitly in Section 1.1.2, is the importance of conceptualization in linguistic analysis (cf. the principle of depth); the other issue, only implied in the earlier discussion, is the importance of a processing perspective in modeling the cognitive systems for language use (cf. the principle of dynamism). In both cases the cognitive-functional approach suggests a position that, at least potentially, runs counter to the trend in one of the two strands (a different one in each case). The third issue is more general and more fundamental, and it is closely related to the two previous issues. Paradoxically, it is a matter in which the cognitive and the functional strands in linguistics show essentially the same tendency, hence in which the cognitive-functional approach deviates from both. It concerns the importance of distinguishing clearly between semantic and structural aspects in the linguistic analysis of a phenomenon, and of

functions or roles). Hence it is more or less equivalent to, and used interchangeably with, the more general notion of 'linguistic meaning.'

assuming a dynamic relationship between the two (this pertains to both the principles of depth and of dynamism).

Here is a brief sketch of these three issues.

The (Non)Concern with Conceptualization in Linguistic Analysis

The central concern in cognitive linguistics with conceptualization in relation to language is entirely in the spirit of the principle of depth (cf. Section 1.1.2). The nonconcern with it in large parts of functional linguistics is not, however.¹⁵ Functional linguists will usually not deny that conceptualization is interesting and relevant for understanding grammar. But they apparently do not consider it crucial for a linguistic analysis, or for developing a theory of grammar. Hence they appear to believe that it can safely be disregarded and left for others to deal with, such as cognitive psychologists or cognitive linguists. The point is, however, that many linguistic phenomena keep on begging the question if one does not explicitly draw into the picture the way they function relative to the conceptual dimension, hence if one does not actively take conceptualization into consideration and try to understand its share in the phenomenon at stake. The way one models a linguistic phenomenon is dependent upon the way it fits into the wider picture of how it functions in the transition from a piece of conceptual information to an utterance produced in communication, and vice versa. Hence one has to draw the entire picture, including the conceptual part, in order to model the phenomenon adequately.

Functional linguists are often struck by this problem, in that in the analysis of linguistic phenomena they come across elements that are hard to deal with in terms of classical grammatical notions and concepts. In such cases the natural reflex should be to wonder whether one is not touching upon phenomena that are beyond what should be handled in syntactic or lexical semantic representations, hence might be elements of conceptual representation. If one disregards the latter, however, the risk is real that one starts to stuff concepts and notions into lexical semantic or syntactic structures that do not belong there. Hence one is potentially triggered into erroneous views about certain areas of grammar.

This situation is not only problematic for one's theory of linguistic structure, however. It also means missing a chance to contribute to a better understanding of what conceptualization involves. If functional linguists would realize the deeper cognitive implications of at least some of their analyses, they would hold the key to gaining new insights into the nature of human conceptualization, thereby adding to the achievements in cognitive linguistics or cognitive psychology.

¹⁵ Construction grammars generally face the same problem as functional linguistics. Although they will usually acknowledge the importance of conceptualization, in practice most of them do not deal with it. This includes construction grammars that are considered part of cognitive linguistics, with Langacker's Cognitive Grammar as the only clear exception.

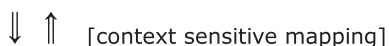
The domain of tense-aspect-mood/modality categories or (in the present terminology) of qualifications of states of affairs, central in this study, offers an illustration of this point. In order to account for the scope properties of markers of these categories, and their effects in linguistic structure (word ordering possibilities, for example), some functional linguistic approaches have put forward the theoretical concept of a hierarchical or layered representation of the categories involved. This notion as such is very plausible and will figure centrally in this study (see Chapter 2). But the problem is that earlier functional linguistic analyses usually implement it in lexical semantic and/or syntactic structure in a grammar. As will be argued in this book, however, there are good reasons to assume that many facets of this phenomenon do not belong in the linguistic domains of a cognitive model of language use but pertain to dimensions of conceptualization. One cannot even understand the phenomenon properly without considering explicitly the conceptual dimension.

In terms of the issue of the role of conceptualization, then, the cognitive-functional approach is entirely on the side of cognitive linguistics.

Processual versus Representationalist Concepts of Grammar and Mind

The second issue pertains to the principle of dynamism (cf. Section 1.1.2): the dynamic, flexible and interactive nature of cognitive processing in language use. Due to their focus on what speakers do when using language, functional linguistic theories render this at least in a basic way, by conceiving of language as a system of levels of organization, such as the lexical semantic and the syntactic, and by postulating rule systems or linking procedures or interfaces (whatever term one wishes to use) which map these levels onto each other in a nonautomatic way, sensitive to contextual and discursive variables, among others. This type of model is rendered in (1). Let's call this a 'process model.'¹⁶

(1) syntactic structure



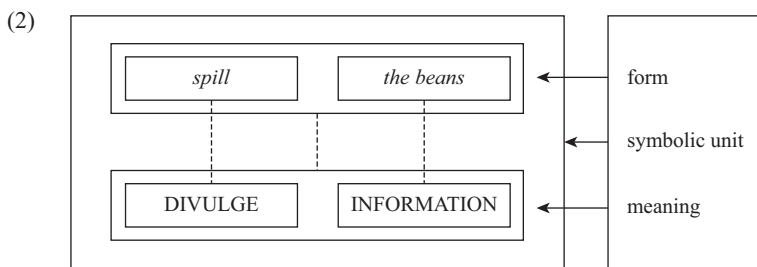
lexical semantic structure

Most functional models do not fully live up to the principle of dynamism, however, in the sense that they render the grammar as a fairly rigid mechanical device, without flexibility in the processing. Moreover, closely related to the

¹⁶ The term 'process model' is used here in a purely technical sense, referring to the concept of a model that links levels of representation or structure of some kind via context-sensitive mechanisms of some kind. The schema in (1) renders one particular instantiation of it, but a process model may also involve other levels of structure or representation (see below). Also, the present use of the term 'process model' is not meant to imply that the model at stake is also cognitively plausible or adequate (unlike, e.g., Butler's 2008 use of the notion).

flexibility issue, they conceive of the construction of a linguistic expression by the grammar as a fairly encapsulated process, without interaction with other cognitive systems, such as those handling general world knowledge and contextual information. The latter problem is obviously related to the lack of concern with the conceptual systems.

The situation in cognitive linguistics regarding the issue of dynamism is potentially worse though. At least it risks developing in the wrong direction. This is probably, to some extent, the effect of this strand's strong focus on the cognitive dimension of language. The primary concern with what language tells us about how humans make sense of the world, rather than with what they do when using language, appears to trigger a strong tendency among cognitive linguists to adopt what may be called a representationalist approach to modeling the cognitive systems for language use. The core issue is: what do linguistic structures look like, what do semantic/conceptual structures look like, and how do they match (rather than get linked). This triggers, among others, a strong preference for a constructionist network concept of a grammar, as witnessed in more or less all grammatical models in cognitive linguistics, not only those labeled Construction Grammar but also Cognitive Grammar.¹⁷ In this concept, a grammar is basically an organized inventory of constructions. Constructions are defined as symbolic units consisting of a fixed pairing of a form and a meaning, of the size ranging from a singular morpheme to a full sentence. These units are stored as such in the grammar. One example of a construction of intermediary size is given in (2) (adapted from Croft and Cruse 2004: 252), rendering the idiom *to spill the beans*. The words in lowercase italics are meant to represent form, the words in uppercase represent meaning.



¹⁷ The representationalist tendency in cognitive linguistics extends beyond grammar, though. It is also present, for instance, in the strong trend towards a metaphor-based view of meaning and meaning change, which involves direct mapping. This contrasts with a stronger focus on metonymy in functional linguistic approaches to semantic issues, which is essentially a matter of a gradual conversion process.

Processing in a constructionist framework is limited to unifying preexisting constructions, by sliding smaller ones into the slots of larger ones.

At face value, it is hard to see how such a static concept of a model could be compatible with the principle of dynamism and could accommodate the flexible and interactive character of the cognitive processing of language. If one looks beyond the surface, the issue of how the constructionist and the process types of models compare is quite complex, though (see Nuyts 2011). Yet the fact that some adherents of constructionist approaches have explicitly rejected a process concept of a grammar (see Section 7.3) indicates that there is a real risk that the two develop in incompatible directions. If so, the principle of dynamism would seem clearly in favor of a process concept, not of a constructionist concept of a model of language.

The domain of qualificational categories in focus in this book is an excellent case to demonstrate the need to assume a flexible and strongly context dependent mapping relationship between the semantic and the structural-linguistic dimensions in language. A prime example is the systematic presence of multiple mapping relationships between forms and meanings in this domain. Qualificational expressions in general, and modal ones in particular, are very often polysemous: it is very common that one linguistic form in a language can be used to communicate a range of different qualificational meanings. Vice versa, individual qualificational meanings can typically be expressed by a range of alternative forms, whereby the choice for one of the alternatives in the paradigm is determined by functional dimensions beyond the qualificational meaning (see Section 2.2). Hence speakers have to take decisions sensitive to the communicative context when selecting a form to express a qualificational meaning. (The same, in the opposite direction, applies for the hearer decoding the message.) In other words, speakers and hearers have to work their way from one level to the other.

In terms of the question which type of model to adopt, then, the cognitive-functional approach is in principle on the side of functional linguistics – even if not uncritically or unqualifiedly so.

The Complex Relations between Meaning and Form

The third and most profound issue is implied by the two preceding ones. Yet, paradoxically, although cognitive linguistics and functional linguistics tend towards opposing positions in terms of the preceding issues, the effect in terms of the present issue is basically the same in both strands. It concerns the question of how one conceives of the relationship between linguistic form and meaning (broadly defined), or at least of how this relationship is handled in practice in the analysis of linguistic phenomena. In both strands one can observe a tendency to reduce the distance, or to simplify the relationship, between meaning and form. In the extreme case, this even results in assuming (even if not necessarily consciously, see below) a one-to-one mapping between

them. The link with the two previous issues is obvious. In the constructionist approaches in cognitive linguistics this tendency is directly related to – in fact, it is part and parcel of – the definition of the theoretical core notion of a construction, as a one-to-one pairing of a form and a meaning (cf. (2) above). This concept nearly automatically leads one to assume that in general there is a minimal distance between meaning and form in language. In the functional linguistic tradition this tendency correlates with the absence of a perspective on the conceptual dimension in dealing with linguistic phenomena. As argued in the discussion of the problems raised by the nonconcern with conceptualization when dealing with the qualificational hierarchy in a model, the result is that one risks conflating aspects of meaning and of structure, and reducing the former to the latter.

A reductionist view of the relation between meaning and form is irreconcilable with the principles of depth and dynamism, however. Both together imply that meaning and form, as clearly distinguishable dimensions in language use, are related in a dynamic way, with context playing a decisive role in determining the matching between them in actual communicative situations. This does not mean the relationship is not systematic. It is. But it is complex: it does not consist of two ingredients – meaning and form – but of three ingredients – meaning, form and context. Correspondingly, language users have freedom to choose how to apply the rules of the matching game, and they can push their limits if they need or want to. (That is why languages can change.)

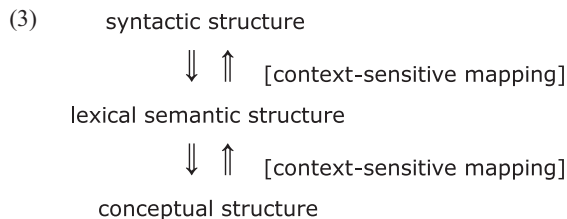
The recurrent tendency in the functional and cognitive linguistic literature to adopt a simplistic view of the meaning-form relationship may often not be the result of a conscious or deliberate choice, however. When asked, most functional linguists, and many cognitive linguists, will subscribe to the above tenet of the complex and context dependent relationship between meaning and form.¹⁸ Hence it is probably fair to say that problems in the literature with the present issue are a matter of a failure to draw the consequences from the complex form-meaning relationship when dealing with linguistic phenomena. The failure to do so is pervasive, however, and is present in analyses of many very divergent phenomena, also in the domain of qualificational categories, including the phenomena

¹⁸ Some cognitive linguists may hesitate, though. The position of Langacker (1987, 1999), for example, would seem ambivalent. On the one hand, in the debate between polysemist vs. monosemist approaches to meaning he endorses the polysemist position. As indicated earlier, the concept of polysemy implies a distance between meaning and form. On the other hand, several elements suggest that Langacker would not simply subscribe to the view on the form-meaning relationship formulated here, for principled, theoretical reasons. One element is the fact that he reduces all linguistic structure above the level of phonological form to meaning patterns (symbolic units, the Cognitive Grammar variant of constructions, consist of a one-to-one pairing of a phonological representation, as the structural part of the unit, and a semantic representation). Another element is the fact that Langacker questions the existence of a lexical semantic level as distinct from a conceptual semantic one (i.e. in his view all meaning is conceptual meaning). A third element is the fact that he assumes, in a very radical way, that all aspects of linguistic form are directly meaningful. See also Chapter 7.

mentioned in the discussion of the two preceding issues. (The traditional label ‘tense-aspect-mood’ in itself already carries the seeds of the problem, see, e.g., Section 2.2.) Hence this matter will surface repeatedly in the course of this study.

In terms of this issue, then, the cognitive-functional approach deviates from both the cognitive and the functional linguistic strands, or at least from actual practice in quite some of the research within them.

Summarizing the three issues, the cognitive-functional approach suggests a model of the cognitive systems for language use that can roughly be schematized as in (3).



The model should do at least the following: (i) In view of the principle of depth, it fully integrates the level of conceptualization, in line with large parts of cognitive linguistics. (ii) In view of the principle of dynamism, it adopts a processual approach, like in functional linguistics. It should advocate a version that is much more flexible and interactive than traditional functionalist models, though, hence it will come closer to the kinds of models developed in language psychology (see Section 1.3). (iii) As a combination of the two previous points, it conceives of the levels of conceptual and grammatical structure as clearly different in nature, and as related through probably very complex mapping procedures which are heavily context sensitive. This will likely require intermediary stages, including a lexical semantic structure (pace Langacker’s 1987 denial of the distinction between a conceptual and a lexical semantic level; see Section 7.1.3).

The position sketched here in terms of the three issues and their consequences is essential as a background to understand the way the modal and related categories, and the system of qualificational dimensions, are analyzed in this study. But the issues as such will also surface throughout this book, as an explicit topic of discussion.

1.3 The Concept of a Functional Procedural Grammar

1.3.1 *What Is a (Grammar) Model?*

The scheme in (3) only draws the rough contours of a model. What might one look like in somewhat more detail? Section 1.3.2 presents a sketch of

a Functional Procedural Grammar (FPG in the remainder of this section), a blueprint of a model offering one possible implementation of the scheme in (3). The outline remains general and tentative but should be specific enough to serve as a reference point for situating all analytical notions and concepts emerging in the course of the present study. Before turning to it, however, we should first address two issues pertaining to the definition and conception of the notion of a ‘model,’ and more specifically a ‘grammar model.’ Firstly, we must briefly reflect on the basic role of a model in general, and of FPG in particular, since FPG will not meet common expectations regarding what a model should look like. Secondly, we need to make clear what the notion of a grammar in the label ‘Functional Procedural Grammar’ stands for.

Functional Procedural Grammar as a ‘Model’

In language research, like in many or all other branches of science, models are highly important but at the same time very dangerous tools. A model is an inevitable and crucial link between data and theory. It is the best way, or maybe even the only way, to bring together and systematize the findings of the often numerous and very diverse individual investigations and analyses of the participants in a wider research paradigm. It is essential as a means to create insight into how all the singular observations hang together and can be integrated, and to offer a broader perspective on them. As such it is indispensable to help understand and interpret the individual observations, and to create a coherent view of the scientific object under scrutiny. It is also indispensable as a means to generate predictions and hypotheses, hence to produce new research, in an efficiently organized way. In other words, models are the hinge between induction and deduction, and a mature scientific paradigm or discipline cannot do without them.

Yet models are also conventional constructs, which, as soon as they get established, tend to start living a life of their own, at least if one lets them. A model inevitably goes far beyond the empirical observations it summarizes. An essential part of its job is to help us interpret the empirical facts and to generalize over them, and in doing so to create a hypothetical theoretical world which explains them. This also involves speculating about how to fill empty gaps for domains not yet covered, and sometimes maybe even not coverable, by empirical observations. In other words, in a model there is much beyond what meets the eye. That is also why models should be handled with care, though. When developing one, it is important not to go too far in one’s creative speculations about how to fill empirical gaps. If aspects of the object of investigation are not sufficiently understood/explored yet, it is safer to leave the model un(der)specified in these areas, awaiting additions and elaborations on the basis of further research. It is also important to always remain aware that one’s model can be mistaken in certain respects, hence may have to be changed on the basis of new insights.

The sore point is that a model, once created, often tends to become a purpose of its own, rather than an instrument in understanding the object of inquiry. Even ‘young’ models are often cast in terms of a more or less strict formalism, even if it is not clear (yet) what this formalism means and implies, and whether it is adequate in view of the nature of the subject matter. There may moreover be a tendency to specify and formalize the model in all respects and in every detail, so that it looks like a complete and fully operational account of one’s object of inquiry, even if (large) parts of the latter are empirically unexplored. The model will then often also tend to achieve the status of an unchangeable system, which serves as a dogma, hence dictates what the analysis of empirical phenomena should look like rather than vice versa.

The FPG model aims to avoid this pitfall. As a consequence, it does not look like a regular model of the kind commonly found in linguistics. Correspondingly, precursors of it have been criticized, to varying degrees, for being purely programmatic (cf., e.g., Sinha 1994, De Bustos 1995 – cf. also Butler 2003: vol. 2). This criticism is missing the point, however, since the model is explicitly intended to be programmatic (see Nuyts 1995). As indicated, FPG presents itself as a blueprint of a model. It focuses on the global outline of the cognitive systems involved in language use, including the level of conceptual representation. It attempts to feature the full variety of notions, structures and procedures deemed relevant for understanding linguistic behavior, and to offer an outline of how they might possibly be organized in the cognitive systems responsible for this behavior. But it remains incomplete and unspecific in very many domains. It is moreover not formalized, and there is no intention to do so at present. It is meant to be a very provisional, tentative and rough draft or sketch that should be altered and gradually filled in in more detail as our insights increase, and that can serve as a heuristic device for investigating linguistic phenomena. Our current understanding of many parts and dimensions of the cognitive structure of language is so limited that it is premature to aim to be specific about them. Formalizing them not only masks our ignorance but also holds a high risk of causing mistaken views. Nevertheless, we need to reserve a place for these aspects and dimensions in the model in order to remain aware of them and to be able to take them into account in our analyses. Moreover, featuring them also means thematizing them for investigation. This is not a common concept of a model, but it probably ought to be.¹⁹

¹⁹ A comparable response can be given to Portner’s (2009: 107–110) criticism that the present author’s analysis of subjectivity (Nuyts 2001b), which Portner selects as a *casus belli* to make a wider point, does not form part of “an effort to create a complete, mechanical model which predicts the relevant facts” (Portner 2009: 110), hence that there is no theory behind it. First of all, the analysis of subjectivity at stake is a coherent part of an encompassing analysis of the wider semantic domain traditionally called modality, and beyond it of the domain of qualifications of states of affairs and related categories. This encompassing analysis is built up in bits and pieces in several places, and is presented in a more comprehensive fashion in among others Nuyts (2001a), and in an updated version in the present book. Article-length publications are not

What Is 'Grammar' in Functional Procedural Grammar?

Another issue requiring attention is the meaning of the notion of a 'grammar' in FPG. In linguistics a grammar is usually a model of language structure. It typically includes the inventory of lexical material available in a language, with a lexical semantic description of the entries, as well as an account of the principles for combining lexical elements to full-fledged utterances. This characterization applies to more or less all functional grammar models, and to most construction grammar models (but not really to Cognitive Grammar, which accounts for language structure in terms of conceptual structure). This concept of a grammar is the practical effect of the fact that most grammar theories are not concerned with conceptualization (cf. Section 1.2). But since it is so pervasive, there may be a general inclination to understand the term 'grammar' by default as the label only for the linguistic components of a cognitive model. This is a narrow definition of the concept of a grammar.

This narrow definition does not apply in FPG, though. In this framework the notion of a grammar is defined broadly, to cover all cognitive systems involved in language use. Hence it not only refers to the linguistic systems but also includes the conceptual systems. What is covered by a grammar in the narrow definition will be called 'the linguistic systems' in the present approach. One advantage of this broad usage of the term 'grammar' is that the linguistic systems are not set apart as special, relative to all other systems involved in language use. Another advantage is that one does not face the problem of determining which aspects/parts of the model are linguistic and which are not. For the borderline between the linguistic and nonlinguistic parts of the processes of producing and interpreting language is probably not sharp, as will elaborated in the next section.

1.3.2 An Outline of Functional Procedural Grammar

The following sketch of FPG differs in a number of respects from earlier versions.²⁰ In part this is only a matter of presentation. For instance, some of the components/experts have a somewhat different organization and/or

suited for a full presentation of such complex clusters of ideas. Secondly, and more importantly, anyone claiming to be able to characterize in a 'complete and mechanical' way "such concepts as 'for a speaker to indicate something,' 'evidence,' 'for someone to know (or have access to) evidence,' 'for someone to draw conclusions,' and 'for a group of people to share a conclusion'" (Portner 2009: 110) is betraying him-/herself and the reader. What each of these issues involves precisely, as part of human interactive behavior, hence in terms of cognitive systems and mechanisms, is far from established wisdom. Spelling out a logical formula will not do to achieve an analysis of such concepts. As long as we do not have a fundamental understanding of these matters, purported 'complete, mechanical models' of them are castles in the air, and do not represent anything worth the label 'theory.'

²⁰ FPG was first proposed in De Schutter and Nuyts (1983), new versions were presented most elaborately in Nuyts (1989), and more synoptically in Nuyts (1992: 256ff., 2001a: 272ff.).

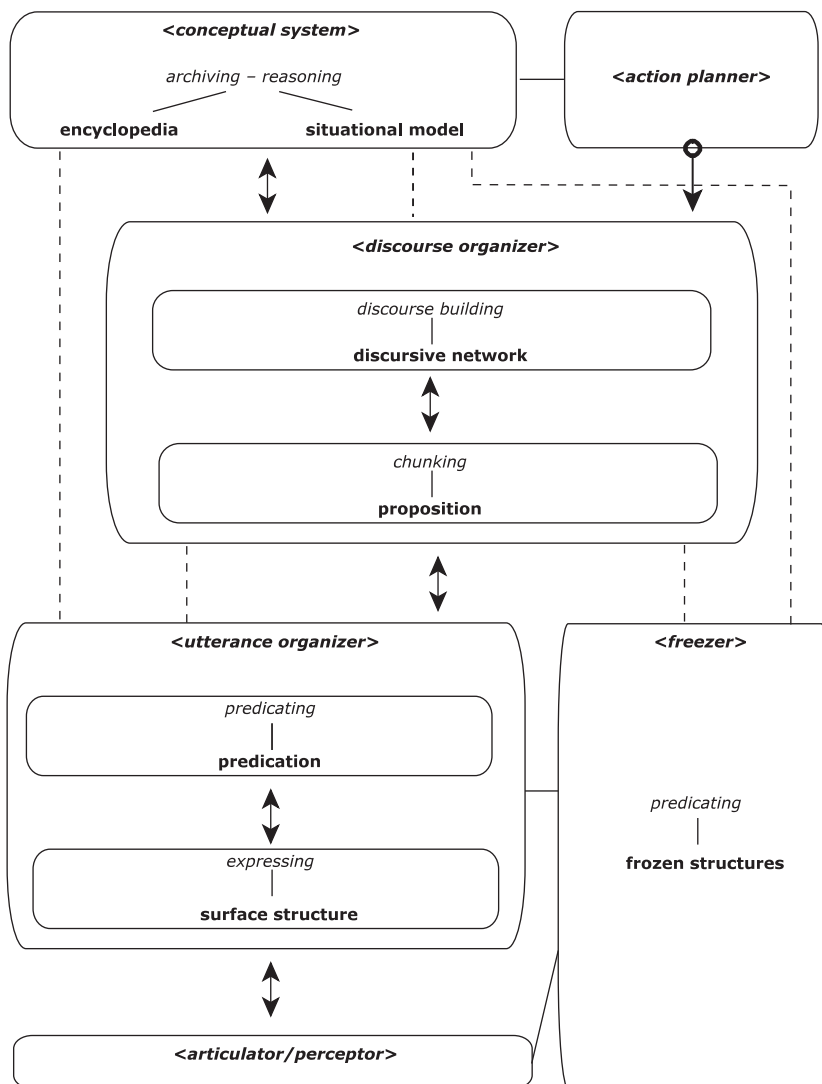
position in the model as compared to Nuyts (2001a: 273), but there is no change in what they do. Other differences are terminological. Thus, several names of parts of the system have changed, for the sake of transparency and/or in order to avoid confusion. There are also a few substantial differences, however, inspired by new research, including insights to be presented in this book. The following overview anticipates the discussions in the following chapters.

The presentation only offers a summary overview of the model, and will no doubt beg the question in some respects (even after the proviso formulated in Section 1.3.1). Some aspects and parts will be elaborated and motivated in more detail in the course of this study. For other parts I will refer to relevant literature, including earlier presentations of the model. Figure 1.1 offers a global overview of the model.

Before going into the role of the different components, a few general remarks are in order.

Functional Procedural Grammar and Models in Language Psychology versus Linguistics

The sketch in Figure 1.1 may remind one more of models of the type developed in language psychology than of grammar models as developed in linguistics. The global outline shows clear similarities with Levelt's (1989: 9, 1999: 87) language production model, which is essentially a synthesis of common views on language production in language psychology. The present 'discourse organizer' corresponds more or less to Levelt's 'conceptualizer,' and the present 'utterance organizer' to Levelt's system of 'grammatical encoding,' as part of the 'formulator.' (For the 'articulator/perceptor,' which will not receive attention in this book, Levelt's detailed model could be adopted in the present context.) Both models start out from the speaker's general situational and world knowledge (the 'conceptual system' in the present model). Finally, both assume a separate yet very important 'lexicon' (here called the 'freezer,' for reasons to be discussed later): to a large extent, linguistic coding appears to be lexically driven. These similarities should not come as a surprise in view of the strongly procedural perspective adopted in FPG (see Section 1.2). At a more finegrained level, however, the present view does differ from common views in traditional language psychology, and from Levelt's model in particular. This is first and foremost due to the adoption of views regarding utterance structure and processing common in functional linguistics. One source of inspiration is Dik's (1978, 1997) Functional Grammar, but the present view is not bound by this model and draws from many other functionalist frameworks as well. Another difference with at least part of language psychological modeling is the strongly interactive and flexible view of processing in different areas of the system (see below).

Figure 1.1 Functional Procedural Grammar²¹

²¹ Legend: Labels in boldface and italics and between angle brackets (e.g. **<conceptual system>**) are names of major subsystems. Labels in italics only (e.g. *chunking*) refer to sets of procedures. Labels in boldface only (e.g. **proposition**) refer to representational

Bidirectionality

Unlike earlier presentations, this version of FPG presents the cognitive systems for language use as essentially bidirectional (cf. the double arrows marking the main flow of processing). This is not meant to imply that the same procedures can be assumed to do both the production and the analysis of linguistic expressions. It only involves the assumption that roughly the same cognitive subsystems (or, in somewhat dangerous terminology: the same types of ‘knowledge’) play a role in both. Whether this means that the procedures in each subsystem operate bidirectionally, or alternatively that each cognitive subsystem has separate sets of procedures for production and analysis, is an open matter. This issue will not be thematized in this book, though, and in practice the analyses in this study (like in all earlier analyses involving FPG), including the survey of FPG below, will primarily adopt a production perspective.

Linear Organization of Subsystems and Flexible, Parallel Processing

The double arrows in Figure 1.1 mark a straight path through the cognitive subsystems. This should not be taken to imply that when producing and interpreting linguistic utterances the processing always proceeds linearly or serially and step by step along this route, though. On the contrary, in the vein of the principle of dynamism (Section 1.1.2), one may expect considerable flexibility in the processing path, the variation being due to, for example, the communicative circumstances. This includes the possibility for incremental processing (cf. Levelt 1989, 1999), and for parallel processing, in which several subsystems do their job simultaneously, independently or in interaction, whenever the circumstances allow it or require it.

No Modularity

Figure 1.1 suggests a componential view of the cognitive systems involved in language use, but this should not be taken to imply a modular view of cognition. On the contrary, the present approach is essentially non-modular. The subsystems in the figure involve experts specialized in parts of the task of producing

structures processed and/or produced by the sets of procedures mentioned immediately above them in the same box. Arrows between boxes show the main flow of processing (i.e. the main line of production or interpretation in language use). Solid lines between boxes (notably, between the ‘conceptual system’ and the ‘action planner,’ and between the ‘freezer’ on the one hand and the ‘utterance organizer’ and the ‘articulator/perceptor’ on the other) signal intensive and structural interaction between subsystems, involving an exchange of information occurring whenever a linguistic utterance is produced or interpreted. Dotted lines between boxes indicate permanent access paths between systems, allowing an exchange of information, or allowing one system to consult the other, if required for the main process of producing or interpreting a linguistic utterance.

and analyzing linguistic utterances. Yet they often do their job in close interaction with other experts (as rendered, among others, by the dotted lines in the figure). Moreover, there are no sharp borders between the subsystems. They rather form a continuum. The blocks in the figure are only an abstraction for the sake of the presentation and for ease of reference.

Links to Other Cognitive Systems

The fact that the outline in Figure 1.1 does not indicate links to any other cognitive systems does not mean that such links are considered unimportant and/or that the systems in the outline are considered to be self-contained. The conceptual system serves all behavioral and perceptive systems, and the action planner is crucially involved in all behavioral systems (see Chapter 5). Moreover, some of the systems interact with other systems involved in communicative behavior, including, for instance, the gestural system.

Let us now briefly survey the different components/experts.

The Conceptual System

The conceptual system is the information center for all cognitive systems involved in human activity, including language use. It is responsible for storing and archiving all perceived knowledge about the world. It is also responsible for reasoning/thought, which involves performing ‘logical’ operations over acquired knowledge, and storing the relevant results as additional knowledge.²² The activities of this system also include such diverse things as: deciding which perceived or inferred information will be archived/stored long term, and what can be discarded; integrating information acquired piecemeal into coherent, sometimes very complex, conceptual networks offering a gestalt view of entities or events in the world; drawing generalizations over and inferences from information about the world; and, highly relevant for the present study, keeping track of the whereabouts of things in the world, and assessing their epistemological status (their probability, desirability, etc.). Operations of this last type underlie the qualificational categories as expressed in language use (see Chapter 4).

One may assume at least two kinds of functionally different, though interacting, subsystems:²³

²² In earlier versions of FPG this was called the ‘universe of interpretation.’

²³ Interactions occur, for instance, when a speaker already knows his/her interlocutor. The hearer model, as part of the situational model, then draws on long-term knowledge about the hearer in the encyclopedia.

- (a) The ‘encyclopedia,’ as the inventory of long-term conceptual knowledge about the world in the widest sense (including the social and the mental world). This is the store of everything one memorizes, hence knows or assumes, about things one encounters during one’s lifetime.
- (b) A ‘situational model,’ as a temporary (medium- to short-term) memory structure holding information about the local circumstances in the actual communicative situation. This includes information about the hearer’s present knowledge and attitudes, collected in a ‘hearer model,’ among others on the basis of the contents of what (s)he has already contributed to the ongoing discourse.

There are good reasons – including empirical ones – to assume that conceptual knowledge representation is nonlinguistic, even if it is currently not possible to specify the format in positive terms. (The nature of conceptualization will be a recurrent topic in this book. See especially Chapters 2 and 7.) Consequently, a substantial part of the processing in linguistic communication must be performed in terms of non- or prelinguistic structures. In a language production perspective, this applies to all processing in the model in Figure 1.1 until the utterance organizer gets to work and the freezer (the store of linguistic materials such as lexical items and memorized phrases – see below) starts to play a constitutive role.

Even the nonlinguistic processes preceding this level aim at linguistic realization, however. Hence one probably cannot draw a sharp dividing line between prelinguistic and linguistic processing (unlike what is often assumed in psychological models, including Levelt’s 1989). One may, for instance, assume that prelinguistic processes in the discourse organizer occasionally look forward to the linguistic possibilities offered by the freezer and the utterance organizer. For they may need to know what lexical material is available for coding the conceptual content, and whether it has grammatical properties that affect the possibilities for the organization of the information above the level of the individual proposition.

Vice versa, linguistic processing often looks back at prelinguistic structures. For example, the conceptual system not only provides the direct input for the language production process, as the deliverer of the information about states of affairs to be expressed in language (cf. the solid arrow between it and the discourse organizer). It also offers indirect input (cf. the dotted lines between it and all other major subsystems in Figure 1.1), in that it is consulted, for instance, whenever decisions have to be made about how to code the conceptual information linguistically in view of the contextual conditions. Deciding on the use of more or less polite linguistic alternatives, for example, requires access to information in the encyclopedia and/or the situational model about social rules and conventions, about one’s relationship with the hearer, and/or about the local circumstances and the hearer’s current conditions and mental states. Decisions of this kind

have to be made all through the production process: when selecting information to be expressed (cf. taboos, socially unacceptable topics, etc.), when choosing lexical material for expression (cf. which level of formality to adopt, or which forms of address and politeness formulae to use), and even when deciding on the pronunciation (cf. social accents, sloppy vs. articulated speech, etc.). (This illustrates the point of the principle of dynamism regarding the interactive nature of linguistic processing, see Section 1.1.2.)

The Action Planner

The action planner is the system that takes decisions regarding when to act, and how to act, linguistically or otherwise. (The circle-initiated arrow leaving downward from the action planner in Figure 1.1 is meant to symbolize its role as the ‘starter’ of the language production process.) The incentive to produce linguistic expressions in order to communicate is due to a communicative intention, resulting from a more general intention to do something with regards to a state of affairs in the speaker’s conceptual knowledge. (On the structure of intentionality, see Nuyts 1994.) This more general intention is normally triggered when there is an issue with a state of affairs in the speaker’s conceptual system. Hence there is an intimate tie between the action planner and the conceptual system (cf. the solid line connecting these systems in Figure 1.1). In the course of language production, the communicative intention triggers the formation of specific types of turns at the discourse level (cf., e.g., narrative, argumentative or instructive ones). Partly in function of the turn type, it also triggers specific illocutions at the single utterance level. All of this has a direct effect on several operations in the linguistic systems. (The role and organization of the action planner, and its relation with the conceptual system, will receive special attention in Chapter 5.)

The Discourse Organizer

The first step in the process of producing linguistic acts for communication is to decide what information needs to be provided to the interlocutor in the course of the communicative interaction. This information must moreover be organized such that it can be expressed in a series of consecutive linguistic utterances, corresponding to the purpose of the discourse as determined by the action planner. This is the job of the discourse organizer. We can assume two subsystems.

- (a) First of all, the procedures for discourse building form a ‘discursive network.’ This structure serves as the basic platform on/from which the actual communicative process is developed.²⁴ The discursive network integrates

²⁴ In earlier versions of FPG this was called the ‘situational network,’ formed through ‘textualizing’ procedures.

all information about states of affairs the speaker is planning to utter in one conversational turn or one narrative or textual ‘thematic unit.’ Typically, the information in it is more elaborate than what can be transmitted in one clause and requires coding in several consecutive utterances. Its size is variable, though, and sometimes the information in it fits into one word, as for example in a one-word conversational turn produced in reply to a question by the interlocutor. A thematic unit in a monologue or a written text may contain considerable amounts of information, hence a very extensive discursive network, however.²⁵

During the further processing of the information contained in the discursive network, the structure also serves as the ‘bookkeeper’ (cf. Levelt 1989: 110ff.) for the ongoing stretch of discourse. When all information in it has been uttered, the structure is cleared. But even after that the system must keep track of what has been uttered. For instance, speakers need to know what they have said in earlier turns in a conversation. Correspondingly, there must be book-keeping of what the interlocutors contribute to the conversation.

The discursive network is nevertheless a temporary structure, construed only for the purpose of the communicative process. It requires medium-term memory and working space, like the situational model in the conceptual system. This is unlike the encyclopedia, the freezer and the infrastructure for the procedures for language processing, which all require long-term memory space. And it is unlike the representations formed later in the production process, which only require very short-term memory and working space.

Like conceptual knowledge, the discursive network is presumably non-linguistic, although the format of both representations must be different. For in the discursive network, the information drawn from the encyclopedia is adapted to the current communicative situation, in view of the speaker’s situational model, and in view of his/her action plan and intention (which at this level leads to the specification of a turn type, i.e. the discourse-level counterpart to the illocutionary mode of a sentence). This adaptation may include taking into consideration the possibilities for the linguistic coding of the information later in the process. This would at least mean that at this level the representation can only be propositional. Unlike conceptualizations in the encyclopedia, it cannot include types of information that can only be rendered pictorially (purely visual/image schematic information), or in terms of another nonlinguistic type of behavioral system. This level may thus embody, more or less, what Slobin (1996) calls ‘thinking for speaking.’

²⁵ There may be a limit to the amount of information the discursive network can contain, though, hence if a thematic unit is too long, it may be handled in consecutive discursive networks, whereby each is connected to the previous ones by the bookkeeping system (see below).

Discourse building involves at least two major subtypes of procedures. First of all, there must be procedures for selecting from the encyclopedia the information about states of affairs that is to be communicated, and for integrating it into a coherent discursive network. Secondly, there must be procedures for determining the information structural organization in this network, in terms of dimensions such as thematicity, given (or old) versus new, and contrastiveness.²⁶ As indicated, these procedures are sensitive to the turn type as determined by the action planner, which is coded somehow on or in the discursive network.

- (b) A second subsystem of the discourse organizer is responsible for chunking up the information in the discursive network into smaller 'propositions,' each of which can be expressed in a single utterance.²⁷ This process depends on how the discursive network is composed, and on the informational status of the information in it. It is also sensitive to the situational network and to the speaker's communicative action plan (the speaker's intention with specific parts of the information, which at this level translates into an illocution for each proposition, see below). The impact of this process may vary considerably, depending on the size of the discursive network (sometimes the entire discursive network fits into one single utterance, see above). At this level information has the representational format of relational structures consisting of entities specified for semantic roles and linked by semantic relations. But it is presumably still

²⁶ In some earlier versions of FPG (e.g. in Nuyts 1989, 1992) a third set of discourse building procedures was assumed, responsible for determining the status of information in terms of dimensions such as aspect, time and types of modality. As suggested in the presentation of the conceptual system, and as argued in Chapters 2, 4 and 7, among others, however, this kind of qualificational operation is performed over conceptual knowledge in the encyclopedia. It is not performed exclusively for the sake of language production, even if this process must take qualifications of information into account. Communication may trigger (re)consideration of the qualificational status of information. But even then, this concerns information in the encyclopedia and can be taken to be performed by the general reasoning mechanisms operating there. The discourse organizer does have to decide which qualificational elements coded at the conceptual level should be included in the discursive network, hence will be mentioned in the discourse. That is the responsibility of the first set of discourse building procedures mentioned earlier, however.

²⁷ In earlier versions of FPG, this process was called 'sentencing,' and its output a 'singular state of affairs,' both fairly unfortunate terms. The present notion of a 'proposition,' used for lack of a less compromised term, should not be misunderstood either, though. This notion is very loaded, especially in philosophical traditions, and particularly in some types of research on modal categories. It is often used in a way that differs considerably from the present, though. Epistemic and deontic modality, for example, are often presented as logical operators over propositions, hence they are not part of the proposition in this sense of the notion. This use of the notion is in the present context covered by the term 'state of affairs' (the event in the world affected by the modal category). The present notion of a proposition is used in a pre-theoretical way, to cover all information to be included in a single linguistic expression, including qualificational dimensions such as the modal ones.

prelinguistic. (This kind of representation may already be needed in the situational network, though.) On the longstanding issue of how to model semantic roles and relations, FPG remains agnostic to date (see Nuyts 1992: 274ff.).

Chunking involves at least the following subtypes of procedures, all of which also contribute to creating coherence among the singular utterances constituting the discourse. Firstly, there are procedures for isolating in the discursive network chunks of information suitable to be expressed in one sentence, and for determining the order in which these chunks can be produced (i.e. for linearizing them). Secondly, there are procedures for organizing each chunk or proposition internally into a self-sufficient information unit. This includes making explicit the link with preceding and following propositions, among others, by making cross-references, or by marking the logical relations with preceding or following propositions, when necessary. Thirdly, there are procedures for determining the topic-focus structure of the information unit, in correlation with the information structural organization in the discursive network and in function of the linear order of the information chunks or propositions (cf. matters such as topic continuity and topic shift). Fourth, there are procedures for specifying the illocution of each single proposition, in relation to the illocutionary functions of preceding and following propositions, such that all illocutions together are consistent with the purpose of the turn. Finally, there are procedures for determining/managing the stance towards the interlocutor(s) (e.g. hedging or politeness strategies), in view of the illocutionary nature of the proposition (cf. face-threatening acts). This is done in view of the situational model (cf. the personality of the hearer) and the discursive network (e.g. what is the nature of the information in the proposition).

(Issues pertaining to the discourse organizer will receive occasional attention in this book, most notably in Chapter 5.)

The Freezer

The freezer is the store of all fixed or 'frozen' linguistic forms in a language. It is an organized collection of all linguistic forms that the language user must learn and memorize in order to be able to use the language. Hence it is the warehouse of the linguistic systems. It corresponds in principle to what in many linguistic and language psychological models is called the 'lexicon,' but the different name signals that it is not entirely the same. It is conceived of as a more elaborate system than the lexicon in most traditional models. It not only includes the complete inventory of lexical morphemes of the language (verbs, nouns, adjectives, etc.) but also all grammatical morphemes. Moreover, it

includes probably large numbers of more complex structures: phrases, and even complete utterances, both idiomatic ones (morpheme combinations that cannot be derived from simpler forms by productive rules of the language) and highly frequent or entrenched ones. (The nature of the traditional lexicon vs. the present freezer is addressed in Section 7.3.)

The entries of linguistic forms in the freezer include a specification of their grammatical properties, which serve as instructions for their usage by the utterance organizer. For a verb, for example, this includes a frame specifying its valency (the number of arguments) and the conditions it imposes on each of the arguments, such as their semantic role. The entries also include a pointer to the meaning of the form in the encyclopedia.

We must also assume a set of procedures operating over the store of frozen forms, corresponding to what in other models are often called ‘lexical rules,’ which are responsible for matters such as the reduction or extension of argument patterns (cf., e.g., causative formation, argument reduction of pseudo-transitive verbs, etc.), or the derivation of complex morphemes. They are called ‘predicating’ procedures in the present context. This is the same label as used for the set of procedures for forming the predication in the utterance organizer (see below). The use of the same term is motivated by the fact that all these procedures contribute to construing the predication (one could just as well consider all of them to belong together in one system as part of the utterance organizer).

The Utterance Organizer

The utterance organizer converts the still prelinguistic propositions into linguistic patterns ready to be fed into the articulator. It thereby makes systematic use of the freezer. Hence these two systems are jointly responsible for performing the process of verbalization of conceptual information. Together, they more or less correspond to what is called ‘grammar’ in the narrow definition of the term, as the ground covered by most traditional functional linguistic grammar models (cf. Section 1.3.1). The utterance organizer may be assumed to consist of two subsystems:²⁸

- (a) Predicating procedures form a ‘predication,’ which, in the prototypical case, has the format of a valency pattern plus additions, of the type commonly accepted in functional linguistics (cf., e.g., the predication in Functional Grammar – Dik 1978, 1997).²⁹ At its core is a verbal or

²⁸ The subsystems of predication and expression in the present model roughly correspond to the components with the same name in Dik’s (1978, 1997) Functional Grammar (although details may differ). There is one major exception: everything pertaining to the layered structure of operators and satellites in the predication in Functional Grammar receives an entirely different treatment in the present context. This will be a major subject matter in the following chapters.

²⁹ In less prototypical cases, the predication consists of a single word or word group, such as, for example, *yes* or *no* (e.g. as an answer to a yes-no-question), or *hi there* or *bye* (as greetings).

nonverbal predicate and its arguments (i.e. the obligatory constituents), and this pattern may be enriched with optional constituents, called ‘satellites,’ and other linguistic elements (e.g. connectors) needed to express all aspects of the proposition.³⁰ The predication is still unordered from a surface syntactic perspective, it is organized in terms of lexical semantic dimensions.

Predicating involves two subtypes of procedures. Firstly, there are procedures for selecting and combining linguistic materials from the freezer so as to code all elements of the proposition. This has three dimensions. The first one is the linguistic coding of the basic state of affairs, the information about the world contained in the proposition. In the prototypical case this involves the selection from the freezer of a predicate with an argument pattern that can bind the central participants in the proposition. It moreover involves the selection of terms that can fill the argument positions of the predicate, as well as of terms that can code extra participants in the proposition and that are added to the argument pattern as satellites, when needed. The second dimension is the linguistic coding of the qualificational categories contained in the proposition. This involves the selection of additional terms, to be added as satellites, and of grammatical materials (e.g. auxiliaries). The third dimension is the selection of further linguistic forms to code aspects of the proposition to do with its discursive position (the textual embedding), its illocutionary function and aspects of speaker–hearer management (e.g. connectors, illocutionary force indicators, or politeness markers or hedges).

A second subtype of procedures is responsible for specifying the syntactic functions (at least subject and object) in the valency pattern, among others in function of the topic-focus structure of the proposition.

- (b) Expressing procedures convert the predication into the surface structure of the utterance, which can be handed over to the articulator. This system covers the traditional domain of syntax. It involves at least three types of procedures. Firstly, there are word ordering procedures, which to a considerable extent draw on standard sentence patterns (cf. the syntactic inventory of templates proposed in Role and Reference Grammar, Van

³⁰ In classical Functional Grammar this would be except for aspects of the proposition that are expressed morphologically, for instance through inflection on the verb or on nouns, which are handled by the ‘expressing’ procedures (see below). An alternative, preferable in the present context, is to distinguish between types of morphological marking. Inflection expressing elements of the proposition (predominantly qualificational categories, i.e. what would be called ‘operators’ in Functional Grammar) is handled in the predicating system. Inflection marking purely formal grammatical features (e.g. agreement, grammatical genus, etc.) is handled by the expressing procedures.

Valin and LaPolla 1997). Secondly, there are procedures for handling the inflection (or at least the purely grammatical aspects of it, see footnote 30) of lexical elements in the predication. Thirdly, there are procedures for specifying the intonational pattern of the expression.

This framework will serve as the orientational map for the analyses in the following chapters. In that context, some dimensions of it will be elaborated and substantiated.

1.4 Conclusion

This chapter has sketched a few preliminaries for this book. It presented the main lines of the cognitive-functional approach and situated this theoretical perspective in current functional and cognitive linguistics. It moreover highlighted a few basic issues for language research emerging from the approach, which will play a central role in this study. Finally, it introduced the blueprint of an FPG, the model that will serve as the background for the analyses in the following chapters.