Constructional Approaches to Language

Construction Grammar in a Cross-Language Perspective

edited by
Mirjam Fried
and Jan-Ola Östman

John Benjamins Publishing Company

Construction Grammar in a Cross-Language Perspective

Constructional Approaches to Language

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Volume 2

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Chapter 1

Historical and intellectual background of Construction Grammar

Jan-Ola Östman & Mirjam Fried

1. Preamble

Judging from the frequency and variety of uses attested in recent linguistic research, almost *any*thing can be referred to as a 'construction'.[1] The term seems to have become immensely popular, if not overused, and its denotation has, consequently, become quite unclear and fuzzy. Sometimes it is used in its traditional and very general sense, as an equivalent to 'structure'. Other times it refers to more specific linguistic objects, and in such usage it very often amounts to being synonymous with 'idiom' or 'formulaic phrase'. The term is often used also in reference to concrete expressions; to sentences or phrases constructed through introspection; or to patterns found in interaction. It is one of the goals of the present volume to clear at least some of the misunderstandings of what a grammatical construction is in Construction Grammar and how it differs from 'constructions' and 'constructional' analyses in other approaches, all of which could be regarded as a family of loosely connected models.

The theoretical model that has come to be known as *Construction Grammar* has its basis in the theorizing of Charles Fillmore and his students and colleagues at the University of California at Berkeley in the early 1980s; the present volume addresses a number and variety of specific issues encountered in different languages, thereby testing the cross-linguistic potential of constructional research in general and Construction Grammar in particular.

2. A brief history of Construction Grammar

As theories develop, they take on new attributes: different researchers pursue different directions and ways of thinking, and it should be in the interest of intellectual progress that nobody may have the unquestioned right to decide which development is *a priori* going in a 'better' direction. In our own thinking, we see the developments within Construction Grammar in the 1980s and during the first half of the 1990s as the necessary, solid foundation from which other strands have developed. Any attempt at writing the history of present-day phenomena will inevitably be a subjective appreciation of what 'really' took place. This section is no exception. But histories and interpretations can only be rectified after they have been articulated.

Construction Grammar clearly evolved out of Case Grammar, the case-role based approach which Fillmore successfully pursued in a number of articles in the late 1960s and early 1970s, of which Fillmore (1968) is the best known (but note also earlier and later articles on Case Grammar, most of which can be found in Dirven & Radden 1987; Fillmore 2002). An overview of the most important notions of Case Grammar that have found a direct continuation in Construction Grammar is given in Chapter 2 of this volume.

In addition to making a semantic level of analysis more discernable through case roles, later known as semantic roles, Case Grammar also deviated from traditional transformational-generative approaches of the 1960s in that it made a point of reinstating the importance of grammatical functions in syntax. Another model that was interested in this line of thought was Relational Grammar, which received broad attention through Perlmutter & Postal (1977), at the same time as Keenan and Comrie (e.g. 1977) presented cross-linguistic relational tendencies. In the late 1970s and early 1980s, Fillmore in fact made a brief informal suggestion of how to combine Case Grammar and Relational Grammar by adding the semantic roles of Case Grammar at a pre-initial stratum to the established formalism of Relational Grammar. Thus, rather than having the representation in Figure 1 below as an appropriate analysis of the sentence in (1), Fillmore's proposal advocated something akin to the analysis in Figure 2 as a more adequate alternative. (Cf. also Leinonen & Östman 1983.)[2]

(1) The field was destroyed with fire.

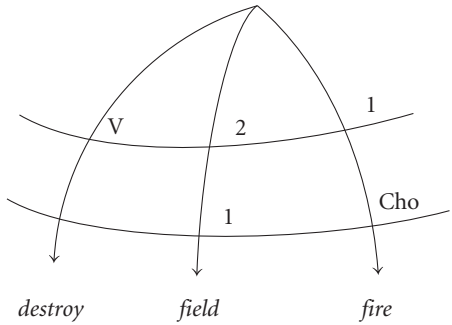

Figure 1. Relational Grammar representation

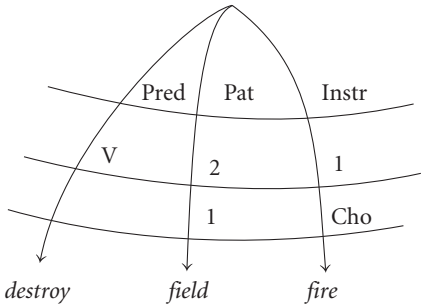

Figure 2. Relational Grammar representation enhanced by case roles

The primary argument for the solution depicted in Figure 2 was that without knowing the semantic role of *fire*, it would not be possible to predict whether the diagram in Figure 1 represents (1), or (2) below.

(2) The field was destroyed by fire.

This reasoning reflects one of the basic tenets of Case Grammar, which held that the morphosyntactic marking on a nominal (whether by a preposition or morphological case) is determined by the semantic role associated with that nominal.

Another precursor to Construction Grammar is a model that was also developed at the University of California at Berkeley in the late 1970s, within the tradition of Generative Semantics. This was the work of George Lakoff and informally known as Gestalt Grammar (Lakoff 1977). Lakoff's "experiential" approach to syntax was based on the view that the grammatical function of a sentence constituent holds only in relation to a particular sentence type as a whole.

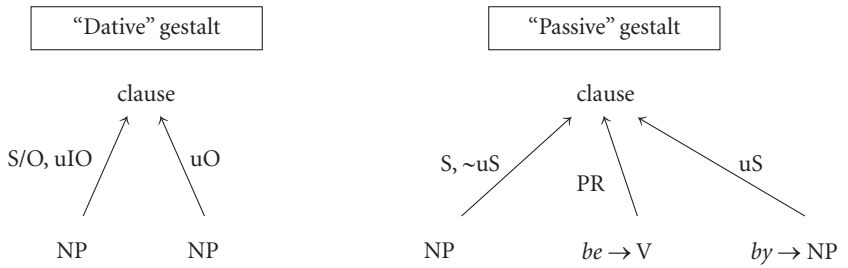

Figure 3. The Dative and Passive gestalts in Gestalt Grammar

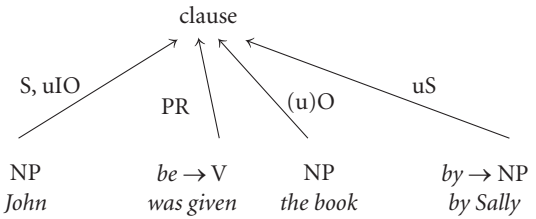

Figure 4. Combination of the Dative and Passive gestalts in Gestalt Grammar

Specific constellations of relations such as Subject and Object thus constituted complex patterns, or "gestalts". Grammar was seen as an inventory of templates such as Passive, (Basic) Word Order, Equi, Cleft, and similar templates, roughly corresponding to transformations in traditional Transformational-Generative Grammar. Gestalt Grammar did not have transformations as such, however; there were no rewrite rules. Instead, the template ("network representation") as a whole contained information about the "underlying/understood" structure, as well as about the surface structure of a given sentence type. All the templates relevant for the analysis of a sentence were taken to apply simultaneously, analogous to placing transparencies on top of each other. For instance, the analysis of the example in (3) needs to make reference to, among other things, the dative gestalt and the passive gestalt as shown in Figure 3, producing as output the gestalt in Figure 4 (cf. Lakoff 1977: 272–273).[3]

(3) John was given the book by Sally.

Lakoff's (1977: 246–247) list of fifteen characteristics of linguistic gestalts contains many of the features that have become definitional criteria of constructions in Construction Grammar, including, for example, the formulation that

"Gestalts are at once holistic and analyzable. They have parts, but the wholes are not reducible to the parts".

Since the mid-1980s Fillmore has worked on Construction Grammar in close association with his colleague Paul Kay, who has focused primarily on formalizing various semantic aspects of Construction Grammar (cf. Kay 1997). From the middle of the 1990s on, much of Kay's work has gone into refining the notation and the general formalism used in Construction Grammar. He has worked closely particularly with Ivan Sag, thus bringing closer together Construction Grammar and Head-Driven Phrase Structure Grammar (HPSG; e.g., Pollard & Sag 1994; Sag 1997; Ginsburg & Sag 2000). HPSG is also a monotonic, declarative, constraint-based model and has many of the same or very similar formal features that are used in Construction Grammar, such as, for example, the use of Attribute-Value Matrices for specifying characteristic features of linguistic expressions, and the use of elaborate inheritance networks for capturing relationships between constructions. Some Construction Grammarians have on occasion explicitly adopted the HPSG notation (e.g. Koenig 1999; Koenig & Lambrecht 1999; Kay 2002, to appear) and Sag (2001) has also addressed the similarities between the two approaches.

It must be noted, however, that there are also significant differences between the two models, particularly in their fundamental focus and stated goals. HPSG is being developed explicitly as a computational model of language, with particular interest in simulating specific syntactic processes. This objective necessarily shapes some of its formalism as well as the theoretical notions it works with. In contrast, Construction Grammar research has attempted to go hand in hand with research in semantics and cognition for the purpose of integrating these dimensions in constructional representations. This focus is most visibly manifested in the semantic 'sister theory' of Construction Grammar known as Frame Semantics, as well as in the semantic orientation of the construction grammarians' interest in pursuing computational applications.

Frame Semantics was developed by Fillmore as a particular model of the 'semantics of understanding', which structures and represents the meaning of words in terms of 'interpretive frames' (Fillmore 1975, 1977, 1982, 1984, 1986; and also Fillmore & Atkins 1992, 1993). Frame Semantics has become a semantic complement to Construction Grammar, as an elaboration on the relationship between form and meaning, addressed from the perspective of lexical semantic issues relevant to grammatical structure. Current work of Frame Semantics has been further expanded by intensive corpus study within Fillmore's FrameNet project at the International Computer Science Institute in

Berkeley (Fillmore et al. 2000; Baker et al. 2000; Johnson et al. 2001; Atkins et al. 2003; Fillmore et al. 2003).

3. Cross-language and universal potential of Construction Grammar

As the brief historical overview indicates, the intellectual environment in which Construction Grammar was originally developed has given the theory solid roots in cognitively oriented linguistic analysis. The cognitive dimension has not always been emphasized to the same degree by all the practitioners of Construction Grammar, but the fundamental interest of construction grammarians in conducting linguistic analysis that is consistent with what we know about cognition cannot be in dispute. While this volume does not intend to address directly the cognitive aspects of Construction Grammar,[4] cognitive issues are touched upon through the lens of cross-linguistic considerations, which inevitably introduce the issue of universal aspects of language.

The extent to which a grammatical theory may serve as a universal model of language constitutes one of the more complicated issues that test the cognitive plausibility of a linguistic analysis. It is certainly relevant to ask how Construction Grammar can (or could) be a universal theory of grammar, given its fundamental emphasis on seeing language, or at least grammar, as consisting of ready-made 'recipes' or formulas, rather than being made up of nouns, verbs, prepositions, etc. (or, possibly, as being a compromise between these two alternatives). If there does indeed exist the kind of complex relationship between form and meaning that Construction Grammar assumes (such that constructions carry more or less general specifications for the conditions under which they can be instantiated in an acceptable manner) and if we also subscribe to some variant of the notion of the 'arbitrariness of the sign' (or even more importantly, if we do not), then the question of universality requires serious attention.

The following quote from Fillmore and Kay (1993, Chapter 1, 4–5) can be taken as an introduction to the main theme of this volume:

> We will be satisfied with the technical resources at our disposal, and with our use of them, if they allow us to represent, in a perspicuous way, everything that we consider to be part of the conventions of the grammar of the first language we work with. We will be happy if we find that a framework that seemed to work for the first language we examine also performs well in representing grammatical knowledge in other languages.

All the chapters in this volume explore what the above formulation means in practice and how cross-language aspects of Construction Grammar are dealt with. The second chapter (by Fried & Östman) addresses these points at the most general level. It contains a fairly detailed overview of Construction Grammar, thus responding to one of the main problems within the Construction Grammar research program: there still is no proper introduction to the model accessible to the general linguistic community, let alone an illustration of how the representation of various language-specific phenomena may be approached in a theoretically consistent manner. The introductory textbook by Fillmore & Kay (Forthcoming) has been in the making for more than a decade – the first version being Fillmore (1988). Earlier versions of this textbook (Fillmore & Kay 1993, 1996, and later versions) are available only in manuscript form and parts of it on the World Wide Web. These earlier versions, together with personal lecture notes, have indeed been used as a basis and inspiration for the 'thumbnail sketch' presented in this volume.

The remaining chapters are devoted specifically to the cross-language potential of Construction Grammar and its analytic and representational tools. For a long time, Construction Grammar was accused of being devised for English grammar. Over the years, a number of scholars, several of whom are represented in this volume, have taken Construction Grammar beyond English and shown its usefulness and power in the description, analysis, and explanation of diverse linguistic phenomena in a variety of languages. The chapter by Fried concentrates on the tension between inherent semantics and context-related factors in shaping linguistic expression as it manifests itself in certain case marking patterns in Czech, involving both regular and seemingly arbitrary case assignment. Her chapter also illustrates the integration of Frame Semantics in constructional analysis of specific grammatical structures. Fujii's contribution explores a set of conditional patterns in Japanese, providing a unified constructional account of their productive and idiomatic aspects by relying on the functional notion of 'constructional scheme' and the grammatical notion of 'construction type'. The chapter by Lambrecht studies the interaction between information structure and syntactic structure which gives rise to a specific grammatical pattern found in spoken French; the construction shares features with certain regular patterns while also displaying idiosyncrasies of its own. This chapter is also valuable and refreshing in that it focuses on systematic analysis of spoken language, which has only very recently started drawing the attention of construction grammarians.

To summarize, the volume as a whole shows how Construction Grammar relates to universal aspects of language, while allowing for a sufficiently detailed

and accurate account of language-specific facts. It is our hope that the explorations presented here will inspire those who wish to further extend the domain of Construction Grammar research within cross-linguistic studies and to find empirically and explanatorily adequate ways for capturing cross-language generalizations. Only sufficiently focused and systematic analyses of linguistically diverse phenomena can respond to the larger question concerning the model's potential for having universal impact, stated in terms of "the sharing of abstract constructions across languages" (Kay & Fillmore 1999: 1).

Notes

1. Although this situation is bound to create some confusion, it is only in the nature of things. We can remind ourselves of the ways in which we use terms such as 'structure' (which is not associated only with 'structural linguistics') or 'function' (beyond the domain of functional grammars or functional linguistics).

2. Key: 1 = Subject; 2 = Object; Cho = Oblique; V = Verb; Pred = Predicate; Pat = Patient; Instr = Instrument.

3. Key: S = Subject, O = Object, IO = Indirect Object, u = underlying/understood, ∼ = not, PR = Predicate, X/Y = either X or Y. The details of the representations are to be read as follows: the left-most NP in Figure 4 is specified as equivalent to the combination of 'S/O, uIO' from the dative gestalt and the 'S, ∼uS' of the passive gestalt; the NP in Figure 4 is specified as S (rather than as O) because there is another O element in the sentence.

4. The cognitive grounding of Construction Grammar and the relationship between linguistic analysis and cognition is explored in detail in Östman & Fried (2005).

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Chapter 2

Construction Grammar
A thumbnail sketch

Mirjam Fried & Jan-Ola Östman

1. Preamble

In this chapter we give an overview of the main characteristics of Construction Grammar. Our aim is to stay as close as possible to the original tenets of Construction Grammar as a distinct model of linguistic analysis.

There is as yet no textbook on Construction Grammar, although such a textbook is in preparation (Fillmore & Kay, forthcoming). In addition to the papers by Fillmore and his colleagues and students published in the 1980s and 1990s in the proceedings of the annual Berkeley Linguistics Society (*BLS*) conference, a number of important articles have been published in *Language*, notably Lambrecht (1984), Fillmore, Kay & O'Connor (1988), Michaelis & Lambrecht (1996), Kay & Fillmore (1999), and Kay (2002). The Construction Grammar framework has been successfully extended in various directions by Lambrecht (1994) on information structure, Goldberg on argument structure (1995), and Kay primarily on formal semantics (1997). Fillmore (2001) and his colleagues integrate Construction Grammar with Frame Semantics and its application FrameNet (cf. Johnson et al. 2001). The various insights of these and other studies form the point of departure for this chapter. In addition, we have made use of the outcomes of lengthy discussions with Charles Fillmore, Paul Kay and others over the last twenty years, and in particular of the various manuscript versions of their forthcoming introduction to Construction Grammar. Nevertheless, many of the issues presented in this chapter have not been explicitly addressed by others working within the model; in these cases we have let our data lead the way in proposing a constructional treatment. Extensions and developments of Construction Grammar in other directions are well exemplified in Östman & Fried (2005).

2. Main features of Construction Grammar

2.1 General properties

In its primary objective, Construction Grammar (CxG) is no different from any other theory of grammar in that it seeks to find the best way of representing the relationship between structure, meaning, and use. Unlike many other theories, however, Construction Grammar sees function and form as inseparable from each other and thus does not develop independent modules or 'components' that must be 'fitted in' with each other as needed. Rather, Construction Grammar is a sign-based grammatical model that is organized around the notion of GRAMMATICAL CONSTRUCTION as the basic unit of analysis and representation.

The conceptual and architectural basis of Construction Grammar is framed by the following hypotheses: (i) speakers rely on relatively complex meaning-form patterns – constructions – for building linguistic expressions; (ii) linguistic expressions reflect the effects of interaction between constructions and the linguistic material, such as words, which occur in them; and (iii) constructions are organized into networks of overlapping patterns related through shared properties.

The primary motivation for Construction Grammar is the insight that the juxtaposition of two or more forms seldom results in a simple concatenation of the meanings those forms might have in isolation. Consequently, Construction Grammar sees linguistic units as particular associations between form and meaning that must be represented as such, rather than leaving such associations to the operation of a set of rules for how to combine individual forms. This view underlies all types of linguistic objects (morphological units, words, phrases, clauses, sentences, turns, texts): different units are thus not treated as *a priori* different in kind. For instance, both words and clauses have constructional properties and are represented as constructions.

It follows that, in principle, no (one type of) linguistic unit or grammatical pattern can be given a central (or relatively more important) status in grammar; for example, pieces of language such as *Thank you* and *See you* are just as central to English as *Bill loves Mary* or *The beautiful butterfly landed on a yellow flower*. All units are taken to be of equal value in describing the overall grammar of a language. This view sets Construction Grammar apart from models in which certain forms are posited as more 'basic' or central; for example, active, positive, declarative, transitive clauses are often postulated as being central in other models.

Like most other contemporary models of syntax, Construction Grammar argues that the only way to explicate and properly understand relations that hold between linguistic elements is to formalize such relationships, whenever possible. In Construction Grammar, formalizations are made in terms of constructions.

Every construction is associated with more or less detailed information about its phonological, morphological, syntactic, semantic, pragmatic, discourse, and prosodic characteristics. Since such characterizations may swell into fairly large and elaborate collections of symbols when represented formally, Construction Grammar uses a box notation as a convenient way of organizing all the information needed to give an adequate account of linguistic structure. The box diagrams have become the most visible and readily recognizable trademark of Construction Grammar representations.

Constructions have always played an important role in grammars and linguistics; traditionally, we talk about sentence types, phrases, formulas, and even idioms. In Construction Grammar, the notion of 'knowing a language' means knowing its constructions; the active, the passive, the reflexive, the existential sentence types can all be seen as constructions, and so can the preposition phrase, or the verb phrase. In fact, in the view of Construction Grammar, language *is* the inventory of its constructions.

2.2 The Case Grammar connection

As noted in the introductory chapter, Construction Grammar evolved out of Case Grammar (Fillmore 1968, 1977; Dirven & Radden 1987) and the early versions of Frame Semantics (Fillmore 1982, 1984). Case Grammar was one of the first approaches that set out to search for a semantically defined 'deep structure' and its manifestations in linguistic expressions.[1]

Thus, the primary reason for saying that *John Smith* has a different semantic role in (1a), below, than *England* in (1b) is not the inherent and intuitive difference in meaning between a person and a country, but the fact that the two display different syntactic behavior; in nominalizations, for example, one tends to take the *s*-genitive, and the other the preposition *in*, as shown in (2a) and (2b), respectively.

(1) a. John Smith remembers nothing of years gone by.
    b. England remembers nothing of years gone by.

(2) a. John Smith's memory of years gone by is non-existent.
    b. The memory of years gone by is non-existent in England.

When comparing the noun *God* used in (3) below to either *John Smith* or *England*, we notice that it patterns syntactically after *John Smith* (shown in 4a), or at least more so than after *England* (shown in 4b), even though intuitively, based on its referential properties, *God* might seem distinct from either of the other two nominals.

(3) God remembers nothing of years gone by.

(4) a. God's memory of years gone by is non-existent.
b. ?The memory of years gone by is non-existent in God.

On the basis of these facts we might want to assign the same semantic role, say, 'agent', to *John Smith* and *God*, but a different role, say, 'location', to *England* (cf. Fillmore's 1971 arguments against the need for a semantic role 'force'). Similarly, we can deduce that the word *children* in (5a) is, at least in principle, semantically ambiguous, since in a passive sentence with an oblique adverbial, we have to choose between using the preposition *by* (which indicates that *children* functions as agent, as in 5b) or *with* (indicating that *children* is an 'instrument', as in 5c); compare to (5d) which contains both agent and instrument roles.

(5) a. Children filled the bewitched house.
b. The bewitched house was filled by children.
c. The bewitched house was filled with children.
d. The bewitched house was filled with children by the unscrupulous witch.

Fillmore (1968) explicates the regularities in mapping semantic roles onto different grammatical functions in sentences. Thus, in English, if there is an agent in an active sentence, that agent is realized as the subject; if there is no agent, but an instrument, the instrument is realized as subject; and if there is no agent nor instrument, but something that is affected by an activity, a 'patient', then the patient is realized as subject. This is illustrated in (6).

(6) a. The Chancellor closed the university with a dull speech.
b. A dull speech closed the university.
c. The university closed.

The semantic role patterning is still at the core of Construction Grammar. In early studies in Frame Semantics, Fillmore developed the notion of roles further, suggesting that grammar can be seen as a network of associations between syntactic roles (more generally known as grammatical functions), textual roles (accounting for information structure), and verb-specific situa-

tional roles (such as 'buyer' and 'seller' in a commercial transaction). These relationships will be addressed in Section 6.

3. Arguments for Construction Grammar

Although the physical realization of language (what we see as form and hear as sound) is what comes closest to being observable and thus empirically based, there are very few, if any, patterns in English that can be said to be purely syntactic, in the sense that their meaning or function play no role in determining well-formedness. The closest we come to a purely syntactic pattern may be what is known as the Subject-Predicate construction, since almost anything can be the subject in English. Most often, however, a construction has among its defining properties specific semantic and pragmatic features. It is not uncommon that even when the structure of two phrases seems to be exactly the same, as in the expressions *Thank you* and *See you*, the two expressions may have different semantic and pragmatic characteristics, which sanction the use of these structures.

This view is in direct contrast to the main interests of formal generative grammars, whose machineries are designed to generate and recognize unlimitedly complex sentences, while leaving outside of their scope many kinds of structures that speakers of a given language produce and comprehend in their every-day language use. Starting out as a counter-movement against the successors of transformational-generative grammars, Construction Grammar made the commitment to go beyond the interests inherited from the tradition of philosophy of language, where the object has been to start one's linguistic analysis by working out the details of fairly simple fragments of language and add more and more fragments as time moves on. Construction Grammar aspires to account for *all* constructions of a language and explicitly rejects the method of starting from the simplest sentences and working up to more complex structures until finally, in the distant future, coming upon phrases such as *See you!*. Rather, the argument goes, in order to account for all the possibilities of grammar, we should start by attempting to provide an account of what have come to be known as the 'peripheral' parts of language. This 'periphery' is important as a starting point for linguistic analysis because most of the structures we use in everyday discourse are *de facto* peripheral in this positive sense.

The commitment to including the 'peripheral' is justified by the following reasoning. If speakers use grammatical patterns that a speech community (through its normative grammars) does not readily embrace, then the com-

bined facts that such patterns (a) are used, and (b) have not been (explicitly) taught, guarantee the importance of such structures in language; it is not an indication of their triviality. When we encounter forms that we have not been explicitly taught – not to mention expressions that speakers are warned (by prescriptive grammars) against using – we know that we are touching on something very basic, something that must be rooted in our cognitive behavior independently of what others have attempted to impose on us.

Consistent with this general view, early studies in Construction Grammar focused on very 'peripheral' and extremely cumbersome structures. Proponents of other formal theories often dismissed such studies as not pertaining to the essence of grammar, but rather constituting an 'idiom-grammar' addendum to the core of grammatical descriptions. Yet, such criticism is missing the point: the unique contribution of Construction Grammar has been in providing analytic tools that do not require any *a priori* decisions about what should count as 'basic', or as the 'core' in language. If construction grammarians had concentrated first on accounting for the presumed and arbitrarily determined 'core' structures, Construction Grammar could have been easily deemed just a notational variant of some other theory.

The relation between 'productive rules' and 'idioms' must be seen as a cline from relatively productive to relatively frozen. There is no sense in treating the constructions of a language as belonging to qualitatively different categories on the basis of their degree of productivity. True, there are idioms that benefit little from being integrated into the productive parts of grammar; for instance, *by and large* or *trip the light fantastic* are clearly at the frozen, formulaic end of the scale. But even so, they are not completely without tractable structure. In expressions such as *What's Bill doing inspecting the car?* or *What's it doing snowing in August?*, as discussed in Kay & Fillmore (1999), or *the greener the better* (Fillmore 1989), it is not at all clear whether it is more appropriate to treat these as idioms, or as productive kinds of structures. Construction Grammar does not have to make that choice.

Another area that illustrates a gradient scale between the formulaic and the productive is that of numbers. Although it may seem that numbers are to a certain extent 'peripheral', they are clearly part of our language and they commonly make up systems that are subject to general grammatical constraints and thus form an integral part of grammar. This is readily apparent in a language like Finnish, where numbers partake in concord relations. In order to say 'in 35 rooms', Finnish speakers do not say '35 room-in', as in (7c), with the number specification in an unmarked, default case, but, minimally, '35-in room-in', as

in (7b), and preferably in the form *kolmessakymmenessäviidessä huoneessa* '3-in 10-in 5-in room-in', as shown in (7a).[2]

(7) a. *kolme-ssa-kymmene-ssä-viide-ssä huonee-ssa*
three -IN -ten -IN -five -IN room -IN
b. *kolmekymmentäviidessä huoneessa*
c. **kolmekymmentäviisi huoneessa*

Evidently, numbers are like other nominals in Finnish in that they are assigned case suffixes. But numbers are not entirely like any other nominals, either; they have their own characteristics that need to be captured in a full account of language. For instance, when accounting explicitly for how numbers are made up morphologically in English, we need to invoke a set of principles that are not frequently referenced elsewhere in the English grammar. In particular, speakers use addition to form sequences like *seventeen*: 7 + 10 ('seven plus te(e)n') or *twenty-three*: 20 + 3 ('twenty plus three'), but multiplication is used in forming *seventy*: 7 × 10 ('seven times ten [=*ty*]'). We can argue that in Finnish, subtraction is also at play, e.g. *kahdeksan* 'two away from ten', i.e., 10 – 2 = 'eight'. And *neljätoista* 'four of the second' displays a complex structure involving both multiplication and addition to designate 'fourteen'. The discussion of numbers also points to the inherent similarity between word-length and sentence-length constructions: Construction Grammar does not have to make an *a priori* choice of whether to consider a piece of linguistic material (in this case, any number) a word, a phrase, or a sentence.

Support for the view that an adequate description of grammar and linguistic structure needs to make reference to complex constructions rather than to the generative capacity of a rewrite-rule system comes from the cognitive correlates of language processing. As Chafe (1994), Pawley (1987), Pawley & Syder (1983), and others have shown, we process language in larger blocks, in gestalts; memory and language storage function in terms of larger formulas rather than in terms of words or phrases; we talk in spurts of two seconds, in terms of prosodic units (variously known as idea units, or information units), rather than strictly in terms of one word or one linguistic phrase at a time. In line with this view, Bolinger (e.g., 1976) has shown the importance of what he calls 'prefabs' in language, including the prosodic patterning of language (e.g., Bolinger 1951): sections or levels of an intonation contour are not by themselves particularly salient for speakers, but serve as cues primarily in the context of the intonation contours as wholes. Furthermore, Chafe has shown that there is a clear relationship between the globality of cognitive and linguistic units, shown in Table 1.

Table 1. The relationship between linguistic and cognitive units, as presented in studies by Wallace Chafe (e.g., Chafe 1980, 1994, 1996)

linguistic units	corresponding to	**cognitive units**
prosodic unit		focus of consciousness
extended sentence		center of interest
paragraph, episode		shift of attention/orientation

To summarize, the most general argument *pro* Construction Grammar is that this model is economical, since it does not need to set up different components of grammar and then encounter problems in relating such components to one another at a later stage of description and analysis. Secondly, by not assigning special status to certain fragments of grammar and by aspiring to give adequate, systematic, and formal descriptions of the morphology, syntax, semantics, and pragmatics of linguistic structures that are typically considered 'irregular' or 'exceptional', Construction Grammar has the potential for a uniform representation of *all* grammatical knowledge. If it is possible to give a precise description of the 'peripheral' or 'exceptional', then clearly this kind of description will be more powerful than descriptions aiming to give a systematic account of 'regular' patterns only (such as, for example, basic transitive declarative sentences). And finally, the Construction Grammar framework appears to be consistent with what we know about cognition; especially recent advances in research on child language acquisition indicate that our cognitive processes manipulate linguistic structures of varying sizes and complexity (e.g., Peters 1983; Braine & Brooks 1995; Tomasello 1992, 2000).

4. The notion GRAMMATICAL CONSTRUCTION

In Construction Grammar the notion 'construction' has theoretical status and the word 'construction' is used as a technical term. GRAMMATICAL CONSTRUCTIONS are symbolic signs and represent the basic building blocks of linguistic analysis. These signs, as we have noted, are not restricted to words but can, in principle, be of any size (morpheme, phrase, sentence, text). A construction is an *abstract*, representational entity, a conventional pattern of linguistic structure that provides a general blueprint for *licensing* well-formed linguistic expressions. In contrast, the actually occurring linguistic expressions, such as sentences and phrases, are not constructions, but CONSTRUCTS. At the risk of oversimplifying, we can compare the status of constructions as abstractions

with traditional linguistic abstractions such as phonemes and morphemes. We communicate in terms of constructs, not constructions, just like in actual speech we produce sounds, not phonemes.

Constructions can represent very simple configurations that could be almost equally well captured by phrase-structure trees. But constructions can also be quite complex, representing much larger and more intricate patterns containing several layers of information (syntactic, semantic, pragmatic, etc.). It is particularly the latter kind of constructions that emphasizes the unique character of Construction Grammar as a multi-dimensional framework in which none of the layers is seen as 'more basic' than any other; constructions only differ in the extent to which they make use of these resources. Furthermore, it might well be the case that what might at first seem like a simple construction turn out on closer scrutiny to have more specific constraints; such extensions and refinements of constructions are easily accommodated in Construction Grammar.

The following are some brief examples of the kinds of information a construction may have to specify.

i. **Information about morphosyntactic properties.** These include:

– Structural relations among constituents (whether we want to think of them in terms of hierarchies or dependencies) or marking, for example, the differences between headed vs. non-headed structures, such as [*hot* [*water*]] vs. [[*hot*] [*and*] [*heavy*]], respectively. The former exemplifies a hierarchical structure headed by the word *water*, while the latter shows a flat, non-headed structure consisting of three elements none of which syntactically dominates the other two.
– Another formal property has to do with the order of elements. For example, in capturing the crucial features of an adpositional phrase, the relevant construction for English will have to specify, among other things, that the adposition must precede its complement noun phrase (*for children*/**children for*), while for Turkish it must specify that the complement comes first (*çocuklar için*/**için çocuklar* 'for children').
– Information about linguistic form also addresses the morphological shape of particular constituents, such as morphological case, specific verb forms, complementizers, and relativizers. For instance, differences in the formal properties of relativizers can be illustrated by the English relative clauses, which may come in three distinct shapes, including null, depending on the relativizing expression (*the books which/that/Ø you like*).

ii. **Information about prosodic or phonetic shape.** The interpretation of a particular linguistic expression may depend on the prosodic contour conventionally associated with it.

– The syntactic structure of expressions such as *Is a sauna hot* or *Did she ever* suggests questions, but depending on what intonation we use in pronouncing these strings of words, each can be interpreted either as a genuine question, or as an exclamation, and each is thus licensed by a distinct grammatical construction. This is not anything peculiarly English, either; e.g., both Swedish *Vilken flicka* and Finnish *Mikä tyttö* have the potential interpretations 'Which girl?' and 'What a girl!' – depending on the concomitant prosody.
– The distinction between a relative clause reading and an infinitival complement reading in *What do you have to eat?* depends on the pronunciation of the sequence *have to*, information which has to be specified as part of the constructions that license the use of the verb *have*: [hævtʊ] is conventionally a feature of the relative-clause reading ('What do you have that can be eaten?'), while the pronunciation [hæftə] is associated with the infinitival complement reading ('What are you obliged to eat?').

iii. **Information about meaning or function.**

– The most obvious example in this category is provided by the semantic roles (such as agent, patient, location, etc.), which mediate the relationship between the lexical meaning of a predicate's arguments and their morphosyntactic expression. Specifying semantic roles is relevant in many environments, including patterns that involve case syncretism, where a single morphological form is associated with multiple, and not necessarily related, semantic roles.
– Other types of semantic information enter the picture as well. The well-formedness of determination patterns in English, for example, depends on (among other features) the semantic notion of boundedness: reference to this feature is crucial for ensuring that the selection of a determiner in a particular NP respects the distinction between mass and count nouns.
– In many languages generalizations about a morphosyntactic pattern expressing possession must take into account the inherent semantics of certain NPs and include reference to a possessive hierarchy that ranks entities according to their possessibility (e.g., body parts > other part-whole relations, including kinship > close alienable entities > distant alienable entities). As the following examples from two Maasai dialects demonstrate, the form itself need not be sufficient as a predictor of grammaticality: all

the sentences in (8) and (9) involve a transitive verb with inverse marking (3rd person acting on 1st person; in these cases, this pattern marks the 1st person as a possessor of something else in the sentence), a nominative subject, and an accusative object, and yet, not all of them are possible Maasai sentences.

(8) IlUasinkishu dialect (data from Payne 1997a):

a. *áa-ytukú en-titó ɛn-káyná* [body part]
3>1-wash F.SG-girl.NOM F.SG-leg.ACC
'The girl will wash my leg.'

b. **áa-ytukú en-titó en-kitók* [kin]
3>1-wash F.SG-girl.NOM F.SG-woman.ACC
'The girl will wash my wife/woman.'

c. **áa-ysʊ́j en-titó ɛn-kılâ* [alienable]
3>1-wash F.SG-girl.NOM F.SG-cloth.ACC
'The girl will wash my cloth/dress/clothing.'

(9) IlKeekonyokie dialect (data from Payne 1997a and 1997b, respectively):

a. *áa-ból ol-páyyàn o-sandúkù* [close]
3>1-open M.SG-man.NOM M.SG-box.ACC
(i) 'My husband will open the box.'
(ii) 'The man will open my box.'

b. **áa-ból ol-páyyàn ɛn-kishómì* [distant]
3>1-open M.SG-man.NOM M.SG-box.ACC
'The man will open my gate.'

In the IlUasinkishu dialect of Maasai (8), only body parts can be construed as a possessed object in these constructions, while in the IlKeekonyokie dialect (9), the cut-off point on the hierarchy is placed between the 'close' and 'distant' alienable possession. These differences do not follow from the syntactic or morphological properties of the sentences or the constituents.

iv. **Information about context.** Some constructions must make reference to differences in register, social value, and other context-related properties or pragmatic reasoning.

– For example, the construct *Why don't you invite them sometime?* resembles an ordinary negative *why*-question, such as *Why don't you ever invite them?*, but on closer inspection, we find that these two constructs must be licensed by different constructions: a defining property of the former is that it expresses a positive suggestion, while the latter is built on the pattern for negative *why*-questions.

The technical details of how these *kinds* of information translate into the Construction Grammar formalism, in terms of 'attributes' and 'values', are discussed in Section 6.2. For now, let us just stress one important general point about the model: it does not impose any *a priori* requirement that every construction in every language (or even in a single language) specify a predetermined set of properties or categories (whether syntactic, semantic, pragmatic, etc.). Nor is there any minimum number or type of properties that have to be specified for a particular construction. Thus, for example, there is no assumption to the effect that *every* construction that represents a sentence structure must specify a subject or, at the other end of the spectrum, that *every* construction must carry information about the 'register' or 'genre' of a given grammatical pattern.

It is possible that some constructions may be centered around structural organization only, while their semantics is fully compositional and therefore need not be specified as a whole. Possible examples of such constructions would be various constraints on word order that cannot be related to, at least not in any obvious way, functional considerations; these might include the sentence-initial position of Walbiri auxiliaries, Wackernagel's second-position clitics, or the verb-second condition in German main clauses.

However, grammatical patterning typically involves considerably richer relationships between its component parts. For example, it has been shown for various kinds of data which cannot be simply dismissed as standard idioms (Payne 1997a, 1997b; Payne & Barshi 1999; Fried 1999a, 1999b) that phrases and sentences are not always, and not even most of the time, simple projections of their lexical heads. Rather, linguistic expressions often reflect the effect of interaction between constructional patterns and the words that fit in them: words, whether heads or dependents, contribute specific semantic properties to any larger construction they occur in, but a construction may also modify some of those properties, as well as add features of its own. It follows that the overall interpretation associated with a given construction may not be – and in fact seldom is – just the sum of its parts. One of the most important characteristics that are unique to Construction Grammar is its commitment to systematically incorporate this observation, by treating both words and phrasal patterns as equal contributors in building up complex linguistic expressions; a similar relationship holds in morphological structures between morphemes and words. In conformity with all this, one of the main challenges of constructional analysis is to identify the paths along which these layers interact, both for the purpose of analyzing individual constructions and for the purpose of discovering broader typological patterns.

In summary, constructions are generalizations which represent all the pieces of conventional or idiosyncratic language and which speakers have to *know* directly. What speakers have to 'figure out' are (i) the ways in which those constructions can be combined with other constructions, and (ii) the ways in which particular lexical items fit in them.

5. Defining Construction Grammar

In an encyclopedia entry, Paul Kay gives the following definition of Construction Grammar:

> Construction grammar (…) is a non-modular, generative, non-derivational, monostratal, unification-based grammatical approach, which aims at full coverage of the facts of any language under study without loss of linguistic generalizations within and across languages. (Kay 1995: 171)

However, it must be emphasized, and not just for the purpose of the present volume, that Construction Grammar can also be seen as a *cognitive* theory of language in that it is inherently concerned with the cognitive correlates of any theoretical concepts and linguistic categories the model relies on. In Construction Grammar, constructions are said to reflect all the linguistic conventions that speakers of a given language know and make use of when they communicate in that language. Linguistic competence in this model of language constitutes speakers' knowledge of the full inventory of constructions, which are organized in networks with varying degrees of complexity and abstractness. The networks can be thought of as 'grammatical maps' that are structured through *inheritance* relations (discussed and exemplified in Sections 6.5 and 6.8), where the notion of inheritance provides a coherent way of capturing which properties individual constructions have in common and what sets them apart as related, but distinct grammatical patterns. Inheritance relations are at work in any part of grammar where two or more patterns show partial overlap such that one pattern is a more constrained version of another pattern. Construction Grammar thus makes certain claims, however indirectly, about speakers and about the 'cognitive reality' of constructions: the representations of constructions in the box-diagrams are seen as depicting speakers' competence, while the networks suggest a way of relating that competence to the ways in which linguistic units may be cognitively processed.

As regards Kay's definition above, we have already discussed the view that a grammar should aim at *full coverage*. In fact, this makes Construction Gram-

mar more of a Maximalist (as opposed to a Minimalist) theory of grammar and aligns it with those approaches to linguistic analysis that characterize themselves as *usage-based*: Construction Grammar bases its generalizations on actually occurring data, in whatever form. Thus, the use of large-scale (computer) corpora as a source for evidence for what language actually looks like, is becoming more and more frequent in Construction Grammar analyses.

Another aspect of Construction Grammar that is in the focus of this volume is the extent to which it can be thought of as a *universal* theory of language. This is not an issue that can be settled theoretically; Construction Grammar *does* aspire to be an enterprise with empirical goals and to offer a valid approach to capturing cross-linguistic generalizations in terms of form-meaning/function constellations. However, Construction Grammar is not committed to a set of specific assumptions about what characteristics are to be expected as universal. The only way to assess universal relevance of Construction Grammar is to carry out detailed analyses on a large variety of languages so that sufficiently broad generalizations can be drawn.

The *non-modularity* of Construction Grammar asserts that sound, syntactic form, meaning, and function are not to be specified in separate, autonomous modules. Rather, a grammar is composed of conventional associations of form and meaning, providing holistic descriptions of complex signs. The constructions function as blueprints for the speaker/hearer, giving him or her guidelines and the semantic and pragmatic preconditions for when and how these blueprints can be used. In this manner, semantic and pragmatic information is associated with an explicitly or implicitly[3] conventional structure, respectively. Until very recently, Construction Grammar has had a fairly narrow view of pragmatics; pragmatic force and effect have been recognized primarily as conveyed through conventions of language, not in terms of conversational reasoning or socio-cultural constraints and possibilities. However, work on extending the model to account also for *discourse* regularities is rapidly increasing (Fried & Östman 2003), as is work on constructions in relation to *interaction* (Auer 2000; Lindström 2000; Thompson & Fox 2002; Wide 2002; Fried & Östman, forthcoming; Östman & Fried, forthcoming).

Construction Grammar is *generative* in the traditional, Chomskyan (1957) sense of the word: it, too, aims to account for all of the grammatical sentences of the language and only those, and to be precise and explicit, which requires some measure of formalization. Capturing generalizations in the most economical way possible, as opposed to mere listings of phenomena and facts, is thus valued in Construction Grammar.

Saying that Construction Grammar is *non-derivational* and *monostratal* means that there are no rewrite rules of the form A→B, which take a derivation from one level (the 'deep structure', 'underlying structure', 'base', or 'initial stratum') to the next (a 'shallow structure' or 'surface structure'). There are no stages of derivation, no transformations or movement; rather, all information resides at one and the same 'level of representation'. Actual constructs are thus not 'generated', but LICENSED, by particular abstract constructions. The notion of 'licensing' rather than generating brings Construction Grammar together with *constraint-based* approaches, where constructs are licensed through constraint principles. Constructions in Construction Grammar are precise expressions of such constraints.

Construction Grammar is *unification-based*, which means that constructions and specifications within constructions unify, they 'fit together' in a non-derivational fashion. The formalization of Construction Grammar is quite elaborate in its detail, but the crucial general point is that unification ensures that pieces of linguistic material that do not match ('unify') along any number and types of properties (syntactic, semantic, pragmatic) will not be licensed as possible constructs of a given language.

6. Working in Construction Grammar

In the rest of this chapter, we will give an overview of the inner workings of Construction Grammar (CxG) and introduce the key concepts needed for carrying out a linguistic analysis within this model.

6.1 Notational and analytical conventions

The CxG notation relies on three major devices: boxes-within-boxes diagrams for representing constituent structure, feature structures for detailed grammatical information, and co-indexation for keeping track of unification relations.

The nested boxes can be thought of as a more elaborate extension of a square-bracket notation. They capture dominance relations and the linear order of constituents, but since a given construction may contain a relatively large amount of information, the boxes provide convenient containers for all the details that need to be specified in order to give an accurate account of a construct or a construction. Most importantly, since CxG recognizes the distinction between construction-level and constituent-level information, the notation has to accommodate two distinct domains of representation: the EXTERNAL char-

acteristics of a construction as a whole (i.e., how a construction fits in a larger grammatical pattern) and its INTERNAL make-up (i.e., what the construction itself consists of). Crucially, specifications in either domain typically go well beyond just marking dominance relations. As a generic example of the notation, Figure 1 shows a skeletal version of a headed phrasal construction; 'headed' because it contains a constituent that serves as the syntactic head ([role head]) and 'phrasal' because it consists of more than one constituent (hence more than one box within the larger box). The internal structure is represented by a set of boxes nested inside the larger construction, which in turn is represented by the outer box. Within the larger construction, the box on the left represents the head and the one on the right its dependent ([role filler]).[4] The superscripted 'Kleene plus' symbol (+) following the box on the right indicates that there might be a variable number of dependents of this kind, but at least one must be present in order for this diagram to represent a phrasal pattern. (A 'Kleene star' symbol (*) would indicate that a construction might have 'zero or more' constituents of a given type.)

The particular order in which the individual pieces of information (*syn*(tactic), *prag*(matic), *sem*(antic), etc.) within any given box is presented is irrelevant. However, certain conventions for these lists have emerged in

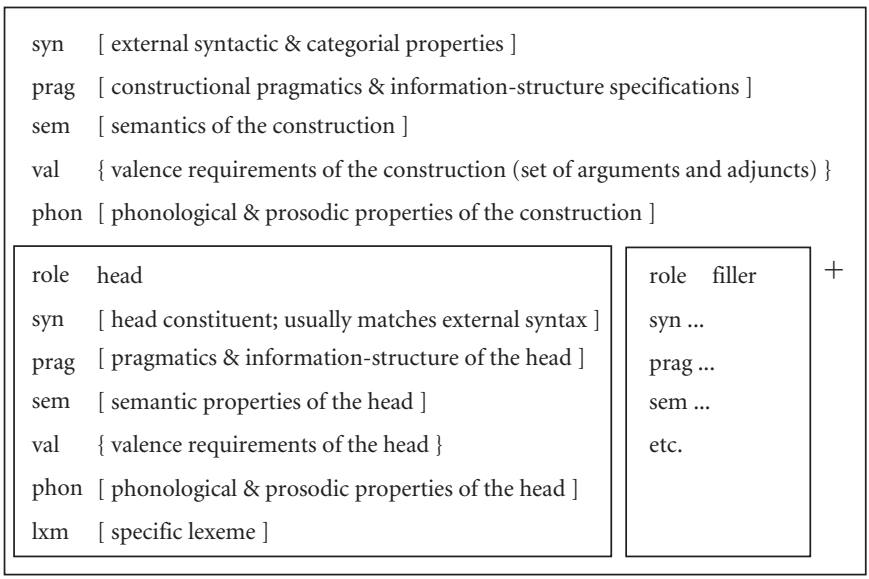

Figure 1. Generic constructional diagram

the CxG literature, and our figures in this chapter generally follow those conventions.[5]

Both the internal and external specifications may be relatively detailed in some cases, considerably constraining the inventory of lexical items or other language material that can be successfully matched with a given construction. An extreme case of such restrictiveness would be a construction that calls for a particular lexeme, such as, for example, the phrasal construction that licenses the use of the word *ago* in English (i.e., [particular types of time expression [*ago*]], as a gross oversimplification of what it would actually take to fully represent this pattern).

The distinction between the external and internal domains is not just a fancy way of marking dominance relations. It plays a crucial role in representing situations in which a construction as a whole is not just a sum of its parts but presents a more complex and less transparent relationship between the constituents and what they amount to when combined. The discrepancies between the external and internal properties may have to do either with a mismatch in form or with a non-compositional meaning of the construction; we will provide some illustrations of this phenomenon in Section 6.9, after we have introduced all the requisite detail of representing various kinds of grammatical information. For now, let us just note that the external and internal domains can be interconnected in various ways, sometimes quite transparently, but oftentimes much less so.

We need to bear in mind, finally, that constructional representation applies not only to syntactic structures, but in principle to all types of structures, including textual and morphological structures. For example, the external properties in morphological representations will be those of a word (or a stem) and the internal properties will correspond to morphemic structure (cf. Rhodes 1992; Orgun 1995, 1999; Zwicky 2001).

Constructions come in several types depending on their function in grammar. There are two complementary ways of building up grammatical patterns in CxG: constructions are constrained by LINKING principles, and by INSTANTIATION principles.

For instance, constructions that contain predicates[6] (i.e. complement-taking entities) need to specify how semantic arguments are expressed in particular grammatical patterns. In CxG this is the task of LINKING CONSTRUCTIONS, which capture the alignment between predicate-specific semantics and the corresponding grammatical or morphosyntactic function; the alignment is mediated by the predicate's VALENCE. Linking constructions are discussed in detail in Section 6.5.

In contrast, instantiation principles constrain the grammatical realization of constituent structure and other types of syntactic dependencies, including linearization patterns. This aspect of grammatical structure is captured by PHRASAL CONSTRUCTIONS (discussed in Sections 6.3 and 6.6) and ORDERING CONSTRUCTIONS (Section 6.7). A phrasal construction represents a conventionalized structural configuration that necessarily consists of more than one constituent (linking constructions are thus non-phrasal, as they do not involve any dominance or precedence relations). Examples of phrasal constructions in English would be a verb phrase construction, a coordination construction, a determination construction, a subject-predicate construction, or a *wh*-question construction. However, depending on the type of grammar a language has, phrasal constructions may take on other shapes and functions as well. Representing linear order, for example, might be an integral part of a phrasal construction (as is the case in most English constructions), but if word order is independent of phrase structure, then the sequence of elements is more accurately represented by positing an ordering construction, whose internal structure is motivated by other principles (e.g., by information structure). Strictly speaking, ordering constructions are thus a special kind of phrasal constructions.

It is important to note that the physical order of constituents as illustrated in Figure 1 does not represent any *a priori* universal assumptions about word order. While the physical sequence of boxes has been used to indicate the relative order of constituents within a particular construction in a particular language, there is nothing in CxG, conceptually or representationally, that would prevent us from devising a notational mechanism for indicating that the order of the boxes (constituents) is not to be taken as fixed or even relevant in the representation of a given hierarchical configuration. The notational conventions of CxG are, in principle, flexible enough to capture ordering generalizations in both fixed-word-order and 'free'-word-order languages. (Some aspects of capturing variable word order within a constructional approach are sketched in Fried, 1994a on the example of the second-position clitics in Czech.)

As we have pointed out earlier, the inventory of constructions is not limited to syntactic patterns. Words and other lexical units are also treated as constructions, referred to as LEXICAL CONSTRUCTIONS, and represented through the same formalism. Some examples of lexical constructions will be given in Sections 6.3 and 6.4.

To summarize, the generic template in Figure 1 does not constitute a predefined pattern into which all constructions of all languages are expected to fit in the same way. The actual shape of any given construction will depend on var-

ious factors that enter into forming a particular generalization about speakers' grammatical knowledge. By definition, every construction has to carry information about the conventional association between form on the one hand and its meaning or discourse function on the other, but the details and the amount of information in each dimension will differ depending on what is idiosyncratic to a given form-function pairing versus what can be 'figured out' from other parts of the grammar. The formal side thus may include any subset of syntactic, morphological, or phonological information, while the functional side will involve various combinations of inherent meaning, pragmatics, or discourse structure information. Valence represents a somewhat special category in that it may contain information both about semantic arguments and their formal properties, such as syntactic function or morphological case.

6.2 Feature structures

Grammatically relevant information is represented in the form of bracketed attribute-value pairs that are organized into sets, known as 'attribute-value matrices' (AVMs). An attribute represents a particular property (i.e., a linguistic category – syntactic, semantic, pragmatic, prosodic, etc. – relevant in a given construction), and the 'value' is a specification of that property in the construction. One of the issues of major importance for any theory, CxG included, is to determine what elementary categories are relevant for adequate description, analysis, and representation of a grammatical pattern at hand, and in general. The strategy in CxG as a data-driven approach has, for the most part, been to depend on the linguistic facts of a given language for suggesting what such categories might be. It is true that many of the categories used in published studies have been rather English-centered, given the fact that most detailed constructional work has been done on English. As we have already noted, however, it would be inaccurate to conclude, therefore, that CxG operates with an *a priori* determined set of attributes that would necessarily function as universal primitives. It does not.

Some examples of the attributes that existing analyses have used in describing and analyzing particular linguistic domains are listed in Table 2. Ultimately, it is of crucial importance that the values make up a system such that each alternative value is defined in relation to other possible values of a given attribute; it cannot be just a random list.

Depending on the nature of a given attribute, its value will be assigned in one of three ways. If it is a binary feature, the value will be + or – (for example, finiteness and definiteness have been treated in this fashion). If it is not a binary

Table 2. Partial list of grammatical attributes and their values

	Attribute	Values
Syntactic domain:	lexical category	N, Adj, V, P, …
	finiteness	+/– (or fin/non-f)
	grammatical function	subj, obj, obl, …
Semantic domain:	number	sg/dual/pl/…
	definiteness	+/–
	semantic role	agent, patient, theme, …
Prosodic domain:	prosodic constituent	word, phrase, clitic, …
	intonation	falling, …
	stress	primary/secondary/null
Pragmatic domain:	activation in discourse	null/active/accessible
	register	formal/informal

feature, either a particular value from a set of possibilities will be assigned (for example, lexical category), or the value will be another AVM, i.e. another set of attribute-value pairs, nested within a higher-level AVM. However, it is also an important characteristic of CxG that it permits a value to remain 'unspecified', marked by a pair of empty brackets [ ], irrespective of whether the feature is binary or not. This notation is not to be confused with a pair of brackets filled with three dots [. . .] that is often found in more complex diagrams. The notation [. . .] is a typographical shortcut for indicating that a value needs to be specified but presently is not spelled out (for reasons of space, or because it is not the focus of interest at that stage of the argumentation). Another convention that is commonly used with certain attributes is to enclose a piece of prose in single quotes (['prose description of a value']). This practice reflects the fact that the details of the property in question have not yet been worked out systematically in terms of feature structures. Not surprisingly, the prose descriptions are most common in the semantic and pragmatic domains.

To exemplify how the feature structures work, we can start by elaborating on the representation of the head constituent in Figure 1. Minimally, we have to specify (i) that it functions as the head of the larger construction and (ii) whether it is itself a phrasal constituent, or a lexical item. These two properties are expressed through the features *head* and *level*, respectively, in the following, very partial, representation. Figure 2 reads as follows: a head constituent will be of a particular lexical category (*cat*), it will be instantiated either by a particular lexical item or by a phrase (*lex*), and it may or may not be further expanded (the maximality feature, *max*). The three dots '. . . ' indicate that additional information would be present in a full representation of this pattern.

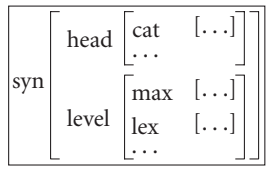

Figure 2. Generic specification of a syntactic head

Both the *head* and *level* attributes illustrate the nesting of AVMs: the value of each is another AVM. The abbreviation *syn* indicates that we are specifying syntactic properties, and that *syn* itself is an attribute with everything to its right forming its value (in the form of nested AVMs).

By filling in particular values, we can capture the specific options available for these attributes. For example, if the head is a verb, the category will be specified as such – [head [cat v]] – and different combinations of values for the *level* attribute will correspond to different verb forms, exemplified in (10).

(10) a. [max +, lex +] maximal lexical predicate, e.g. *sang*
b. [max –, lex +] lexical predicate that must be expanded *sung*
c. [max +, lex –] maximal phrasal predicate *can sing*
d. [max –, lex –] phrasal predicate that must be expanded *been singing*

Here, the specification [max +] indicates that the expressions *sang* and *can sing* may not be further expanded (we do not say **He has sang* nor **He will can sing*); [max –] in (10b) or (10d) indicates that the element requires a phrasal companion (we do not say **He sung/been singing the national anthem*); [lex +] represents a lexical element; and [lex –] represents a phrasal element.

The attributes just discussed (*syn, head, level, cat, max*) apply across lexical categories but there are also features that are specific to particular types of expressions. For example, a specific set of grammatically relevant semantic attributes would be found in the representations of English nominal expressions: configuration (*cnfg*), which has to do with the contrast between mass and count nouns; boundedness (*bounded*), which has to do with certain properties shared by mass nouns and plural count nouns (see Fillmore & Kay 1995 for detailed discussion and motivation for this attribute); and the distinction between common and proper nouns (*proper*); the latter two features are binary. A simple example to illustrate the use of these attributes and their values is in Figure 3, which shows lexical constructions with partial representations of the lexical entries for three nouns: the count noun *book*, the mass noun *snow*, and the proper noun *Prague*. For the moment, we are ignoring the representa-

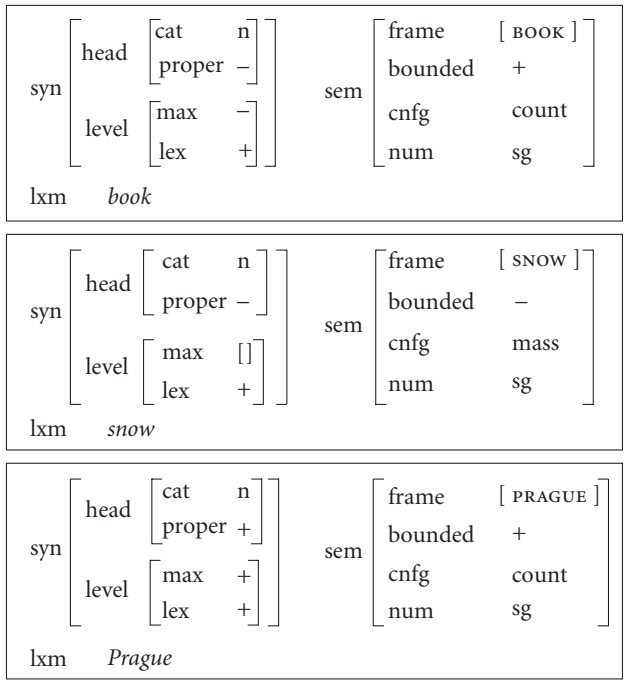

Figure 3. Examples of nominal features in English

tion of the nouns' inherent semantics beyond showing that each is associated with an interpretive frame, which contains information about the word's lexical meaning, here simply indicated by the name of the lexeme in capital letters. (More will be said about frames in the sections on predicate valence and the interaction between lexical semantics and morphosyntax.)

Grammar, however, does not consist only of tracking down the hierarchical or linear organization of words but must also address their combinatorial properties. Thus, in addition to storing information about grammatical properties of individual words in the AVMs, the representational machinery must also be able to capture various kinds of relations that hold between words within larger structures. There are several major kinds of such relationships: dominance, linear sequence, agreement, and government. As already mentioned, the linear sequence and some properties of constituent structure can be handled through the nesting and linear ordering of boxes. However, other kinds of dependencies, such as agreement, government, and certain details of constituent structure as well, require a mechanism that can access and manipulate

directly the information stored in AVMs. These kinds of relations are regulated through the unification of specific features or feature structures.

6.3 Unification in practice

In general, the task of unification principles is to ensure that attributes with contradictory values fail to combine. In Fillmore & Kay (1995), unification is defined as an operation by which two or more AVMs are combined in such a way that the resulting AVM contains no more and no less than what is contained in its component AVMs. However, not all features are automatically subject to unification in the same way. In fact, conceptually, unification covers several different linguistic processes and it is important to understand the differences.

Let us illustrate some of the issues on a simple example of combining a noun with a determiner. The lexical entry of an English determiner can be demonstrated on the example of the definite article *the* and the quantifier *much*, shown in the lexical constructions in Figure 4.

By combining the words *much* and *snow*, we get a construct that is represented in Figure 5. Focusing first just on the constituents themselves, we notice that there are apparently two types of attributes: those that cannot – are not expected to – unify and those that can and must unify.[7] The former have to do with the inherent lexical semantics of each word and their attendant syntactic properties: their lexical category (*cat*) and their phrasal/non-phrasal status (the *max* and *lex* attributes). The attributes that must unify in these constructs could be described, at least provisionally, as those semantic features that are

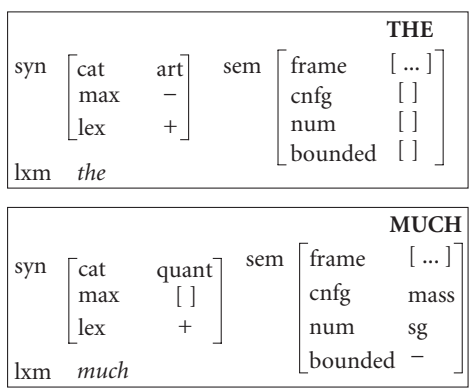

Figure 4. Examples of lexical constructions for English determiners

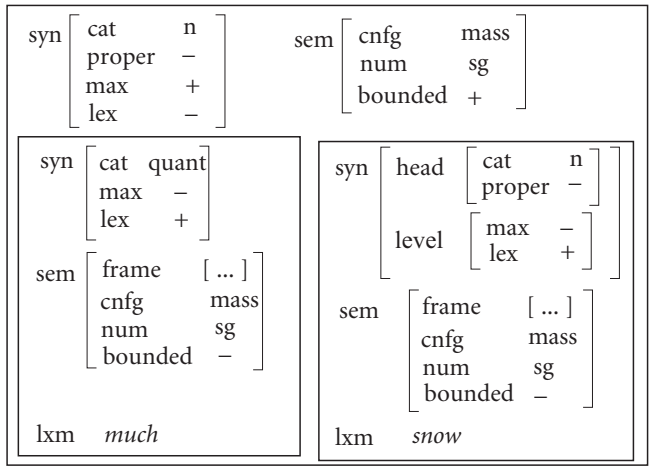

Figure 5. Partial representation of the construct *much snow*[8]

'projected' onto the phrase as a whole and constitute the basis of grammatical agreement between constituents in this particular pattern. In the case of *much snow*, the semantic specifications match each other exactly along all three attributes (*cnfg*, *num*, and *bounded*); in technical language, we would say that the corresponding semantic values of the two sisters unify with each other. Notice also that the unspecified maximality (*max*) value for *much* in its lexical entry (Figure 4) is now, in Figure 5, given the specific value 'non-maximal', as it appears together with *snow*.

In contrast, an attempt to combine *much* and *book* results in a failure – **much book* is not a well-formed English phrase, as shown in Figure 6. The failure is due to conflicting values along two semantic attributes: each constituent is marked with a different value for configuration and boundedness, and successful unification is thus impossible.

Finally, a different situation arises when we combine the nouns *snow* or *book* with the definite article *the*. As we saw in Figure 4, *the* leaves all three attributes unspecified, which is to say it does not put any constraints on its co-occurrence relations. The phrasal representations in Figure 7 show that the semantic features of the determiner are whatever the corresponding features specify for the noun.

Notionally, all these examples illustrate a situation in which unification serves as a device for handling grammatical agreement between structural sisters, along shared semantic categories with non-conflicting values. This is dif-

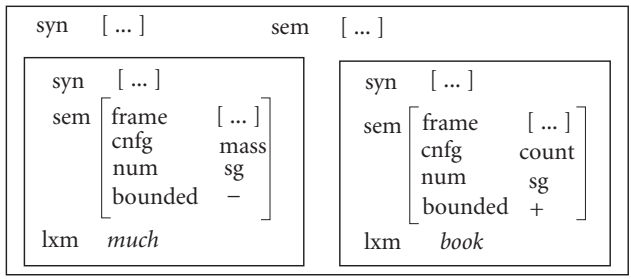

Figure 6. Partial representation of the ill-formed construct **much book*

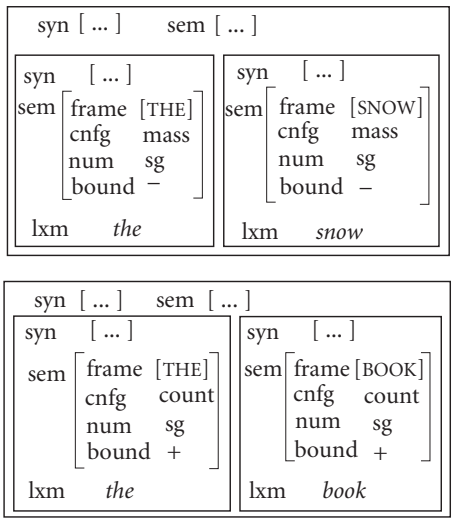

Figure 7. Partial representation of the constructs *the snow* and *the book*

ferent from the unification pattern that is associated with government relations and that will be taken up in Section 6.4 on valence.

A mere listing of the feature structures associated with each word is not enough to represent the phrase as a whole. The phrase has specific external properties that need to be represented as well; these are shown in the top portion of the outer boxes in Figure 5. In particular, we note that the construct functions as a noun phrase ([cat n], [lex –]) which is a maximal projection of a common noun ([proper –], [max +]) and which consists of minimally two constituents – a noun and a determiner – specified within the inside boxes

as part of their syntax. Semantically, it is a union of the two frames associated with the two constituents. With respect to syntactic distribution, the resulting phrase *much snow* will fit environments that require bounded entities ([bounded +], despite the fact that both *much* and *snow* are inherently [bounded –], see the discussion below), such as the direct object of certain telic transitive events. For illustration, consider the difference between *He fixed the washer in a week* or *He cleared the snow in a few minutes* (with the bounded determined phrases *the washer* and *the snow*) vs. **He fixed washers in a week* or **He cleared snow in a few minutes* (with the unbounded undetermined phrases *washers* and *snow*).

Notice also that there is a particular relationship between the construction and its constituents along several attributes. For one thing, as we see in Figure 5, the category of the head noun, including its status [proper –], is also the category of the phrase (thus instantiating the Head Feature Principle as formulated in Kay & Fillmore 1999: 9, under one particular view of headedness in CxG; cf. Michaelis 2005, for a different analysis). As for the agreement features, the constructional semantics (i.e., the semantics of the phrase as a whole) contains the semantic values supplied by the constituents for the attributes of number and configuration, as is evident from the representations in Figure 5.

Based on these and similar constructs, we can formulate a generalization about a determination pattern in English, abstracting away from the details of individual lexical elements that can instantiate it. Figure 8 contains a feature representation of the English Determination construction, i.e., an abstract grammatical pattern that licenses constructs such as *a book*, *much snow*, *the book*, *the books*, while prohibiting constructs such as **a snow*, **the snows*, **a books*, **much book(s)*, or **a Prague*.

Several things need to be noted about this construction and its representation. First of all, the construction is represented as a maximal phrasal projection of its head; the head itself could actually be a phrasal constituent as well, as indicated by the unspecified value in [lex []], allowing for the presence of a modifier (in expressions such as *the beautiful book*). As mentioned above, the construction as a whole does not need to specify any external values for the semantic attributes number and configuration. That information is supplied by the constituents and passed on to the phrase; this relationship is represented by the UNIFICATION INDICES #1 and #2, indicating a connection between the semantic attributes of the two constituents and the external semantics of the construction as a whole. Unification indices (#1–#3) also ensure that the two constituents agree along all three semantic features, whatever that value will be in a given construct. Overall, the notation tells us that the con-

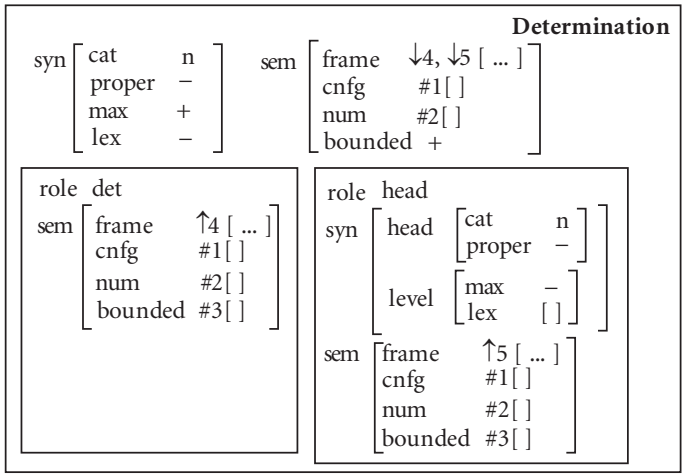

Figure 8. English Determination construction

struction as a whole does not put any restrictions on what kind of a noun or determiner is used with respect to these semantic features, but whatever the specific values, they must be the same in both sisters and two of them are also carried over onto the mother.

Finally, the semantic characterization of the construction must include information about integrating the frames of its constituents. To our knowledge, the representation of this relationship has not been worked out in any detail yet. For the purposes of this chapter and as an interim solution, we use unification indices marked by arrows as follows: the downward arrow ↓ indicates that the external semantics integrates the semantics of the constituent(s) marked by the upward arrow ↑. We will briefly return to this issue in the summary on unification in Section 6.8.

All of this stands in contrast to the boundedness attribute, however, for which the Determination construction imposes its own value, and it may or may not be the same as in the daughters. This illustrates a general point about constructions, namely, that they have defining properties of their own and their value may override a conflicting value supplied by a constituent. For example, *much snow* is a well-formed combination because both words agree in boundedness [bounded –], but the result of their combination is not [bounded –] but [bounded +], simply because that is what this construction is about: by virtue of adding a determiner to a noun, it gives the whole expression conventionally the interpretation of a bounded entity, regardless of the inherent value of the

head noun. In contrast, **much book* is not licensed because these two words conflict in boundedness ([–] vs. [+], respectively); the fact that *book* is inherently specified for [bounded +] (cf. Figure 3) and therefore not in conflict with the external semantics of the construction is irrelevant.[9]

The point about constructions being entities in their own right is further reinforced by the fact that certain combinations are ruled out not by the inherent lexical properties of the words that fit in them but by the specification of the construction itself. A case in point are ill-formed constructs such as **the Prague* (i.e. the co-occurrence of determiners and proper nouns in general, as in **The Prague is an old city*). Unification of the agreement features between the two words would be possible, just like in our previous examples, but the combination violates the constructional requirement that the phrase be headed by a common noun ([proper –] in Figure 8).

To summarize our discussion so far, the 'golden rule' for successful unification between structural sisters could be stated as follows: unification can take place only on condition that the relevant pieces of information do not conflict. This means that two values either have to match exactly or at least one must be unspecified. This principle holds both for the cases of unification we have seen so far and for the dependency relations known as government, which will be discussed in Section 6.4.

A problem for strict unification as described above arises in cases in which two words are apparently allowed to combine into a phrase even though their inherent specifications are in conflict – either with each other or with the construction they occur in. For example, it is possible to say *The Prague I remembered was completely different* or *There are really two Californias* or *Bring us three coffees.* Yet, the first two expressions violate a syntactic requirement of the Determination construction and English pluralization, respectively, while the third one violates the inherent configuration of the noun *coffee* as a mass noun. The standard way of dealing with these patterns has been to posit a feature-changing lexical construction (cf. Fillmore & Kay 1995, Chapter 3), which essentially creates a new lexical item. An example of such a construction would be the shift in status from proper to common noun, shown in Figure 9.

The representation correctly captures the fact that the change in certain attribute-value specifications is necessarily associated with a change in interpretation, in the diagram informally stated as 'a portion or chronological stage' within the meaning description through the associated semantic frame; this feature is not part of the basic meaning of *Prague*. It is, then, this special lexical construction, not the 'basic' one shown in Figure 3, which unifies with the Determination construction in order to license the construct *the Prague*. Never-

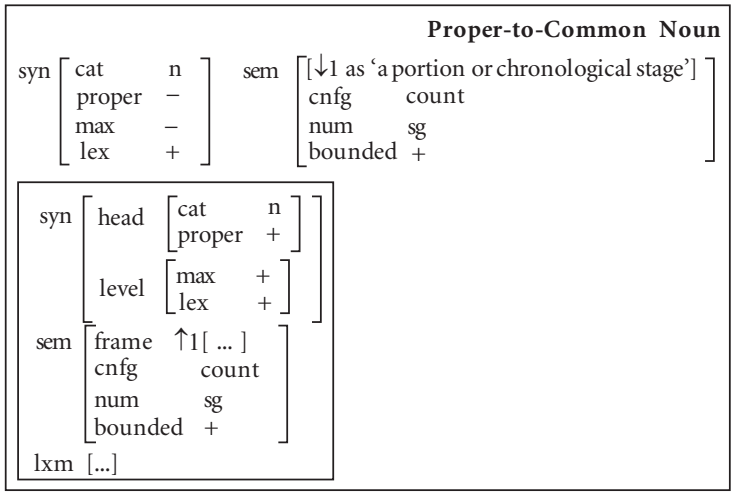

Figure 9. Proper-to-Common Noun construction in English

theless, it remains open to discussion whether this is indeed the most satisfying solution to such cases of 'accommodation' or, to use Pustejovky's (1995) term, semantic coercion.

The weakness of strict unification consists in losing sight of the motivation for the shift. It is precisely by virtue of attempting to use an inherently maximal proper noun in a determination pattern that the noun has to be interpreted as a non-maximal common noun: the Determination construction 'coerces' that reading and the extent to which such an apparent unification failure can still be accepted by speakers will depend on various contextual factors. An even stronger argument can be made in case of the count-mass mismatches, in both directions, where it is even less obvious for individual nouns why some undergo the shift more readily than others (cf. *Bring us three coffees* vs. *Termite Tim had too much book for dinner*). It would be more in the spirit of CxG to treat these shifts as examples of stretching the 'blueprint' by failing some of its specifications, thus also capturing the cline in acceptability of such shifts. Notice that this kind of stretching is a general tendency in language use. For instance, our earlier example of the pattern [particular types of time expression [*ago*]] can be extended to *three cigarettes ago* or *three girlfriends ago*, where the inherently non-temporal noun phrases *three cigarettes* or *three girlfriends* are interpreted as measures of time elapsed simply by virtue of appearing in this grammatical pattern.

It is a known fact that hearers always first attempt to interpret a piece of language, however imperfect, rather than simply reject it out of hand. In other words, what we are faced with here is not so much an issue of the inherent meaning of nouns as an issue of *usage* in context, and simply positing feature-changing lexical constructions obscures this important dimension.

6.4 Valence

In describing and representing the combinatorial possibilities of individual lexical items, a whole different set of issues arises when dealing with complement-taking entities (verbs, adpositions, nouns, or adjectives) and their place and role in constructions. Generally, we must address the association between event participants required by the meaning of a given predicate and the morphosyntactic realization of those participants. Moreover, we must have a way of integrating those participants in the structure of the morphosyntactic pattern(s) they occur in. Let us start with the first question, which can be broken down into two more specific problems: how many and what types of complements are required by a particular word.

If we take verbs as a representative example of complement-taking entities, we are struck by several observations. First, a single verb may appear in sentences with a varying number of constituents, as shown by the examples in (11).

(11) a. This time Peter carried the bags for me to the car.
b. Peter carried the bags.
c. ??Peter carried.

While the verb *carry* may appear with a relatively large number of phrasal companions, as in (11a), there seems to be a limit to the minimum number required for sentences with *carry* to be well-formed. The awkwardness (at least out of context) of (11c) suggests that two participants would be necessary for a minimally complete sentence. However, this need not hold up as a cross-linguistic generalization, as suggested by the corresponding Turkish examples in (12) with the verb *taşı–* 'carry': (12c) has only one overt nominal and exemplifies a perfectly ordinary Turkish sentence.

(12) a. *Şimdi Ahmet torbaları benim için arabaya*
now Ahmed.SG.NOM bag.PL.ACC 1.SG.GEN for car.SG.DAT
taşıdı.
carry.PST.SG
'This time Ahmed carried the bags for me to the car.'

b. *Ahmet* *torbaları* *taşıdı.*
Ahmed.SG.NOM bag.PL.ACC carry.PST.SG
'Ahmed carried the bags.'
c. *Torbaları* *taşıdı.*
bag.PL.ACC carry.PST.SG
'[He/she/it] carried the bags.'

Moreover, it is evident from the English examples in (13) below that it is not just a matter of numbers anyway; both (13a) and (13b) have two complements and yet, neither is a well-formed sentence.

(13) a. *He carried for me.
b. *This time carried to the car.

Although *Peter* and *bags* constitute an acceptable minimum of roles, any other combination of any two complements found in (11a) does not. And finally, the one-complement Turkish sentence in (12c) is still different from other one-complement patterns, such as the Russian example in (14), even though they look superficially identical in that the single complement in both is an accusative-marked constituent.

(14) *Menya* *tošnilo.*
1SG.ACC nauseate.PPL.SG.N
'I feel sick/faint.' (lit. something like 'fainted me')

The crucial difference between the examples in (12c) and (14) consists in the fact that the carrier in (12c) can be inserted in the form of a nominative NP, and its presence or absence in a given utterance depends on its role in discourse, while the cause of the faintness in (14) cannot be expressed under any circumstances because the verb *tošnit*' 'nauseate' simply does not express that aspect of what it means to experience nausea.[10]

Different verbs, then, display different expectations both for the number and the type of minimally required complements. For example, some English verbs require only one (*blush*, *work*, *jump*), others require two (*carry*, *love*, *appeal*, *destroy, seem*), while still others must have three (*put*, *place*, *donate*), and others may not have any (*rain*). These co-occurrence requirements are contained and specified in the VALENCE of the predicate, which is part of the predicate's lexical specifications and consists of a list of just those event participants that are minimally necessary in morphosyntax to express the meaning of a given predicate.

In dealing with issues of lexical semantics and grammatical patterning, CxG incorporates the scene-based approach to meaning known as Frame Se-

mantics (Fillmore 1982, 1984, 1986b; Lambrecht 1984; Fillmore & Atkins 1992, 1993; Atkins 1994; Fillmore, Wooters, & Baker 2000; Johnson et al. 2001), in which the meaning of words is "relativized to scenes" (Fillmore 1977:73) and the essentials of any particular scene are stored in conceptual entities called 'interpretive frames' (Fillmore 1982). A frame represents a fixed structure imposed on our conceptualization of an event of a particular type and must specify, among other things, the number and type of participants (FRAME ELEMENTS) necessary for 'enacting' the event denoted by a given predicate (cf. the 'situational roles' of early Case Grammar and Frame Semantics). This structure is fairly specific and idiosyncratic because the conceptualization is to a large degree shaped by cultural, social, and individual backgrounds; yet, the structure is taken to be similar enough among speakers of the same language to allow co-interpretable abstractions and generalizations.

The fact that the conceptual structure associated with words is built around the notion of relatively complete scenes also provides the crucial link between the predicate-specific frame elements and the more abstract, generalized semantic roles.[11] Frame elements (*FE*) are entities relevant to modeling lexical meaning (roughly equivalent to what Dowty 1991 calls 'individual roles'), whereas semantic roles are linguistically motivated abstractions in that they pick out specifically those properties that tend to display the same behavior in morphosyntax (recall our earlier discussion of examples (1–4) in Section 2.2). For example, the frame associated with the English predicate *carry* may contain the following elements: carrier, carried thing, destination, container, manner, etc., while in the frame for, say, *steal*, the elements include a thief, stolen thing, source, owner, value, container, manner, etc. The frame for Russian *tošnit'* 'nauseate' might contain an experiencer, a cause of the physical state, perceptual mode, intensity, and so on. However, the fine-grained, frame-based distinctions between participants are often far too specific for drawing generalizations about syntactic patterning. The passive in English, for example, does not differentiate between 'carrier' and 'thief': passivization applies equally well to both predicates (*The box was carried / stolen by Peter*). Semantic roles thus serve as generalizations over the most salient properties of large sets of frame participants, and saliency is understood with respect to their role in a given event type.[12]

The lexical representation of predicates thus must consist of two layers of information: a frame and a valence. The frame captures all the idiosyncratic information needed for our understanding of the meaning of a given predicate. The valence, in contrast, represents the corresponding event pattern in a highly schematized form, and though it represents a subset of frame elements, it is not

necessarily fully predictable from the frame (cf. also Mosel's 1991 arguments for the unidirectional nature of this relationship). As a result, languages may differ from each other in the correspondences between frame elements and valence elements, and these differences may be projected all the way into the syntactic expression.

By now classic examples of valences representing idiosyncratically assigned structures on the same set of participants are pairs such as *buy* vs. *sell*, each of which presents the same transaction from the perspective of a different participant (Fillmore 1977). Differences of this sort can manifest themselves through distinct morphemes (*buy*/*sell*), or through the same morpheme with multiple valences (e.g., the *load* cases in English: *Peter loaded the truck with hay* / *hay onto the truck*). The idiosyncratic nature of these perspectivizing processes also explains why they may differ from language to language. For example, the verb *fill* in English only allows one perspective (therefore has one valence only), whereas its equivalent in Turkish behaves like the English *load* verbs: *dol-* 'fill x with y'; 'fill y into x'.

A valence thus contains a set of semantic roles, each of which is directly linked to a particular frame participant on the one hand and to its corresponding morphosyntactic expression on the other (cf. also Guerssel et al. 1985; or Jackendoff's 1987: 405 view that an argument structure can be described as an abbreviation for the part of conceptual structure that is "visible" to syntax). This does not entail, however, that all predicates behave uniformly with respect to the level of detail at which frame-specific semantic information is passed onto morphosyntax. Individual predicates may differ in what they make 'visible' to syntax through their valence, ranging from fully specifying every detail and thus severely constraining the morphosyntactic patterns a predicate can appear in, to specifying relatively little, which leaves room for wider distribution and availability to a wider range of grammatical patterns. The notion of underspecification is thus an important feature in valence representation. A trivial example is the degree to which animacy and volitional involvement play a role in determining the range of permissible subjects, differentiating between very permissive systems (e.g. English, where almost anything can be a subject), very restrictive ones (e.g. Kannada, where subjecthood correlates strongly with volitional control, cf. Bhat 1991), or something in between (e.g. Russian). Such differences will be reflected in the value associated with the semantic role attribute, marked by the symbol θ: it may be a name of a specific role, it may be left unspecified (marked by empty brackets [ ]), or it could, ultimately, be itself a feature structure, if it turns out that these roles are best represented as

combinations of more elementary semantic features such as animacy, control, affectedness, etc.

The number of arguments, their links to corresponding frame elements, and the semantic roles associated with them are specified in what is called a 'minimal valence', which is a lexical construction representing information that is idiosyncratically connected with a particular lexical item. However, co-occurrence restrictions are not limited to specifying just the number and type of arguments. The constructional representations also have to have a way of capturing the fact that certain arguments may show 'privileged' behavior with respect to coding as well as to morphosyntactic constraints on their distribution; for example, a particular argument is more likely to function as the subject in active sentences, or to be marked by the nominative case. CxG does not subscribe to the notion of a universal hierarchy of semantic roles that would automatically predict for any given valence in any given language which semantic role is the privileged one. Since such hierarchies tend to be problematic (cf. Ladusaw & Dowty 1988; Engdahl 1990; Fillmore & Kay 1995; Davis 1996; Sells 1998), Fillmore & Kay (1995) maintain that semantic prominence should be treated as a predicate-related phenomenon (cf. also Levin & Rappaport 1995), at least in the absence of any better alternative. The privileged status, if present, is also marked in the minimal valence of each predicate and identifies an argument that maps onto the subject function in active clauses. Such an argument is labeled 'distinguished argument' (*DA*), using a binary value [DA +/–].

Valences are represented as lists of elements enclosed in curly brackets and separated by commas, {. . . , . . . }; each element is again a feature structure, which specifies, through the *rel*(ationship) attribute, the kinds of relationships that an argument holds to the verb (i.e., as a specific semantic role or as a grammatical function, or both). The two examples in Figures 10 and 11 show, respectively, the lexical entries for the English verb *carry* and the Russian verb *tošnit'* 'nauseate'. The representation indicates that English speakers must know that in an active sentence, the agent argument of *carry* will have the form and behavior of grammatical subjects; the agent is thus specified as [DA +]. Correspondingly, speakers of Russian must know that none of the frame elements in the frame TOŠNIT' will turn up in the nominative and behave like a grammatical subject (i.e., the predicate has no distinguished argument in its valence). Abbreviations for θ-values include *agt* 'agent', *pat* 'patient', *exp* 'experiencer', *stim* 'stimulus'.[13]

The 'inherit' statement ("inherit Subject construction") in the lexical representation of *carry* is an expression of what Fillmore & Kay (1995, Chapter 8:27) call the SUBJECT PRINCIPLE: "Every fully specified verbal valence has a

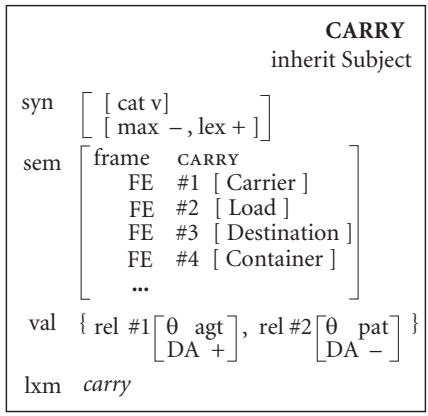

Figure 10. Minimal valence of *carry*

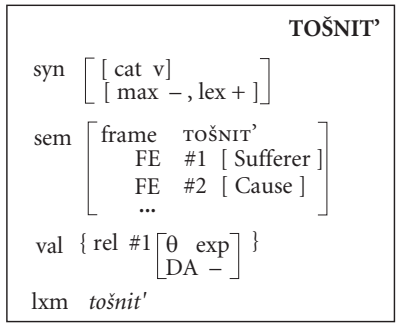

Figure 11. Minimal valence of Russian *tošnit'* 'nauseate'

subject gf [=grammatical function]". By including this requirement, the lexical construction in Figure 10 captures the type of grammar English has with respect to the obligatoriness of grammatical subjects. In contrast, the lexical entry for the Russian verb *tošnit'* 'nauseate' (or any Russian verb, for that matter) does not call for inheriting a subject construction because syntactic well-formedness of Russian sentences does not depend on the presence of a subject constituent in the same way it does in English.[14] The Subject construction for English would have the form shown in Figure 12, expressing the following information: any lexical construction of the syntactic type 'verb' must unify with a linking construction (see below) that provides a subject valence slot.

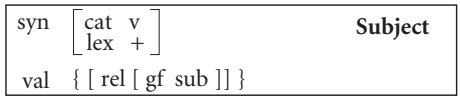

Figure 12. English Subject construction

The present approach to the privileged status and its relationship to grammatical subjecthood might well turn out to be an interim solution, which may at some point be replaced by a less stipulative treatment when the semantic valence structure is fleshed out so that the distribution of the semantic privilege follows from the inventory and organization of event types.

6.5 Linking

The semantic roles listed in the minimal valence mediate all regularly occurring associations between syntactically relevant frame-level participants and their morphosyntactic expression. These associations are represented in the form of linking constructions, which express generalizations about matching a particular semantic argument (agent, patient, location, etc.) with its canonical expression in a specific grammatical pattern. Marking the form may involve different kinds of representation, depending on the language type (case marking, grammatical functions, word order, or a combination thereof). The general relationship between lexical meaning of predicates and the morphosyntactic expression of their arguments can be schematically summarized as in Figure 13 (adapted from Fried, in press), which is a generic template for any syntactically two-place predicate.

Let us now illustrate some of the issues involved in formulating linking constructions. A simple example can be taken from the English transitive pattern. The set of sentences in (15) contains predicates with different frames

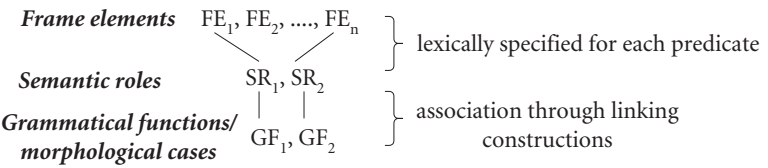

Figure 13. From frames to morphosyntax

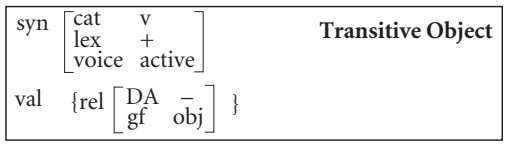

Figure 14. English Transitive Object linking construction

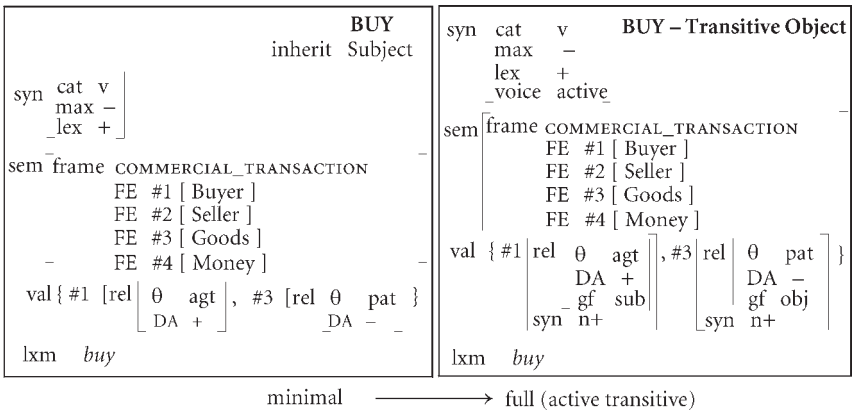

Figure 15. From a minimal to a full valence (active transitive)

and different minimal valences (shown to the right of each example, in an abbreviated form), but they all are instances of the same syntactic pattern.

(15) a. The result *pleased* him. {[rel [θ stim, DA +]], [rel [θ exp, DA –]]}
b. Sam *bought* a house. {[rel [θ agt, DA +]], [rel [θ pat, DA –]]}
c. We *received* your letter. {[rel [θ goal, DA +]], [rel [θ theme, DA –]]}
d. Everybody *heard* you. {[rel [θ exp, DA +]], [rel [θ stim, DA –]]}

All of these examples involve unification between a particular lexical predicate and the Transitive Object linking construction, which specifies – as represented in Figure 14 – that it expects to unify with a lexical verb in an active voice form and that the non-DA argument in the verb's valence must be linked to the object function.

Thus in (15b), for example, the lexical specification for the verb *buy* (shown on the left in Figure 15) unifies with the Transitive Object linking construction, resulting in a full valence specification (the right-hand box in Figure 15). Notice that the full valence also spells out the information provided by several other constructions which we will not elaborate here: (i) the subject

construction required by the lexeme *buy* and (ii) the constructions responsible for assigning lexical categories to the arguments. Fully specified valence, then, includes the following information: the number and type of frame elements relevant to syntax (indicated by the unification indices, here marking Buyer and Goods), the nature of the semantic relation that each argument bears to the predicate (the θ feature), the grammatical function of each argument (*gf*), and the syntactic type of each constituent (the *syn* feature in the valence).[15]

Before we proceed, let us return to two typologically relevant points introduced earlier, and how they relate to the representations used so far. First, CxG does not claim that a given construction must have universal status and be present in the description and representation of every language. We already noted that the Subject construction, as specified above for English, is not a necessary part of the constructional inventory in a language like Russian. And as more and more research has shown, the absence of this construction – and, consequently, any other grammatical pattern that targets grammatical subjects – will figure in describing many other languages as well (e.g. Schachter 1976; Foley & van Valin 1977; LaPolla 1990; Bhat 1991). And secondly, CxG does not assume that a particular syntactic or morphological attribute must be present in the description of all constructions with a similar external function. For example, the morphosyntactic properties of the DA argument in a simple assertion can be defined through reference to discourse roles, grammatical functions, morphological case, or a combination of these – or other – categories. With respect to linking, this can be demonstrated on the Russian example, in which crucial information for grammatical patterning consists largely in case marking, which is sensitive primarily to semantic roles, rather than to more abstract grammatical relations. It would be beyond the scope of this introductory sketch to discuss the arguments for this analysis (cf. for example, Nichols 1983 for some discussion; and Daneš 1968 and Fried 1994b on similar problems in Czech), but we include the construction in Figure 16 simply to illustrate one possible representation of linking in a language where grammatical functions may not be relevant to the same degree or in the same way as in English.

Linking constructions also represent phenomena known as shifts in diathesis and various kinds of alternations in argument expression, all of which involve variable alignment between semantic arguments and their expression. A very basic and familiar example can be taken from the English passive, which would be represented as in Figure 17. This construction unifies with a lexical predicate in the passive form and links the predicate's distinguished argument with an oblique function which has the form of a prepositional phrase

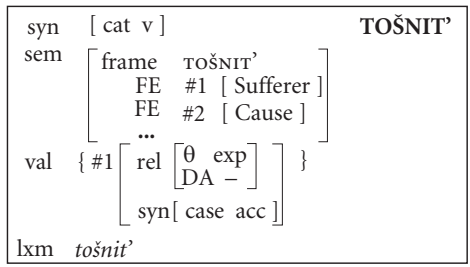

Figure 16. Linking in a case-marking language

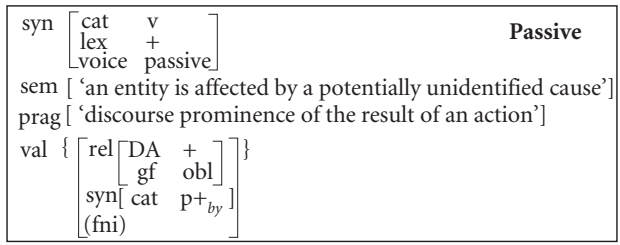

Figure 17. English Passive linking construction

headed by the preposition *by*. The fact that the DA argument (the *by*-phrase in traditional terminology) need not be expressed at all is indicated by the parenthesized 'free null instantiation' statement (*fni*) – for discussion of that feature, see Section 6.6.3. Notice further, that the construction has its specific semantics and serves a particular pragmatic function; both of these characteristics are here given as prose statements.

The way we arrive at the full valence specification of a passive verb form is illustrated in Figure 18, using again the lexical entry of the verb *buy*. We thus have in mind the passive verb form in a passive construct such as *The house was bought* (*by Sam*).

It should be clear that this treatment of the passive does not make any claim about its relationship to the active transitive pattern. In fact, the passive construction resembles ordinary adjunct constructions (cf. Kay & Fillmore 1999 for an elaborate example of an adjunct construction) in that it simply adds an optional valence element to a predicate that has a semantic potential for supplying one.

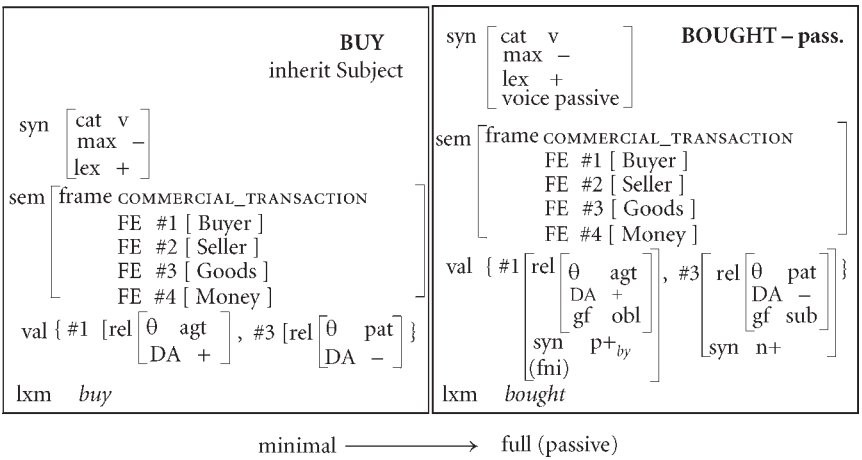

Figure 18. From minimal to full valence (passive)

In this respect, it might be tempting to consider the Transitive Object construction as a potentially argument-adding construction as well, on the analysis that it may unify either with inherently transitive predicates that simply need the second argument to be aligned with the object function (such as any of the predicates in (15)), or with an inherently intransitive predicate, resulting in a two-place pattern that mimics transitive verbs, in constructs such as those in (16).

(16) a. She'll walk you across the street.
b. Now we're talking money!

It is not clear what the correct analysis should be (or that both examples even represent a single grammatical pattern, given the special intonation usually associated with the example in (16b) but absent in (16a)). One thing is certain, though: they involve more than a simple addition of an object in the way the Transitive Object construction is formulated. Minimally, we have to note the holistic reading of the second argument (*you* and *money*, respectively), conveying a clear sense of completeness or affectedness, whether in the sense of manipulation (in the case of leading a walking companion) or simply 'having the real thing (=the topic of conversation) thoroughly under control' in (16b). This semantic feature is not contributed by the lexical meaning of either verb (*walk*, *talk*) nor by the nominal complements themselves, and would not follow from simply using the Transitive Object construction either, since that construction is not – and cannot be – associated with the 'affectedness' seman-

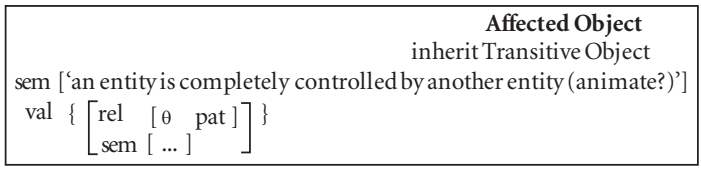

Figure 19. Affected Object linking construction

tics if it is to apply to a sufficiently wide semantic range of transitive predicates, such as the set in (15).

Semantic extensions like these provide evidence that grammatical constructions themselves have meaning, however general and abstract it may be in some cases. In order to account for constructs of the kind exemplified in (16), we need to posit another construction. This construction – we will label it Affected Object linking construction – is a semantically more constrained version of the Transitive Object construction (no doubt motivated by prototypical instances of semantically transitive verbs), along the lines of Figure 19. The relationship between the two constructions is captured through the inheritance relation, which ensures that all the properties of the Transitive Object construction are also present ('inherited by') in the Affected Object construction. The latter then adds requirements of its own, namely: a particular overall interpretation, which is not just a sum of the meanings of its parts; the semantic role patient for the object; and, possibly, other restrictions on the inherent semantics of the added object (this is indicated by the three dots within a pair of square brackets, but the validity of this analysis is an empirical issue that cannot be resolved in this space).

For illustrative purposes, we give a fully spelled out version of the Affected Object construction in Figure 20, where all the information inherited from the Transitive Object is in boldface italics.

This construction can, then, unify with one-place verbs, forcing a transitive reading on two frame elements (here, Walker and Companion, and Speaker and Topic in (16a) and (16b), respectively) that are not inherently in a transitive relationship. An example of such a coersion is in Figure 21, showing the relationship between the minimal valence of *walk* and its use in the Affected Object construction.[16]

However, the need to have a linking mechanism for adding valence elements goes well beyond simply elaborating the depicted event by adding circumstantial adjuncts of time, location, manner, passive agent, etc., or instances

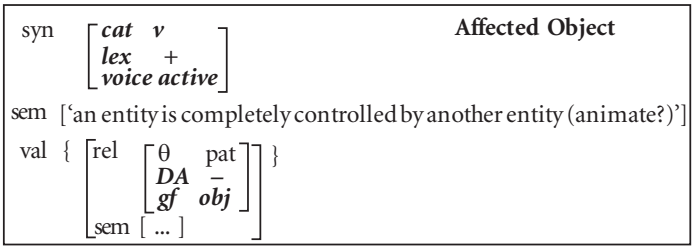

Figure 20. Affected Object linking construction, fully spelled out

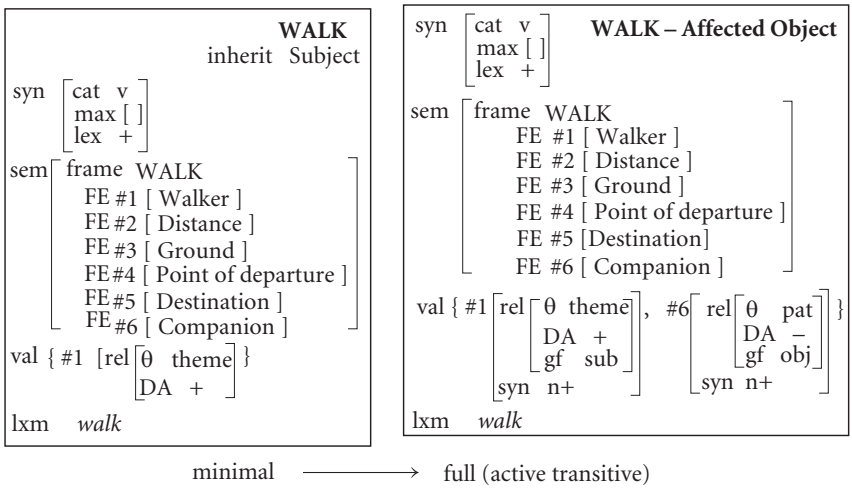

Figure 21. The verb *walk* in the Affected Object construction

of manipulating the meaning of lexical predicates by combining them with independently existing linking patterns. Sometimes participants are added that differ from the above cases in two respects: (i) on the one hand, they clearly cannot be projected by the lexical predicate (i.e., they are not even in the inventory of frame elements as potential additions), and (ii) the addition does not affect the meaning or interpretation of the lexical predicate. Yet, these extra elements are fully integrated into the morphosyntactic, prosodic, semantic, and pragmatic structure of a sentence, just like any other argument.

Well-known and apparently ubiquitous (Payne & Barshi 1999: 5) examples of such patterns include applicatives and external possessors, which were briefly introduced in Section 4 by the Maasai data. These patterns pose a seri-

ous challenge to syntactic theories that assume the clause structure to be always a direct projection of verbal argument structure. We will now illustrate some of the complexities involved in these cases as they manifest themselves in the distribution of the dative case in Czech (in just a subset of its functions), and show how a constructional analysis accounts for such patterning.

The sentences in (17) below show a single lexical predicate – *svítit* 'to emit light' – in its basic use (17a), which does not involve any dative complement, and in two instances with an added dative-marked argument (17b, c), each with a different interpretation. Note that the meaning of the predicate remains constant: all three sentences are about a source of light that is or is not in operation.

(17) a. *Lampa ještě svítí.*
lamp.NOM.SG.F still emit.light.PRES.3SG
'The lamp is still on.'

b. *Bude jim to svítit na cestu.*
be.FUT.3SG 3PL.DAT that.NOM.SG.N emit.light.INF on path.ACC.SG.F
'It'll be lighting the path for them.'

c. *Nesvítí nám baterka.*
NEG.emit.light.PRES.3SG 1PL.DAT flashlight.NOM.SG.F
'Our flashlight isn't working.'

The sentence in (17a) also contrasts with the examples in (18), which show two-place predicates that have an obligatory dative-marked complement in their valence.

(18) a. *Jemu nelze pomoct/důvěřovat/vzdorovat/ublížit.*
3SG.DAT.M impossible help/trust/defy/bring.harm.INF
'[It's] impossible to help/trust/defy/harm him.'

b. *Komu ten chleba nechutnal?*
who.DAT that.NOM.SG.M bread.NOM.SG.M NEG.appeal.PPL.SG.M
'Who didn't like the bread?' (lit. 'to whom didn't the bread appeal')

Without going into all the details (for more data, discussion, and complete representations see Fried 1999a, 1999b), let us briefly sketch how the dative-linking patterns involved in these examples form a network of progressively more specialized constructions. The example in (18a) represents the basic function of the Czech dative, which can be described as a special type of affectedness, distinct from patienthood and consistently marked in opposition

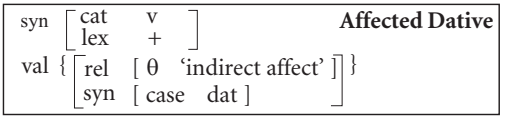

Figure 22. Affected Dative linking construction

to accusative-marked affectedness. The linking construction relevant for this use has the representation in Figure 22, specifying that an argument with the semantic role 'indirect affect' is linked to the dative form.[17]

The content of this linking relation holds also for the examples in (17b) and (17c), where the dative is added as an extra argument, but with additional constraints. In (17b) and (17c), just like in (18a), the dative-marked referent is cast as affected in some indirect way by the situation described by the predicate. However, (17b) and (17c) allow only an animate referent for the dative-marked nominal, which makes this dative reading narrower than in (18a): the plain Affected Dative is not restricted with respect to animacy. The personal pronoun *jemu* 'to him' in (18a) could be easily replaced by a semantically appropriate inanimate referent, but the use shown in (17b) and (17c) cannot, as demonstrated in (19).

(19) **Městu* *nesvítily* *pouliční*
town.DAT.SG.N NEG.emit.light.PPL.3PL street.ADJ.NOM.PL.F
lampy.
lamp.NOM.PL.F
(i) *'The street lamps didn't work for/on the town.' (i.e. 'the town suffered from broken street lamps')
(ii)*'The town's lamps didn't work [for the town's benefit].'

Starting with (17b), we have to conclude that the linking construction that licenses constructs of this kind is an elaboration on the Affected Dative. It inherits all the properties of the Affected Dative but adds the following constraints: its pragmatic purpose is the speaker's decision to introduce an interested (necessarily animate) party, and to express his/her subjective take on the event (cf. King 1998a; and Dabrowska 1997 for discussion of the empathy-related aspect of this use of the dative). Semantically, the construction casts the interested party as indirectly affected by the circumstances of the event. The result is a slight shift in the role of the dative-marked participant (indicated in Figure 23 by the provisional label 'interest'): the construction narrows the affectedness down to something like 'someone's interest in the event'.[18]

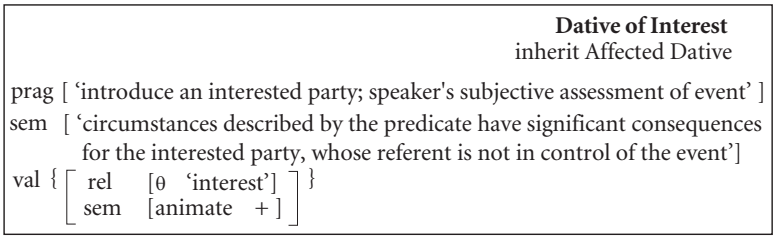

Figure 23. Dative-of-Interest linking construction

However, to invoke this construction is not enough to account for the pattern in (18c). On the one hand, the dative still marks a referent with 'interest' in the event (i.e., one positively or negatively affected by the circumstances), but on the other hand, this referent is also necessarily interpreted as the owner of the flashlight: (18c) cannot mean 'somebody else's flashlight isn't working for our benefit', but only 'our flashlight isn't working on us (i.e. for our benefit)'. No possessive relationship is present in (18b). Put differently, it is necessarily the case that the 'interested party' in (18b) is simultaneously the owner of something else in the scene *and* an affected entity, not simply one or the other (for detailed arguments see Fried 1999a; and also King 1998b).

In order to capture this complexity – a dative-of-interest reading overlayed with possession – the Dative-of-Interest construction must be further elaborated, yielding yet another linking construction – let us label it Affected Possessor – in this inheritance network. The Affected Possessor linking construction adds the POSSESSION frame that introduces the frame elements Possessor and Possessum (what is possessed). This frame must be integrated with the frame of the main predicate in such a way that the Possessor semantics unifies with the semantics of the added dative-marked element, while the Possessum unifies with a 'non-agentive' argument that is provided by the main verb (this is to satisfy the condition that the Possessum cannot be a transitive or unergative subject, but can be semantically either an affected participant or a location). Finally, the pragmatic purpose of this construction is to mark the Possessor as more prominent than the Possessum in discourse and to express the speaker's empathy with the Possessor. Neither of these conditions obtains with the use of what is considered the unmarked, NP-internally expressed possessive relationships (this is a fact that has been reported for other languages with external possessors as well, e.g. for Hebrew in Berman 1982; for Northern Pomo in

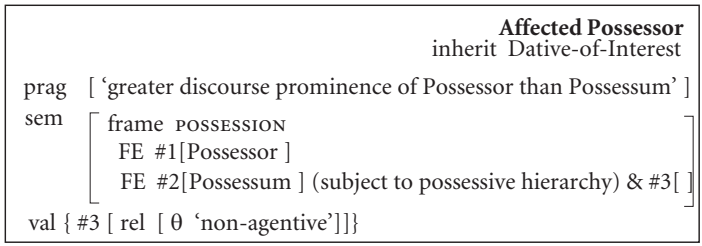

Figure 24. Affected (external) Possessor

O'Connor 1994; and for Maasai in Payne 1997a). Figure 24 is a representation of this special construction capturing the details of Czech.

Some of the instances of linking discussed here are reminiscent of the 'argument structure constructions' proposed in Goldberg (1995). However, it should be clear even from this handful of brief illustrations that the general scope and nature of linking phenomena is considerably broader than those treated by Goldberg. Goldberg discusses only a particular type of what CxG might include in linking, namely relatively elaborate cases in which a whole valence pattern (not just one added element) provides the source of a constructional meaning when unified with predicates that do not inherently occur in that pattern. In fact, meaning seems to be attributed exclusively to the constructions, while the inherent semantics of the predicates themselves is given little consideration, if any at all. Goldberg's constructions are not 'adjunct' constructions that add valence elements, but are complete event patterns, expressed as fully specified valences ('argument structures'), which make a connection between fairly abstract conceptual structures and their grammatical realization and which always involve a shift in the meaning of the predicate. Her 'argument structure constructions' are thus neither phrasal nor linking constructions as understood in CxG (cf. Kay, forthcoming; and Boas 2003 for detailing some of the main differences). Moreover, Goldberg's constructions do not seem to operate explicitly with the notion of frame in the sense of Frame Semantics (beyond simply assuming the existence of frames, without any clear connection to the constructional argument structures), but rather with a version of semantic decomposition reminiscent of Jackendoff's approach to lexical semantics, which also constitutes a marked departure from CxG.

This section has demonstrated that the content of linking constructions can be fairly minimal, such as the English Transitive Object or Passive constructions, but also quite elaborate. As the dative-marking examples from Czech

show, linking can involve a good amount of semantic and pragmatic detail and can, ultimately, lead to a network of constructions organized by inheritance relations.

6.6 Instantiation patterns

As we have just demonstrated, CxG takes sentences to be built around lexical predicates, since it is the predicate that determines a number of syntactic and semantic properties and relations encoded by a sentence. The predicate serves this crucial function through evoking a rich semantic structure (frame) that provides the participants and props in a given scene, and through canonical (or not so canonical) linking patterns that establish the grammatical patterning associated with a given predicate. This information alone constitutes the backbone of any predicate-based expression and also serves as a basis for incorporating additional complements that may not be contributed by the predicate itself but must be semantically compatible with it. However, a valence is an unordered set of primarily semantic elements and provides no information about the physical realization of arguments, such as structural dependencies or the linear order in which valence elements are instantiated.

This aspect of syntactic structure is represented in phrasal and ordering constructions, which carry information about various syntactic dependencies called INSTANTIATION PATTERNS. The English Determination construction constitutes a simple example of an instantiation pattern, illustrating a *modification* structure, where – roughly speaking – one constituent narrows down the distributional properties of its phrase-mate: it is a phrasal construction that specifies what kinds of constituents, in what relative order, and in what structural relationship, must be present in a well-formed English noun phrase of a particular type. In other words, the details of the phrase structure and the linear order do not simply follow from the inherent features of the constituents (determiner and noun) but must be specified as a conventional syntactic pattern. In comparison, instantiation principles that regulate the syntactic realization of *complementation* structures, where one constituent selects for particular kinds of phrase-mates, can be much more complex, involving a number of instantiation possibilities for a single argument. We will illustrate just a few major patterns.

6.6.1 *Direct instantiation*

The most transparent instantiation pattern involves cases where each valence element corresponds to a discrete syntactic entity ('a phrase'), which may or

may not be internally complex.[19] This is known as DIRECT instantiation and captures a relationship between two syntactic sisters such that one sister instantiates a valence element required by the other. We can use the sentence in (15b) to illustrate the two ways in which direct instantiation of complement structures works in English. Let us start with a relatively full representation of the construct *Sam bought a house*, shown in Figure 25, which approximates the level of detail that is present when a speaker produces this sentence or a hearer interprets it. It is clear that the diagram leaves out much information that would have to be included in a truly full representation: such as intonation, sentence type (positive assertion), etc., but since we are now concerned with those properties that are crucial to the issues of instantiation, we have decided to take some representational shortcuts, which we will return to later.

The outer box in Figure 25 represents the sentence externally as a verb-headed entity. Internally, it consists of two major constituents, indicated by the presence of the two boxes inside the sentence box. The one on the left represents the word *Sam* and serves as the subject of the sentence, while the larger box on the right represents the verb phrase *bought a house*. This phrase is again internally complex, consisting of the head verb on the left followed by its object complement on the right. Finally, the object complement is also an internally

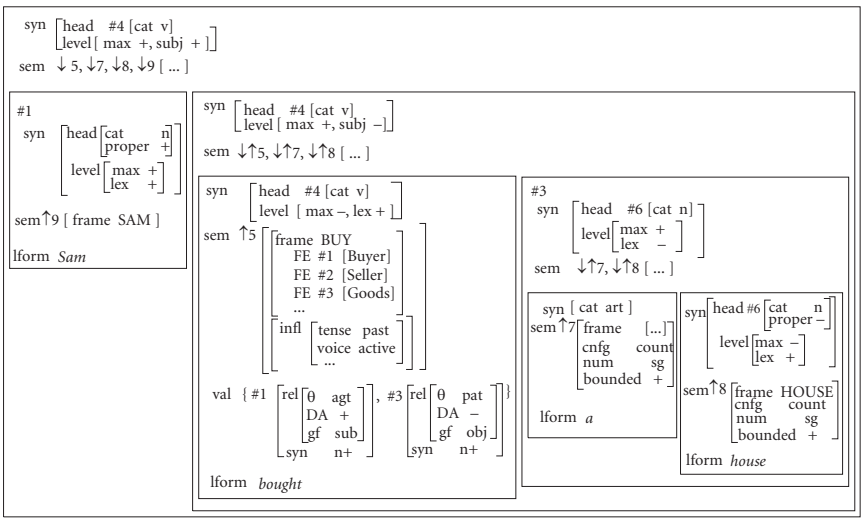

Figure 25. Representation of the construct *Sam bought a house*

structured phrase, as indicated by the two boxes inside it; it is an instantiation of the Determination construction. We will return to some of the notational details after we have discussed the constructions that contribute to licensing this whole construct, but let us note for now that (i) each constituent must include a great deal of detail about its syntactic and semantic properties (not to mention prosodic and morphophonemic properties, which, unfortunately, the limited scope of this chapter forces us to ignore altogether), both at the external and internal levels, and that (ii) all pieces of information about each word in this particular syntactic pattern eventually 'add up' at the level of the sentence.

It is important to stress that Figure 25 is only useful for representing that one particular sentence. In order to formulate a general instantiation pattern that will generate an infinite number of constructs with the same general structural and relational properties, speakers clearly abstract away from all the idiosyncracies contributed by individual lexical items and keep only those specifications that hold independently. In formulating generalizations that license this and comparable sentential constructs of English, we arrive at two phrasal constructions: the Verb Phrase (VP) construction and the Subject-Predicate (S-P) construction.

The VP construction is schematically represented in Figure 26, which shows this construction as a general instantiation pattern of English that licenses structures such as *bought a house*, *bought a house from his neighbor for a huge amount of money*, *decided that we didn't deserve her attention*, *loves it*, etc. The construction can be described as follows. In terms of its internal structure, it is a phrasal pattern consisting of at least two sisters: a head verb and at least one additional constituent – the verb's non-subject complement. In case of the verb *bought*, one complement is all that its valence calls for as minimally re-

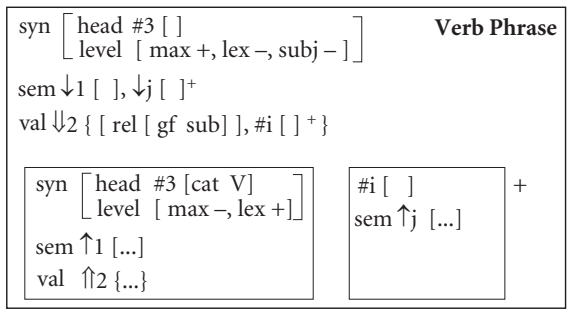

Figure 26. English Verb Phrase construction

quired, but for verbs such as *give*, *put*, *substitute*, etc., there would be two such complements, and if we add any of the optionally expressed participants contained in a particular frame, the number can be even higher (e.g., in *Sam bought a house from his neighbor for a huge amount of money*, there would be three non-subject complements). This flexibility in the minimal number of complements within the VP is expressed by the Kleene plus (which means 'one or more'), and by the unification index marked as a variable (#i), specified both in the constructional valence and in the right-hand side inner box in Figure 26. The complementation requirement is also reflected in the value of the *syn* attribute of the head: the head is a lexical item ([lex +]) that requires a certain number of non-subject complements (hence, [max –]). The head verb also brings along a specific semantic frame and a valence; these provide information both about the head's inherent semantics and about the relational properties of its arguments. Externally, the VP is a maximal phrasal projection of the head verb in the sense that its non-subject complementation is complete but its subject is still missing ([lex –, max +, subj –] in the external syntax; we will return to this definition shortly). Consequently, the VP construction has its own external valence requirement with respect to larger constructions it occurs in: namely, it must unify with a construction that will license a subject complement. Finally, the semantics of the VP construction as a whole integrates all the inherent semantics contributed by each of the structural sisters in this construction, as indicated by the downward and upward pointing arrows (single-shafted for the lexical semantic information and double-shafted for valence information; we will return to this notation in Section 6.8). (Note that the particular numbers associated with the arrows and the unification indices are totally arbitrary and only serve the purpose of keeping track of what elements go together.)

A direct instantiation of the subject complement is provided by the Subject-Predicate construction and, abstracting again from the representation in Figure 25, we can give it the following description, diagrammed in Figure 27. Its external syntax is that of a verb-headed phrasal pattern that cannot be expanded any further since its subject requirement is satisfied ([max +, subj +]). Its external semantics integrates all the semantics of its daughter constituents: both the inherent meaning and function of the subject NP and the (composite) meaning of the VP, as indicated by the single-shafted arrows. Unlike the VP construction, though, the S-P construction has no valence requirements of its own: it simply contains everything the valence of the VP requires. Internally, this construction consists of two daughters: the subject complement followed by a verb-headed constituent that requires a subject, and this relationship is in-

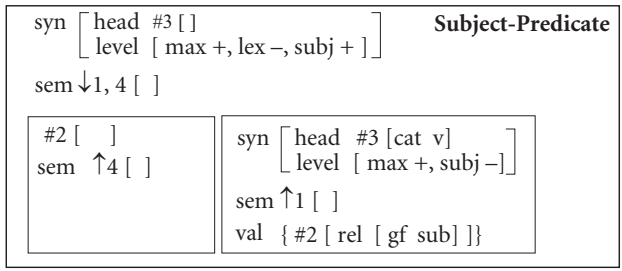

Figure 27. English Subject-Predicate construction

dicated by the coindexation (#2) between the left daughter and the appropriate valence element in the right daughter.

To summarize, the VP construction and the S-P construction are examples of direct instantiation, involving the physical realization of, respectively, non-subject complements and subject complements of a verb-headed syntactic structure. The construct in Figure 25, then, is the result of the unification of a number of constructions, each of which licenses a specific part of the overall expression and represents a specific part of English grammar: the VP and S-P constructions, the Determination construction, the Transitive Object linking construction, the lexical constructions associated with each lexical item, and several other constructions we did not discuss, such as the Subject construction mentioned in Section 6.4, constructions responsible for assigning lexical categories to the arguments, etc.

With this knowledge in mind, we can now address some of the notational issues in Figures 25–27. If we were to be precise about presenting a fully specified construct (Figure 25), all the information that resides in the inner boxes would have to be repeated in all the outer boxes as well, as an indication of the word-level information that is being passed onto the larger phrases in which the inner boxes participate. Sometimes we have done just that, as, for example, in repeating from the inside out, the semantic information within the determination construct (*cnfg, num, bounded*) or the lexical categories throughout. But we chose to simplify other parts of the representation. For example, the frame- and valence-related information that is passed from the daughters onto the mothers should have been spelled out in the mothers as well, but in Figure 25, we used unification indices instead of a full repetition, in an attempt to keep the diagram as uncluttered and transparent as possible. By the same token, unification indices should not, strictly speaking, be necessary in the representa-

tion of a construct, because everything would be spelled out and the relational information together with the instantiation pattern tells us where everything is. However, we entered some of the indices redundantly, for easier reference for readers not familiar with the formalism. Clearly, what we have in Figure 25 is different from representing constructions that license constructs like *Sam bought a house*; in constructions, only the minimum of abstract information is specified and the relationships between entities must be identified through the unification indices.

So far, we have only discussed the instantiation of multi-valent predicates, whose non-subject complements cannot be accounted for without a VP construction, i.e. without an internally complex, phrasal pattern. However, it is one of the basic features of the CxG architecture that it does not force us into generating unnecessary intermediate structure where none is justified by the actual linguistic expression. Consequently, the verb phrase machinery just illustrated does not apply to the use of simple intransitive predicates whose valence can be fully satisfied by the S-P construction alone. Notice that the way the S-P construction is formulated in Figure 27 indicates that the head daughter simply has to be an entity of the category Verb, whose only remaining valence requirement is that of a subject; it says nothing about whether or not the verb may also have non-subject complements. And since verbs are inherently unspecified for syntactic maximality (cf. the notation [max [ ]] in the valence constructions in Section 6.5 on linking), an intransitive predicate can unify directly with the S-P construction, thereby acquiring the status of a maximally expanded verbal expression, without having to form a verb phrase that would consist of the head verb only. In contrast, a transitive predicate (or an intransitive predicate with adjuncts) cannot unify with the S-P construction directly, even though there is no conflict in maximality per se; the S-P construction by itself simply does not license the instantiation of non-subject complements.

Finally, let us briefly comment on the attribute *subj*[20] since its presence makes a theoretical claim about grammatical structure – a claim that has typological consequences and might be of concern to anybody working with languages that are distinctly different from English. The VP construction is explicitly characterized as a syntactic pattern that requires, but is lacking, a grammatical subject ([max +, subj –]), in contrast with the S-P construction which licenses the requisite constituent ([max +, subj +]). These definitions also go hand-in-hand with the requirement that lexical entries for verbs contain the 'inherit Subject' statement mentioned earlier, and some other constructions that will be discussed in the next section. It must be stressed, though, that we view *subj* as a language-dependent attribute, here capturing the fact of En-

glish grammar that a well-formed sentence must have a grammatical subject. There is no intrinsic requirement (theoretical or representational) that this attribute be used in formulating generalizations about instantiation principles and sentence structure in all languages.

6.6.2 *Coinstantiation*

In addition to direct instantiation, there are various situations in which a valence element is not realized by a discrete syntactic entity, or where it is not realized in the 'expected' place. Examples of such complications include:

- DOUBLE INSTANTIATION (also known as 'extraposition'), where a single valence element is realized by two discrete pieces of linguistic material, such as *it* (as a place holder) and *that they can be so oblivious* (expressing the content of the complement) in the sentence *It is amazing that they can be so oblivious;*
- LEFT-ISOLATION patterns (also known as long-distance instantiation, or *wh*-movement in the transformational tradition), in which a non-subject complement appears to the left of the subject;
- COINSTANTIATION (including phenomena known as raising and equi-deletion, or 'control' structures), whereby a single syntactic entity instantiates multiple valence elements each of which belongs to a different valence.

Here we will only illustrate two basic examples of coinstantiation.

In general, coinstantiation phenomena can be described as syntactic patterns that contain a non-finite verbal complement (infinitival, gerundial, participial) whose subject requirement is satisfied by one of the arguments of the main predicate. Among the English predicates that exhibit this syntactic behavior are verbs (e.g. *try*, *want*, *seem*, *expect*, *persuade*, *order*), adjectives (e.g. *likely*, *difficult*, *eager*), and nouns (e.g. *fun*, *drag*, *pleasure*). They differ along two dimensions within their relational properties: the semantic role and the grammatical function of the valence element in the main predicate that coinstantiates the subject of the non-finite verbal complement. To illustrate how CxG captures the semantically based difference, we can compare the minimal valences of the verbs *try* and *seem*.

The representations are in Figures 28 and 29, which show that both verbs have two elements in their valence and that the second element is instantiated by an infinitival verb phrase (indicated by the notation [cat vp_{inf}]). The vp_{inf} serves the grammatical function of a 'complement' ([gf comp])[21] in the main clause and brings along its own frame; its content is not specified beyond the requirement that it have a frame element whose relational function is that of

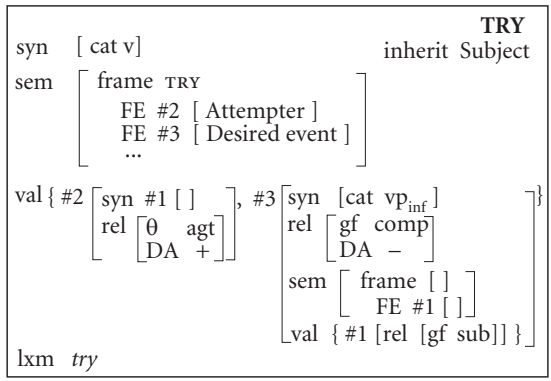

Figure 28. Minimal valence of *try*

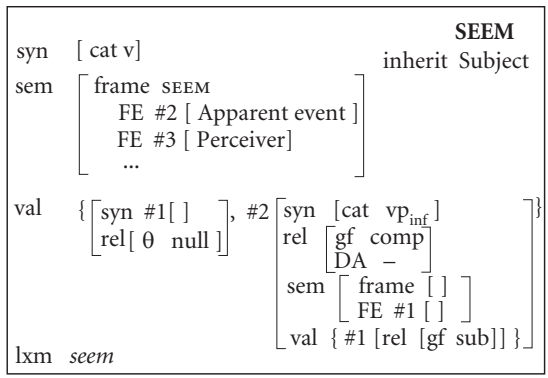

Figure 29. Minimal valence of *seem*

a subject (expressed through the notation #1 [rel [gf sub]]). This embedded subject will have the same *syntactic* properties (namely, those of a nominative NP, which will be contributed by a separate construction responsible for assigning lexical categories independently of any coinstantiation issues) as the first valence element of the main verb, but not necessarily the same *relational* properties (θ-roles or grammatical functions, as we shall see shortly). This coinstantiation relationship is marked by the unification index #1 placed at the appropriate attributes: the subject of the embedded predicate and the syntax attribute of the first valence element of the main verb. The only difference between the two verbs resides in the value of the θ-relation of the coinstantiating

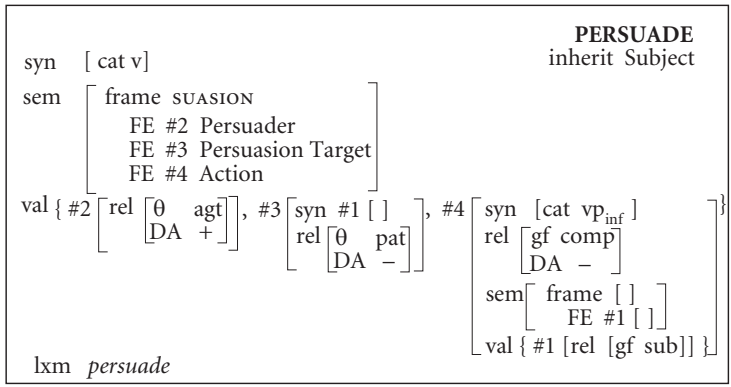

Figure 30. Fully specified valence of *persuade*

element: the *try*-class predicates assign a semantic role to the first argument, while the *seem*-class predicates contribute no semantic content to the first constituent, as indicated by [θ null] in its valence and the lack of a corresponding frame participant.

These two predicate classes involve coinstantiation between the same grammatical functions (subjects). To illustrate a case in which the embedded subject is coinstantiated by a non-subject, we can compare these examples with the valence of *persuade* in Figure 30, which represents coinstantiation between a matrix object and an embedded subject (also known as 'object control').

The same representation would apply to verbs of the *expect*-class (known as 'subject-to-object raising' in earlier transformational tradition); the only difference would be the semantics. There would be only two relevant frame participants, Anticipator and Expected event, linked to the matrix subject and the vp_{inf} complement, respectively, while the second argument in the three-element valence would have the θ-relation specified as 'null', indicating that this verb-class requires a syntactic constituent of a particular type but does not contribute any meaning to it.

Similar representations are also associated with any adjectives and nouns that take non-finite verbal complements. However, whatever the idiosyncratic details inherent in the range of eligible predicates, the generalization about their shared properties can be formulated in the shape of a coinstantiation construction, shown in Figure 31.

All that needs to be specified as idiosyncratic to this instantiation pattern and unpredictable from anything else in the English grammar is the fact that

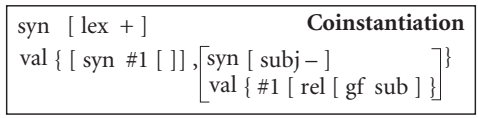

Figure 31. English Coinstantiation construction

there are lexical predicates (the [lex +] feature) whose one argument has its own valence requirement, which is of the following kind: one of the embedded valence elements has the grammatical function of subject and this requirement is not satisfied inside the embedded complement (indicated by the external feature [subj –]); instead, the embedded subject must unify with the syntactic realization of another argument of the matrix predicate. What remains unspecified is the information about the categorial properties of the eligible matrix predicates (v, adj, n), their inherent semantics, and the relational status of the matrix element that coinstantiates the embedded subject.[22]

6.6.3 *Null instantiation*

CxG also works with the notion of NULL instantiation, which covers cases where a valence element clearly required by the semantics of the head predicate is left unexpressed in certain environments. This absence can be licensed under various conditions; the reader is referred to Fillmore (1986a) for detailed discussion of the relevant patterns and examples (further elaborated on French material by Lambrecht & Lemoine, forthcoming). Here we will just briefly survey the general types.

We have seen in the English Passive construction that the agent argument can be freely left out for various communicative reasons – the referent may be unknown to the speaker, unimportant in the current discourse, intentionally left unidentified, etc. This property, labeled 'free null instantiation', is marked by the abbreviation *fni* in the valence entry of the valence element that allows such instantiation (cf. Figure 17) and its use is always licensed by constructions. Other occurrences of *fni* include generic referents in certain constructions with gerundial and infinitival phrases (e.g., *It takes a lot of courage to eat that stuff*; *Seeing is believing*) and various pragmatically conditioned interpretations of a referent that is left unexpressed but clearly involves a particular discourse participant. For example, in sentences such as *Let me tell you, it was pretty upsetting to find the house all ransacked*, the subject referent of the infinitival phrase *to find the house all ransacked* would represent a case of *fni*, but its exact interpretation can be determined only from the discourse context: the subject referent

would be most likely the speaker, it could be a third party, but it certainly would not be the hearer or 'folks in general'.

These patterns are distinct from cases of 'indefinite null instantiation', abbreviated *ini*, which are not licensed by grammatical constructions but by particular lexical predicates (i.e. by lexical constructions). For example, English transitive verbs such as *eat*, *drink*, *read*, *write*, *cook* allow the omission of their second argument, which is marked as *ini* in the lexical entries of these verbs. Indefinite null instantiation is not an exclusive property of transitive verbs, though. A different example can be taken from the class of experiential two-place predicates in Czech, shown in (20), in which the dative-marked experiencer argument can be left unexpressed under *ini* conditions: (20a) shows a full, direct instantiation of both arguments (nominative and dative), while (20b) shows the dative unexpressed, with noticeable consequences for the interpretation of (20b) as compared to (20a).

(20) a. *Jana se dětem moc líbila.*
Jane.NOM.SG.F RF child.NOM.PL.F a.lot appeal.PPL.SG.F
'The children liked Jane a lot.' (lit. 'Jane was very appealing to the children.')

b. *Jana se moc líbila.*
Jane.NOM.SG.F RF a.lot appeal.PPL.SG.F
'Jane got a lot of recognition.' (lit. 'Jane was very appealing.')

In (20b), the appeal of an entity (Jane) is understood to affect some unspecified audience whose existence is taken for granted as part of the scene of 'being appealing'. Crucially, that is the only interpretation available for the omitted constituent, even if the immediately preceding context were to contain a plausible specific referent. This is illustrated by the examples in (21) below. Sentence (21b) can be a natural continuation of (21a): the dative pronoun *mu* 'to him' in (21b) is interpreted as coreferent with *Petr* in (21a). In contrast, (21c) is incoherent as a follow-up to (21a) because of the absence of any explicit anaphoric expression that would help pick out *Petr* (or, for that matter, any other constituent in the preceding context) as a referent of the uninstantiated dative-marked argument; (21c) can only have the indefinite interpretation of 'being appealing to some general, large audience'.

(21) a. *Petr měl pro naše děti slabost.*
'Peter had a weak spot for all our children.'

b. *Obzvlášť Jana se mu líbila.*
especially Jane.NOM.SG.F RF 3SG.M.DAT appeal.PPL.SG.F
'He particularly liked Jane.' (lit. 'Particularly Jane appealed to him.')

c. #*Obzvlášť Jana se líbila.*
especially Jane.NOM.SG.F RF appeal.PPL.SG.F

To reflect this instantiation property, the minimal valence of *líbit se* 'be appealing' must mark the syntax of the appropriate valence element, as shown in Figure 32.

The examples in (21) represent a typical scenario in that the unexpressed argument under the *ini* condition is interpreted in a fairly general way ('something that can generally be cooked, written, read, eaten, appealing, etc.'). However, semantic narrowing to a very specific type of referent can occur as well. A well-known example is provided by the verb *drink*, which typically restricts its uninstantiated object to alcohol. In contrast, the *líbit se* 'be appealing' example illustrates another (unsurprising) development that the absence of a valence element invites, namely, a slight shift in the meaning of the verb itself. Here the shift goes from 'appeal to X' to 'be acknowledged positively [by some general, and large, X]'.

Yet another kind of null instantiation is 'definite null instantiation' (*dni*), which can be licensed by specific grammatical constructions, or it can be an inherent property of individual lexical predicates. The constructionally conditioned *dni* is for example associated with the subject in the Imperative construction. A case of a lexically licensed *dni* status is exemplified by the second argument of the verb *win* in the sentence *We won*. As distinct as these two examples are in a number of syntactic, semantic, and pragmatic details, they share one important feature: the omission of an argument is allowed only if its referent is present in the discourse and can be assumed by the speaker to be identifiable by the hearer. In case of the Imperative, it is part of the construc-

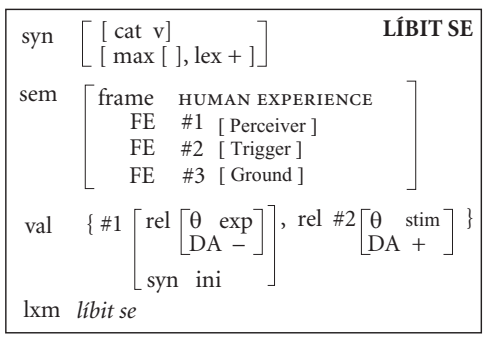

Figure 32. Minimal valence of the Czech verb *líbit se* 'be appealing'

tional specifications that the *syn* attribute of the subject of the head predicate includes the *dni* notation, in addition to stipulating in the *sem* and *prag* attributes that the referent can only be the hearer. In case of the verb *win*, it must be specified in its lexical entry that the frame element Contest can be omitted under *dni*.

6.7 Ordering constructions

Since most of the examples above have had to do with representing English syntactic patterns, the instantiation principles we have discussed so far cover simultaneously phrase structure relationships and the linear order of constituents. This fact reflects the type of grammar that English has, but it does not follow that such representations should simply be assumed to be universal. The S-P and VP constructions, for example, will not be part of the constructional inventory of a language in which grammatical subjecthood cannot be defined in the same structural terms as in English or in which the presence of a phrasal subject is not a condition of syntactic well-formedness. In a language in which a subject NP is not only not required but sometimes even cannot be supplied because the predicate valence does not provide an argument slot (cf. the Russian verb *tošnit'* 'nauseate' mentioned earlier), the use of these two constructions would amount to making the wrong generalizations about the grammar of that language.

However, many languages clearly make use of an elaborate inventory of ORDERING constructions, which determine the linear order of sentence constituents that is not necessarily tied either to constituent structure or to valence requirements. Some examples of such constructions can, in fact, be found in English as well: the relative order of locational and temporal adverbs, illustrated in (22), or the phenomena known as the 'heavy NP shift' in (23) are regulated by specific ordering generalizations that speakers of English must know (cf. Wasow 2000 for a systematic analysis of the factors that play a consistent role in these shifts).

(22) a. I found the letter on that bookshelf in a few minutes.
b. *I found the letter in a few minutes on that bookshelf.

(23) I found on that bookshelf several letters that had been addressed to me and never delivered.

However, ordering constructions represent a fairly minor subset of instantiation patterns in a language like English, while they are of central importance

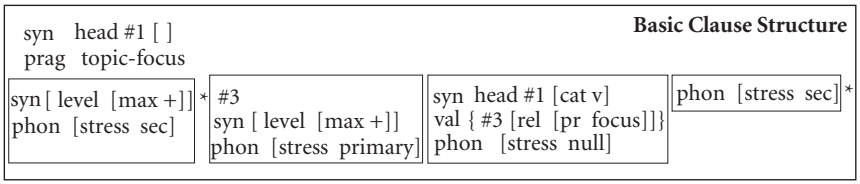

Figure 33. Basic Clause Structure ordering construction in Hungarian

in languages with discourse-motivated word order; in such languages, ordering constructions typically represent more elaborate generalizations. A brief example can be taken from Hungarian, in which the basic sentence pattern is a sequence of positions that reflect the instantiation of discourse functional relations, rather than grammatical or syntactic ones. A construction that might capture such an instantiation pattern would have to stipulate minimally the following information (based on the analyses in Kenesei 1986; Vogel & Kenesei 1987; Kiss 1995), formally represented in Figure 33. The sentence is headed by a predicate that is immediately preceded by a focus constituent, which is syntactically a maximal phrase and instantiates one of the valence elements of the head predicate (represented in its valence as [rel [pr focus]], where *pr* stands for 'pragmatic role'). The focus can be preceded by any number of additional constituents, including zero, and the verb can also be followed by zero or more constituents (indicated by the Kleene star to the right of the appropriate boxes). The details specifying the postverbal constituents are somewhat complicated (they include certain quantifiers, in addition to regular maximal complements) and a more precise generalization would require a careful analysis of the facts; the point of this example is to illustrate a general strategy for representing a 'flat phrase structure' in which the order of constituents is independent of grammatical relations, categorial status, and, to a large degree, of the valence of the head predicate as well. The instantiation pattern operates primarily with two types of features, namely, topic-focus relations and the distribution of lexical stress: the only constituent that must be present and in a particular 'slot' is the preverbal focus of the sentence, and each position is associated with a particular stress value (primary, secondary, null/unstressed), as discussed in Vogel & Kenesei (1987).

Ordering constructions of the kind just illustrated clearly play an important role in languages with relatively flexible word order, where the distinct ordering possibilities would be captured by a family of instantiation patterns. So far, however, very few systematic attempts at formalizing the sentence struc-

ture of non-configurational languages has been made within CxG (cf., though, Fried 2002; Leino & Kuningas 2002).

6.8 Unification and Inheritance

Let us now briefly summarize the role of unification and inheritance in CxG, as they play a major role in the representational mechanism in this model. We have noted that the use of unification indices serves to ensure that attributes with contradictory values fail to combine and that successful unification between two entities can take place under two conditions: (i) an attribute has an identical value assigned for both entities or (ii) one entity leaves the value unspecified. However, it is clear that conceptually, unification phenomena fall into several categories, depending on the kinds of linguistic relations they represent. Moreover, they may be marked by different symbols in the CxG formalism. The symbols and their use as presented in this chapter are summarized in Table 3.[23]

No matter what linguistic process is involved and what specific interpretation the unification indices may have, the result is always a feature structure that contains exactly those attribute-value pairs (no less, no more) that are contributed by the entities that unify.

In contrast, the function of inheritance relations is to keep track of properties along which linguistic expressions resemble each other. If construction A inherits construction B, it means that A contains all the specifications that hold for B, in addition to features idiosyncratic to A. Inheritance relations thus

Table 3. Unification summary

Symbol	Relationship	Description
#	agreement	match in inherent properties between structural sisters
#	government	match in relational properties between head and dependents (not necessarily structural sisters)
#	semantic linking	match between frame elements and valence elements
↓↑	semantic integration	semantic unification between structural mother and daughter(s)
⇓⇑	valence expansion	incorporation of non-argument valence elements (adjuncts) between structural mother and daughter(s)

provide a mechanism for representing grammar not as a more or less arbitrary list of 'rules', but as a network of related and often overlapping grammatical patterns: constructions that share a particular feature (or a set of features) form clusters of mutually related generalizations about linguistic competence, going from the most abstract and unconstrained to the most restricted. Put differently, through inheritance, we are able to map out networks of linguistic patterns, whether we see such networks as strict type hierarchies (with a single common root) or as a web of family-resemblance relationships; we believe it to be an empirical question to determine which of these two views – or what specific combination of them – more adequately reflects linguistic facts and leads to cognitively plausible generalizations about speakers' linguistic competence.

6.9 External vs. internal properties

Throughout this chapter, we have repeatedly pointed out that a linguistic expression can be analyzed with respect to its internal properties, and with respect to its external properties. Furthermore, as mentioned repeatedly, the external properties of a construction need not be – often, indeed, are not – fully predictable from the properties of its parts. Shifts in meaning and grammatical behavior of individual words when used in particular grammatical patterns may have various sources. We will now briefly consider two examples that illustrate this phenomenon.

Many languages use a specific pronoun to mark social distance or polite address, in which case the inherent meaning of that pronoun may be in conflict with the external meaning and grammatical behavior in certain grammatical contexts. We can illustrate this on the use of the personal pronoun *vy* in Czech.

Normally, the referent of this pronoun is the second person plural, which is consistently reflected in nominative-verb agreement. This includes any morphologically adjectival forms as well (i.e. participles or adjectives), as shown in (24). The past participle in (24a) is in the plural form, agreeing in number with the auxiliary and the subject *vy*. In (24b), the participle is in the singular (here marking also gender distinctions), agreeing again in number with the auxiliary and the 2nd person singular *ty*.

(24) a. *Vy* *jste* *přišli* *pozdě.*
2PL.NOM AUX.2PL come.PPL.PL late.ADV
'You-all came late.'

b. *Ty* *jsi* *přišel/přišla* *pozdě.*
2SG.NOM AUX.2SG come.PPL.SG.M/.F late.ADV

'You [sg. male/female familiar] came late.'

However, *vy* is also used to refer to a single referent in a polite address, as an honorific; this usage manifests itself in singular agreement on the participle, while maintaining plural agreement on the auxiliary, as shown in (25).

(25) *Vy* *jste* *přišel/přišla* *pozdě.*
2PL.NOM.HON AUX.2PL come.PPL.SG.M/.F late.ADV
'You [sg. male/female honorific] came late.'

A complete analysis of this pattern is too complex to be presented in this space, but the complicated agreement pattern reflects two things. First, internally, the inherent meaning of *vy* remains plural and as such it is also referenced by the auxiliary, which in Czech serves as a marker of person (1st and 2nd) and number in all instances of a regular nominative-verb agreement. Secondly, its external function in discourse is that of a singular, reflected in the adjectival form, which encodes directly the singular reference of the pattern as a whole. But again, as is the case with any such discrepancies between the internal and external characteristics, the external behavior also exhibits properties that are idiosyncratically associated only with this grammatical pattern and not predictable from its parts in isolation. In this case the non-compositional effect concerns a specific pragmatic function: the pattern serves as a conventionalized marker of respect and social distance. In order to account for this honorific use of *vy*, we posit a 'special' construction: one that inherits the regular plural agreement pattern of *vy* and adds the following properties: (i) the pragmatic function of an honorific marker; (ii) the semantic restriction on the pronoun's referent (singular, human); and, (iii) with respect to its grammatical behavior, the singular agreement requirement when combined with adjectival predicates.

Interestingly, this construction licenses only those honorific constructs that contain predicates involving adjective-like components; in the present and future tenses (finite verb forms in Czech), the agreement pattern takes *vy* at face value (i.e., is licensed by the more general agreement construction) and always treats it as plural. In other words, the external and internal semantics of *vy* match for the purpose of agreement. As a result, the example in (26a) is ambiguous with respect to the pragmatic function of *vy* between informal and honorific interpretations, just like it is necessarily ambiguous in (24a), with the plural agreement throughout. This is in contrast to (26b), in which the singular pronoun *ty* can only have the function of 'singular familiar', as always.

(26) a. *Vy* *už* *se* *stěhujete*?
2PL.NOM already RF move.PRES.2PL

(i) 'Are you-all moving already?'
(ii) 'Are you [sg., honorific] moving already?'

b. *Ty už se stěhuješ*?
2SG.NOM already RF move.PRES.2SG
'Are you [sg., familiar] moving already?'

Resolving the ambiguity of (24a) or (26a) is not an issue of grammatical behavior, but purely a matter of context, including the fact that immediate resolution in a given piece of discourse is not always possible; the plural, in effect, neutralizes the familiar-honorific distinction. In constructional terms this means that we do not posit an additional grammatical construction, but treat the ambiguity as a choice that speakers and hearers make in selecting the familiar vs. honorific interpretation, where grammatically speaking both are possible, but extralinguistically speaking only one may be appropriate.

Conflicts between external and internal properties can also have their source in more syntactically based relations. As discussed in Section 6.3, the English Determination construction combines a common noun with a determiner to create a maximal noun phrase, such as *a house*, *the car*, *the fresh snow*. In comparison, constructs such as *the privileged*, *the poor*, *the clueless* also function externally as syntactic noun phrases, but their internal structure shows a combination of [[art] [adj]] rather than the expected [[art] [n]]; the adjectival status of the right sister is confirmed by the fact that the adjective can be modified by a degree marker (*the very rich, the less fortunate*). Moreover, the meaning of the phrase is not just a simple combination of what the determiner means and what the adjective means. Rather, the phrase displays several idiosyncratic details about the conditions for usage: (i) the determiner slot is restricted to the definite article only (cf. **some privileged*, **clueless*, **a hungry*); (ii) the phrase can be used only in reference to people; (iii) the phrase has necessarily a generic interpretation, manifested also syntactically by plural agreement (**The poor next door is a nice guy* vs. *The poor were treated with disdain*); and (iv) the adjective has to be of the kind that can function both attributively and predicatively (cf. *the clueless* vs. **the main*). None of this follows from the categorial, semantic, or combinatorial properties either of the English article *the* or the adjectives; yet, the combination cannot be dismissed simply as an idiomatic usage of individual words.

The way CxG captures the generalization that can be made about this pattern is by treating it as a special grammatical construction that neither invalidates nor contradicts the general Determination construction represented in Figure 8. However, in order to incorporate the fact that this special pattern

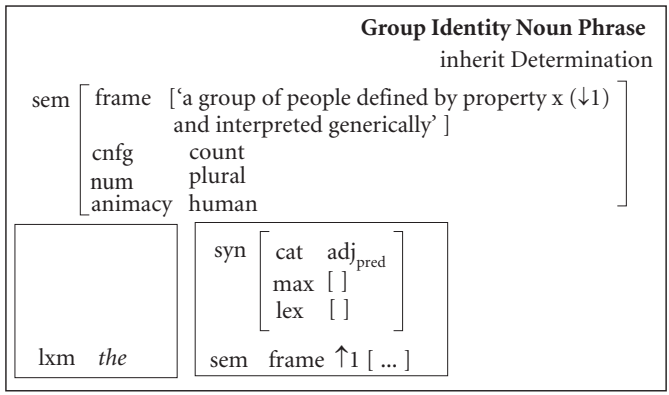

Figure 34. Group Identity Noun Phrase construction

shares some crucial external properties with the Determination construction (namely, it functions as a bounded noun phrase), we again appeal to the notion of inheritance and treat the special construction as a pattern that inherits the specifications of the Determination construction, but modifies or further restricts some of its properties. A possible representation of the special construction is suggested in Figure 34. The link to the Determination construction is handled by the *inherit* statement, which ensures that the external syntax remains that of a maximally expanded NP and the external semantics remains that of a bounded entity. The attributes *cnfg* and *num*, however, are now specified at the external level as having the values *count* and *plural*, respectively, thus ensuring that the phrase has the interpretation of a plural countable entity, and the attribute-value pair [animacy human] must be added as a special property of this construction, restricting its referential domain to people only. The specifications for the determiner simply add the condition that a particular lexeme is expected. The greatest departure from the Determination construction consists in specifying that the right-hand side sister of the determiner is an adjective of a particular semantic and syntactic kind (*cat* adj_{pred}), thus also suspending any of the semantic attributes associated with nouns (*cnfg*, *num*, *bounded*).

To summarize, the internal vs. external distinction is needed independently of these 'special' cases, as a way of capturing the behavior of linguistic units in terms of their place in both paradigmatic and syntagmatic relations. It is an added benefit that this distinction provides a natural and theoretically consis-

tent way of accounting for cases in which the two dimensions do not match exactly along a set of internally coherent and well-defined criteria.

7. Construction Grammar: Outlook

In Section 6 we introduced some of the most important mechanisms of CxG and illustrated how its practitioners think and argue in accounting for some fairly complex and intricate problems of linguistic structure. In the limited space of this chapter, we could only provide a glimpse of all the issues faced by a construction grammarian, and of the paths to their treatment afforded by the framework. For further details we refer the reader to the list of references below, to the papers in this volume and in Östman & Fried (2005), and to the website <http://www.constructiongrammar.org>.

The one thing we hope to have shown in this chapter is that constructions offer a fruitful and insightful approach to analyzing language through a single conceptual tool – the notion of construction. CxG sees no advantage (analytic, representational, cognitive) in splitting the task of language description into separate and autonomous domains: 'regular rules' on the one hand, versus the 'irregular', which then might include constructions as a special device for representing certain multi-word fixed expressions (idioms and formulaic language). Instead, CxG argues that there is no fixed and *a priori* established cut-off point between what is regular, ordinary, predictable in structure and meaning, and belonging to an arbitrarily assumed 'core', and what is exceptional, unpredictable, and belonging to an equally arbitrarily delimited 'periphery' of language. If the notion of construction can capture speakers' linguistic competence both in the 'core' and the 'periphery' of language, then there is no need to posit several types of procedures for licensing linguistic expressions. As a usage-based model, however, CxG is committed to striving for cognitive and communicative plausibility in linguistic analysis. Consequently, if it turned out, for example through language processing or acquisition experiments, that speakers engage in cognitively and interactionally different behaviors when using simple, active, declarative sentences versus expressions such as, say, *the heavier the better*, then CxG would have to re-evaluate its strong hypothesis about grammar and lexicon forming a single continuum of signs that only differ in their degree of abstractness or specificity, not in their intrinsic character.

We have also made a point of showing how CxG can be used for the description and analysis of languages other than English and how a constructional grammarian may go about capturing generalizations about grammatical

phenomena that are not part of English grammar. Recently, there has been some discussion about the status of various grammatical categories used in constructions (notably in Croft 2001, but also Zwicky 2001, and, in the context of child language acquisition, Clark 1998), suggesting that CxG cannot be applied cross-linguistically or aspire to universal validity because it forces a correspondence between elements/units/boxes and various language-specific categories or patterns, such as what we know from English as NPs and VPs. The debate will no doubt continue, as it should, but it ought to be emphasized that it is entirely in the spirit of CxG to allow for a 'radical' (i.e. construction-specific) approach to grammatical categories. Nothing in the CxG architecture rests on the assumption that certain morphosyntactic patterns or discrete grammatical categories are universal or that a particular construction proposed for one language is necessarily a cross-linguistic generalization in all its details. The fact that certain categories may be – and have been – treated as autonomous (morpho)syntactic primitives (such as subject, object, VP, etc.) is more reflective of individual practitioners of constructional analysis than of any fundamental principles underlying CxG itself. Nevertheless, we are not aware of any constructional account that makes explicit claims about the universal status of such categories or of particular constructions.

Construction Grammar is still a fairly young model of language and, as with any new approach, it needs time to simmer in order for all its different flavors to be fully developed and appreciated. Nor can it account for everything in one fell swoop; no model can. It is thus also in the nature of things that in the immediate future Construction Grammar will have to address, and be tested on, linguistic peculiarities and problems not only in more and more different types of languages, but also in a variety of spheres of language where so far we have barely scratched the surface.

Notes

1. At the time, Case Grammar was closely associated with advances in Generative Semantics and with studies like Chafe (1970). Work inspired by Case Grammar has continued in present-day versions of Case Grammar, as well as in Role-and-Reference Grammar, in Conceptual Semantics, in some cognitive grammars, and in several functional grammars.

2. 'IN' in the glosses stands for inessive case; the countable entity is in the singular after a numeral in Finnish. In this study we will be using the following abbreviations for grammatical categories in the morphological glosses for our example sentences: ACC 'accusative'; ADJ 'adjective'; DAT 'dative'; F 'feminine'; FUT 'future tense'; GEN 'genitive'; IN 'inessive'; INF 'infinitive'; M 'masculine'; N 'neuter'; NEG 'negative'; NOM 'nominative'; PL 'plural'; PPL

'past participle'; PRES 'present tense'; PST 'past tense'; RF 'reflexive particle'; SG 'singular'; 3>1 '3rd person acting on 1st person'.

3. On pragmatics as implicitness, see Östman (1986).

4. A brief terminological and theoretical digression is in order here. The specification 'role' appears in some constructional literature (Fillmore & Kay 1995; Fillmore 1998; Kay & Fillmore 1999) and is intended to capture the function of a linguistic unit in abstract syntactic patterns such as modification, complementation, determination, etc. Thus the role can either specify the head status of a constituent, or a filler status (e.g. *pcomp* 'phrasal complement', *spec* 'specifier', *mod* 'modifier', *mkr* 'marker', etc.). In this chapter, we will mostly refrain from including this information in the representations since the use of these features seems to vary greatly among the CxG practitioners. Some do not use it at all (Goldberg 1995), sometimes the label 'role' is used to introduce grammatical and semantic relations (Michaelis & Lambrecht 1996; Michaelis 2005), sometimes the head function is listed together with grammatical semantic relations under the label 'rel' (Lambrecht, this volume), etc. The use of these representational categories makes a definite – and rather controversial – claim about the status of headedness in CxG. While marking the phrasal head is relevant and appropriate in some patterns, it is far from clear that all constructions in a language require a separate statement about head-dependent relations. We prefer to leave the theoretical issue open for now, especially in light of the ways in which the head feature seems to have been applied so far. In this chapter, we will only mark this feature in the most transparent cases.

5. We use the attribute *lxm* for introducing specific lexemes. In more recent CxG literature, this information has appeared under various other labels, such as *lexeme* (Fillmore 1998), *lhead* (which stands for 'lexical head', cf. Fillmore & Kay 1995), or *text* (Fillmore 2002). Kay (2002) uses *phon* as the attribute and surrounds its values with graphics brackets: <he>. In representing constructs, however, we use the attribute *lform* to mark a word form.

6. The term 'predicate' will be used in two different readings throughout the chapter. Most of the time, it will refer to any complement-taking entity (verb, noun, adjective, preposition), following the practices of modern syntactic studies. Only in the discussion of the subject-predicate construction will it be used in the broader and, perhaps, more traditional functional sense of 'that which is predicated of the subject of the sentence' (i.e. anything outside of the subject).

7. As far as we are aware, no principled distinctions have been made between classes of attributes or classes of grammatical contexts that would classify them with respect to unification.

8. As a typographical shortcut, we will use the full notation for syntactic heads shown in Figure 2 only in the representations of head constituents. Everywhere else, we will simply list the four attributes as if they were at the same level; in Figure 8, this format applies both to the external syntax and the syntax of the left daughter *much*.

9. The interpretation of what the indices stand for is thus slightly different depending on where in the representation they appear. In the inside boxes, they indicate unification of values provided by the daughter constituents. In the outer box, they indicate that the result of that unification is shared by the mother as well; in other words, at the external level, they serve to track properties that are 'projected' from lexical items into larger syn-

tactic structures. In case of a conflict between co-indexed internal and external values, the value associated with the external index takes precedence, indicating that the construction 'overrides' the corresponding internal value(s) that the daughters bring along.

10. Unlike Turkish, Russian has subject-verb agreement not only in person and number, but also in gender (masc., fem., neuter). The fact that the verb in (14) is in the neuter form and cannot be substituted by any of the personal forms (singular or plural) is evidence that the sentence has necessarily an impersonal interpretation.

11. We will use the term 'semantic roles' for entities that are known variously as semantic roles, as thematic roles or thematic relations, as θ-roles (theta-roles), or – in Fillmore (1968) – as deep cases.

12. The conception of semantic roles as abstractions over finer-grained semantic structures is by no means an exclusive property of the Fillmorean approach. Similar views have been expressed within other frameworks as well (Jackendoff 1976; Guerssel et al. 1985; Levin & Rappapport 1988; Bresnan & Kanerva 1989; Dowty 1991). The difference between other approaches and the manner semantic roles are treated in CxG lies in CxG's explicit reference to event structures as the motivating factor in creating the abstractions. (Jacobsen 1985:97 comes close to the CxG view with his notion of 'experiential prototypes' in accounting for certain valences.)

13. As illustrated in Figures 10 and 11, the attribute-value pairs are sometimes listed horizontally, separated by a comma (e.g. [max +, lex +]). This format is used for purely practical reasons and has no theoretical significance. Similarly, as we have seen from Figure 3 onwards, as long as there is no possibility of confusion, attributes and their values can also for practical purposes be presented one next to the other horizontally (without commas separating them), rather than as in our prototypical example in Figure 1, where all attribute-value pairs are listed vertically one underneath the other.

14. This is not to say that Russian sentences do not or cannot have subjects. But the presence of subject constituents in particular constructs is licensed by specific grammatical constructions, such as, for example, the Past Tense construction or certain constructions involving infinitival complements. It is not, however, an inherent property of lexical verbs in Russian (and therefore cannot be part of their lexical entry) that one of their arguments be overtly realized as a grammatical subject. *Mutatis mutandis*, the same applies in the case of English clauses without overt subjects (e.g. imperatives, infinitival 'deliberative' clauses of the type *To buy or not to buy?*, null subjects in certain types of spoken discourse): such patterns are licensed by special grammatical constructions that detail the conditions under which the subject requirement is satisfied without the presence of an overt subject NP.

15. The symbol [n+] in Figure 15 is a shortcut for [head [cat n], level [max +]], i.e. a noun phrase. Similarly in other diagrams [p+] stands for [head [cat p], level [max +]], representing a prepositional phrase.

16. There is also further evidence that these pseudo-transitives are not just a subset of inherent transitives simply by virtue of appearing with a direct object.They display idiosyncratic restrictions precisely because the transitive pattern is imposed from the outside. For example, they do not easily passivize, and this fact may, perhaps, call for a refinement of the semantics of the Passive construction. It is also clear that not all *FE*s in a given frame are

available for linking to the object function; this may have to do with the inherent semantics of the *FE*s, but these are all questions that remain to be studied.

17. The label is enclosed in quotes to indicate that there is no standard name available and that its precise formal definition is still to be worked out. Some discussion of this notion can also be found in Kemmer & Verhagen (1994).

18. The notion of 'interest' is meant as a useful cover term for both benefactive and malefactive readings, since these datives allow both possibilities (cf. the traditional notion of *dativus* (*in*)*commodi*).

19. The terms 'noun phrase', 'verb phrase', etc. do not necessarily mean 'a multiword unit' in this framework. It only means that in its external syntax, a syntactic entity labeled as 'phrase' serves as a maximal projection of its head, which can amount to just one word (the head itself, e.g., an intransitive verb or a proper noun), or more words (a VP headed by a transitive verb or a NP headed by a common count noun). A phrasal construction is defined as a pattern consisting of more than one such syntactic phrase.

20. This attribute is sometimes labeled *srs*, for 'subject-requirement-satisfied' (e.g. Fillmore & Kay 1995; Fillmore 1998; Kay & Fillmore 1999). We prefer *subj*, used in earlier versions of CxG, as a more transparent abbreviation.

21. The abbreviation *comp* stands for 'complement' and belongs in the inventory of grammatical functions (i.e., it is one of the values of the *gf* attribute). This is different from the abbreviation *pcomp* found in some constructional writings, which stands for 'phrasal complement' and marks a particular syntactic role in head-dependent relationships as briefly mentioned in Footnote 4.

22. It is very likely that the principles of coinstantiation can and should be further refined along the semantic dimension. It has been shown for English (Sag & Pollard 1991) that the relationship between the matrix 'controller' and the embedded subject it coinstantiates with the equi-type predicates may be largely predictable from the semantics of the relevant predicates. This will be even more the case cross-linguistically, since languages apparently differ in the semantic conditions they put on equi-type coinstantiations (Comrie 1984; Bhat 1991; Fried 1994b).

23. The single-arrow indices are thus, strictly speaking, markers of a 'special' kind of unification at best, since they are allowed to represent more than just mechanical 'adding up' of non-conflicting semantic values, in a compositional manner. Our use of these symbols is a modification of the arrow notation as it appears once and only briefly in Fillmore & Kay, 1995 (Part I, Chapter 5 and Part II, p. 11f.). Fillmore & Kay do not elaborate on the status of the arrows, except for noting that they mark a unity of meaning between a construction and its head daughter and, as far as we know, there has been no discussion of the use of these symbols anywhere in the CxG literature. However, we find it a useful tool – even if as a possibly interim shortcut until the details of the semantic representations are fully worked out – to simply indicate that the semantic dimension of grammatical constructions (i) is not left to some other module that operates independently of the constructional representations, and (ii) is not relevant just for 'idiomatic' meanings, but plays a role in representing regular, compositional and predictable semantics as well. Consistent integration of meaning and form has been one of the defining features of CxG since its conception, and the repre-

sentations ought to reflect that, even if the tools at our disposal are still rather crude, and the whole issue of semantic integration awaits further work.

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Chapter 3

Predicate semantics and event construal in Czech case marking

Mirjam Fried

1. Introduction[1]

One of the fundamental concerns of grammatical theory is the meaning-form patterning known as 'linking' – the alignment between valence information associated with a predicate and the formal expression of its arguments. This chapter concentrates on case assignment as a specific manifestation of linking, and particularly on the question of predictable versus idiosyncratic case marking. At issue will be the tension between inherent semantics and context-related factors in shaping a linguistic expression, and specifically, how this tension plays out in reinterpreting grammatical patterns that show partial overlap in form and function. Focusing on a semi-productive experiential construction in Czech, my goal is to determine to what extent regular case marking principles can be appealed to in accounting for seemingly arbitrary case patterns.

The relevant material is exemplified in (1) and will be examined against the background of the more productive pattern in (2). Both examples are 'impersonal' in that they necessarily lack any nominative NP and the head verb is in the 3rd pers. sg. neuter form.[2] Semantically, they both appear to contain an obligatory experiencer argument and an equally obligatory locus of sensation (a body part), but they differ in case marking. While the experiencer must be in the dative in (2), the pattern in (1) marks it with the accusative, which sometimes alternates with the dative:

(1) *Píchalo* *mě / mi* *v* *boku*.[3]
stab.PPL.SG.N 1SG.ACC / DAT in side.LOC.SG.M[4]
'I had a stitch in [my] side.' (lit. 'stabbed me/to me in [the] side')

(2) *Zvonilo* *mi / *mě* *v* *uších.*
ring.PPL.SG.N 1SG.DAT / *ACC in ear.LOC.PL.N
'I had a ringing sensation in [my] ears.' (lit. 'rang to me in ears')

I will refer to the pattern in (1), which takes the accusative but sometimes allows the dative, as the A-Construction (AC) and the one in (2), which only takes the dative, as the D-Construction (DC).

Existing descriptions of these Czech patterns and comparable expressions in other Slavic languages (Poldauf 1962; Grepl & Karlík 1989; Wierzbicka 1988; Dabrowska 1997) are largely motivated by the observation that both patterns express a kind of experience located in a body part. Based on the greater productivity of DC, traditional accounts of the Czech data have treated the accusative form as an exceptional version of the pattern exemplified in (2), which has led to two possible analyses: either the use of the accusative is an arbitrary quirk, or it reflects the difference in relative affectedness of the experiencer. Neither view, however, provides a satisfying account. The semi-productivity of AC as well as the fact that the same alternation also occurs in other, unrelated patterns make it doubtful that the accusative is simply a lexically marked exception without any relationship to the rest of the Czech grammar. The affectedness-based approach is intuitively more attractive, given that Czech makes a systematic distinction between 'more directly' and 'less directly' affected participants: the former require the accusative case, while the latter, including experiencers, are consistently marked by the dative (cf. *Mluvnice češtiny* 1986; Grepl & Karlík 1989; Fried 1999a). However, the sentence in (1) contradicts this patterning in that it has only one reading regardless of the case form: it describes the sensation one experiences as a result of running or walking fast.

Taking a closer look at the internal structure of each pattern, I will propose that AC is a conventionalization of a more general linking relationship available elsewhere in the language. In order to establish in what ways AC is both distinct from and similar to DC, several factors will be considered: the valence of the head predicates, the overall construal of each pattern, and the effects of formal and functional overlap between distinct, but related, grammatical patterns. I will argue that the alternations attested in AC represent various stages of constructional reanalysis, leading to case marking that amounts to resolving a conflict between a pragmatically grounded construal of an event and a lexical (or structural) assignment governed by a particular lexical item. In case of AC, the result is a blurring of the semantic distinction between the competing case forms.

The material also brings out issues of broader theoretical and typological interest. I will show that both patterns involve extra syntactic elements that are not projected from the head predicate, thereby raising the question of how those elements are integrated in the complement structure of the sentences. The data call for a constructional analysis of the kind outlined in Fried & Östman (this volume); the layered architecture of Construction Grammar (Fillmore 1988; Fillmore & Kay 1995; Kay 1995; Kay & Fillmore 1999; Kay 2002) offers the right tools for representing linguistic structures whose components may come from multiple sources and whose combination may not be just the sum of its parts. However, the data and the analysis proposed in this chapter pose a challenge for Goldberg's (1995) conception of argument structure constructions, in which issues of argument expression are reduced to the constructional level. The Czech data highlight the need to differentiate between the meaning of a predicate and the overall meaning of a complex construction in which it is used, since grammatical processes may be sensitive to different layers of semantic information. This, in turn, entails the need for a sufficiently articulated semantic component that will enable us to spell out the interaction, often subtle, between the two. Thus, a crucial role in the treatment of our two patterns will be given to the distinction between lexical-level properties and clause-level properties and their interaction in complex linguistic expressions. The constructional level addresses the observation that both (1) and (2) have the same overall construal; the predicate semantics allows us to account for the case marking differences between (1) and (2); and reference to both levels is necessary for explaining the alternations within (1).

Finally, the analysis developed in this chapter offers an insight into the speakers' knowledge of grammatical patterning by focusing on the meaning-form relationships that hold within relatively complex networks of grammatical information, instead of attempting to define grammatical categories in isolation. Specifically, the analysis will provide reasons to examine more closely what we mean by ascribing semantic content to morphological cases as practiced in various approaches, most prominently in the cognitively oriented ones (Wierzbicka 1988; Janda 1993; Kemmer & Verhagen 1994; and others) but going back to the stand-by of Slavic linguistics, namely the invariance hypothesis in associating semantic content with morphological cases (Jakobson 1936; Janda 1993). By invoking constructional properties as a factor in case assignment, the present analysis (i) is closest in spirit and gives a specific representation to Dabrowska's (1997:126) general conclusion that the choice of case marking depends largely on the construal of events and (ii) makes a case

for Construction Grammar as a uniquely suitable framework for capturing the multi-layered character and cognitive grounding of linguistic structure.

The chapter is organized as follows. First I describe DC in Section 2. AC and its syntactic source are discussed in Section 3, while Section 4 deals with additional idiomatic shifts in AC. In Section 5 I turn to the issues of constructional representation of the case marking involved in both patterns, followed by conclusions in Section 6.

2. The dative-experiencer pattern

The essence of DC is relatively well-understood and the descriptions in the traditional grammars uncontroversial (cf. Havránek & Jedlička 1959; *Mluvnice češtiny* 1986; Grepl & Karlík 1989). It belongs to a family of patterns expressing an event that has no linguistically identifiable cause but that may or may not be located in a particular domain. The family includes nominal and verbal expressions of general atmospheric states or processes, as well as physical or mental experiences related to individuals ('experiencers'). The latter are briefly exemplified below, showing non-verbal expressions in (3a) and (3b) and a verbal one in (3c).

(3) a. *Bylo mu horko / nepříjemně.*
be.PPL.SG.N 3SG.M.DAT hot / unpleasantly
'He was hot/uncomfortable.'

b. *Ivě bylo do pláče.*
Iva.DAT be.PPL.SG.N into crying.GEN.SG.M
'Iva felt like crying.'

c. *Všem se ulevilo.*
everybody.DAT RF relieve.PPL.SG.N
'Everybody felt a relief.'

However, DC displays one special property that sets it apart from most other members of this family of constructions: the predicates that occur in DC are not limited to the experiential use. As the example in (4) demonstrates, the verb *zvonit* 'ring' (cf. example (2) above) can be used non-experientially as well, and the same is true for all the other predicates we find in DCs, such as *vyschnout* 'dry up', *zatmět se* 'turn dark', *znít* 'sound', *kručet* 'rumble', *praštět* 'make a cracking sound'.

(4) *Zvonil* *budík.*
ring.PPL.SG.M alarm.clock.NOM.SG.M
'The alarm clock was ringing.'

Consequently, we cannot give a general account of the number, semantic type, and morphological marking of the nominals in (2) by appealing to the lexical meaning and valence of the head predicate. The majority of these predicates are mono-valent verbs, whose single argument is semantically of the theme/patient variety and is regularly coded in the nominative, as shown in (4).[5] Some of the predicates (e.g. *zatmět se* 'turn dark') are zero-valent in that they do not require any argument in their basic use as 'weather' predicates, shown in (5).

(5) *Najednou se zatmělo.*
suddenly RF turn.dark.PPL.SG.N[6]
'Suddenly [it] turned dark.'

The experiencer and the locus of sensation in DC thus must be treated as non-lexical, licensed by a larger grammatical pattern that is headed by verbs like *zvonit* 'ring' or *zatmět se* 'turn dark' but that must also contribute valence elements of its own. The key to identifying the defining properties of this larger pattern is its overall meaning and function: it serves as an expression of spontaneous experience, in which a sentient being, through an unidentified stimulus, undergoes a physical or mental sensation located in a body part.

The descriptive generalization about DC can, then, be summarized as in (6); the list is not intended in any procedural sense, the conditions are all co-present.

(6) **D-Construction**
Properties contributed by the head predicate:
a. Expect a head predicate from the atransitive or 'unaccusative' classes.[7]
Constructional properties:
b. Suppress the single argument (if any) contributed by the valence of the head predicate.
c. Introduce a locative element, specifying that its referent must be a body part.
d. Introduce an experiencer.
e. The overall interpretation: 'report a spontaneously occurring physical or mental experience located in a body part'.

The complement structure of DC is thus determined by two distinct sources and their interaction: the *head predicate* with its inherent meaning and valence

on the one hand (for example, the one-place predicate *zvonit* 'ring' in 2) and the extra valence elements contributed by the *construction* on the other. The combination of arguments that is characteristic for DC is the result of conditions (6b)–(6d): (6b) ensures the existential flavor of the construction as a whole by removing what would otherwise have to be interpreted as the stimulus (i.e. the trigger of the experience, such as a ringing sound in 2), while (6c) and (6d) spell out the <Experiencer, Locative> valence associated with the construction itself; in (2) above, this valence is instantiated by *mu* 'to him' and *v uších* 'in ears'. The fact that these two elements are also necessarily in a mutual whole/part relationship is independent of DC. It has to do with the way ownership of body parts is construed in Czech in general (details can be found in Fried 1999a).

With respect to case marking, DC does not deviate from regular linking principles that hold throughout Czech grammar. For the moment we will only note that the locative element is expressed by an appropriate prepositional phrase and the experiencer receives the dative, exactly as expected in this language. I will return to the details of this construction and its representation in Section 5.

3. The accusative-experiencer pattern

When we dissect DC into its major component parts as outlined in (6) above, one conspicuous difference between our two constructions emerges. While DC is based on intransitive predicates, AC invariably involves transitive verbs, most of which are not dedicated to the experiential use illustrated in (1) either; we find verbs such as *štípat* 'pinch', *škrábat* 'scratch/scrape', *píchat* 'stab/pierce', *pálit* 'burn (tr.)', *bolet* 'hurt', *mrazit* 'freeze (tr.)', etc. For example, the verb *bolet* 'hurt/cause pain' can figure both in AC, shown in (7a) below and in a regular transitive pattern illustrated in (7b). It is also worth pointing out that the latter has a tendency to appear in the perfective aspect, indicated by the aspectual prefix *za-* in (7b). In Czech these prefixes are strongly correlated with semantic transitivity, which, in turn, is associated with complete affectedness of the patient. For a verb like *bolet* 'hurt', which is not a verb of physical manipulation or contact and, therefore, inherently lower in transitivity, the presence of the perfectivizing prefix clearly serves to boost the event's transitivity by explicitly bringing attention to its endpoint.

(7) a. *Bolelo mě v krku.*
hurt.PPL.SG.N 1SG.ACC in throat.LOC.SG.M
'I had a sore throat.'
b. *Jeho slova nás (za)bolela.*
his word.NOM.PL.N 3PL.ACC (PF)hurt.PPL.PL.N
'His words made us feel hurt.'

This observation puts into question the traditional claim that both DC and AC involve a single semantic class of verbs expressing an experience; at a minimum, the head predicates differ systematically in their transitivity. Moreover, the transitivity of the head verbs in AC suggests a natural source of the accusative marking: since Czech has a regular linking relationship between transitive patients and the accusative case, the accusative-marked constituent in (1) need not be any more exceptional in AC than in any garden-variety transitive sentence. But the presence of the accusative is only one piece of a larger puzzle. If we stopped at simply observing that AC contains transitive verbs, too many of its remaining and equally important properties would be left unaccounted for, since the construction also differs from regular transitive patterns in several respects, both formally and semantically.

For one thing, the plain patient analysis would not, in itself, address the possibility of dative marking shown in (1). In Czech, patients of semantically transitive verbs do not allow the dative, as illustrated in (8).

(8) *Políbil / pozdravil / rozzlobil / uhodil mě / *mi.*
kiss / greet / make.angry / hit.PPL.SG.M 1SG.ACC / *DAT
'He kissed/greeted/angered/hit me.'

This linking pattern holds true also in the regular transitive use of the verbs that can occur in AC. Compare the experiential use of *bolet* 'hurt' in (9a) with the transitive sentence in (9b); dative marking is possible in (9a) but prohibited in (9b).

(9) a. *Bolelo mě / mi v krku.*
hurt.PPL.SG.N 1SG.ACC / DAT in throat.LOC.SG.M
'I had a sore throat.'
b. *Její slova mě/*mi (za)bolela.*
her word.NOM.PL.N 1SG.ACC/*DAT (PF)hurt.PPL.PL.N
'Her words gave me pain.'

The same is observed with the strongly transitive verb *škrábat* 'scratch' used in AC (10a), where both case forms may occur, as compared to a regular transitive use in (10b), with only the accusative.

(10) a. *Pořád mě / mi škrábalo v krku.*
constantly 1SG.ACC / DAT scratch.PPL.SG.N in throat.LOC.SG.M
'I kept having a scratchy throat.' (lit. 'scratched me in throat')

b. *Pořád mě / *mi ten kocour*
constantly 1SG.ACC / *DAT that.NOM.SG.M tomcat.NOM.SG.M
škrábal.
scratch.PPL.SG.M
'The cat kept scratching me.'

Second, to the extent that AC can be nominalized at all, it follows nominalization patterns different from those observed with regular transitive verbs. Patients of nominalized transitive verbs are invariably marked by the genitive, as demonstrated in (11) by the nominalizations of the verbs *pálit* 'burn (tr.)', *loupat* 'peel', and *ošetřovat* 'nurse, take care'; the first two verbs can occur in AC as well.

(11) *pálení knih, loupání brambor, ošetřování*
burn.NM book.GEN.PL, peel.NM potato.GEN.PL, care.NM
pacienta
patient.GEN.SG.M
'the burning of books, the peeling of potatoes, taking care of a patient'

In contrast, the accusative nominal in AC cannot be turned into a genitive NP as a result of nominalization, which is illustrated by the set of examples in (12). In (12a) we see the verb *pálit* 'burn' used in AC, with the patient of burning in the accusative. The expression in (12b) shows an unsuccessful attempt to nominalize (12a) by following the nominalization pattern for regular transitive predicates.[8] And (12c) demonstrates that while nominalization of AC is possible, it can only be applied if the patient is left unexpressed:

(12) a. *Evu pálilo v ústech.*
Eve.ACC burn.PPL.SG.N in mouth.LOC.PL.N
'Eve felt a burning pain in [her] mouth.'

b. **pálení Evy v ústech*
burning.NOM.SG.N Eve.GEN in mouth.LOC.PL.N

c. *To pálení v ústech*
that.NOM.SG.N burn.NM.NOM.SG.N in mouth.LOC.PL.N
bylo nepříjemné.
be.PPL.SG.N unpleasant.NOM.SG.N
'The burning [pain I/he/she/they felt] in [my/his/…] mouth was unpleasant.'

Finally, AC also differs from regular transitive patterns in its complement structure. A transitive valence consists of an agent and a patient, while AC obligatorily lacks any agentive argument. At the same time, a transitive valence does not have a locative argument as one of its nuclear participants. In contrast, it is one of the defining properties of AC that a locative participant be always present. We can again compare a regular use of the verb *škrábat* 'scratch' in (13a) with an instance of AC in (13b). As indicated by the parentheses in (13a), the locative phrase can be left out without affecting the grammaticality of a normal transitive sentence. The same is not true of AC: the absence of a locative phrase in (13b) leads to an incomplete structure.

(13) a. *Kocour* *začal* *Evu* *škrábat* (*po*
cat.NOM.SG.M start.PPL.SG.M Eve.ACC scratch.INF (on
rukou).
hand.LOC.PL.F)
'The cat started scratching Eve (on [her] hands).'

b. **Evu* *škrábalo / píchalo / loupalo / bolelo /*....
Eve.ACC scratch / stab / peel / hurt /....PPL.SG.N
*'Eve felt scratching/stabbing/peeling pain.'

All these idiosyncratic features and constraints suggest that AC is a grammatical entity in its own right, distinct both from DC (in that the AC is built around transitive predicates) and from regular transitive patterns (in both its complement structure and its syntactic behavior). In the remainder of this chapter I will argue that AC represents an instance of what has been called a syntactic idiom (Fillmore, Kay, & O'Connor 1988), which can be described as a special, crystallized use of a regular grammatical pattern that is found elsewhere in the language. The analysis, then, revolves around two main questions: (i) what is the regular grammatical pattern that motivates the overall complementation structure found in AC, including the accusative marking of the 'experiencer', and (ii) how does the idiomatic interpretation of that structure arise? I will show that at the heart of the idiom is valence reanalysis of a commonly attested linking pattern associated with transitive verbs and subsequent conventionalization of the newly established construction.

To identify the motivation for the clause structure is not so difficult once we consider data beyond the bounds of standard Modern Czech. In some regional dialects of Czech and in other Slavic languages, there is a productive construction that exhibits some of the formal properties of interest here. Consider the examples in (14)–(16). They are all built around transitive verbs and their function is to de-emphasize the agentive participant by leaving it obli-

gatorily unexpressed (cf. also Mrázek 1956; Šmilauer 1966; Bauer 1972; Grepl & Karlík 1989); the dialectal data in (14) are from Chloupek 1971 and Bartoš 1886, respectively.

(14) a. *Tam zabilo hospodáře s koňmi.* (Moravian dial.)
there kill.PPL.SG.N farmer.ACC.SG.M with horse.INS.PL.M
'A/The farmer with his horses got killed there.'

b. *Byla velikúcná voda, podmývalo břehy.* (Moravian dial.)
be.PPL.SG.F big.NOM.SG.F water.NOM.SG.F wash.off.PPL.SG.N river.bank.ACC.PL.M
'There was flooding, the river banks got washed off.'

(15) *Na prahu ju prevalilo.* (Slovak)
on doorstep.LOC.SG.M 3SG.F.ACC knock.over.PPL.SG.N
'At the doorway, she was knocked down.'

(16) *Oxotnika zasosalo v bolotě.* (Russian)
hunter.ACC.SG.M swallow.PPL.SG.N in mud.LOC.SG.N
'The hunter got swallowed up in the swamp.'

All these sentences report a resultant state involving an affected entity that may or may not be animate. The cause of the state is communicatively irrelevant, although its referent may be sometimes identifiable from the context, as in (14b) or (16). They are not structurally passive, however. The verb has active morphology and the patient argument is not formally promoted but keeps the accusative form it has in a basic active transitive sentence. Because of the absence of any nominative NP, the verb assumes the impersonal, 3rd pers. sg. neuter form. This grammatical pattern exemplified in (14)–(16) is yet another formal device in the rich repertoire of agent-demoting constructions in Slavic, which include various generic subject constructions, reflexivization, periphrastic passive, etc. (for Czech see Panevová 1973). It just so happens that this particular agent-demoting pattern is no longer productive as such in standard Modern Czech. However, its basic clause structure and case marking are precisely the properties that we find in AC and that also set it apart from DC.

When the affected entity is a person, the agent-demoting construction exemplified above can easily acquire an experiential flavor, as demonstrated by the examples below. The sentences in (17)–(19) do not express just a transitive action inflicted by an unknown or pragmatically irrelevant source, as would be implied by the literal meaning of their head predicates. Rather, the fact that the patient is an animate, sentient being allows the construction as a whole to be interpreted as reporting a (physical) state that the patient argument ex-

periences. This reading is particularly strong in (17b) and in (19), including the formulaic expression in (19b); the examples in (17) are again from Bartoš (1886), illustrating various Moravian dialects.

(17) a. (*Jak vidźim lidi,*) *už mě pozdvihuje,* (*už muśim do pola*)
already 1SG.ACC lift.PRES.3SG
'(As soon as I see [other] people,) I become restless, (I have to go out to the fields.)'

b. *Položilo mě.*
put.down.PPL.SG.N 1SG.ACC
'I fell ill.'

(18) …*když ženu bolí k dietěti* (Old Czech)
when woman.ACC.SG.F hurt.PRES.3SG to child.DAT.SG.N
'when a woman is going through labor pains'

(19) a. *Záblo mě.* (standard Modern Czech)
freeze.PPL.SG.N 1SG.ACC
'I was freezing.'

b. *Těšilo mě.*
please.PPL.SG.N 1SG.ACC
'Pleased [to have met you].' (lit. 'pleased me')

This exact pattern is only very rarely found in standard Modern Czech, but I will argue that the commonly attested AC is simply a more restricted variant of this kind of agent-demoting construction.

The most conspicuous difference is the obligatory presence of the locative participant. While the agent-demoting construction expresses a state in which necessarily the whole body of the patient is affected, as it follows from the structure of the underlying transitive event, it is the job of AC to localize the resulting effect to a particular body part. Indeed, we find evidence of this localization in the dialectal data as well, shown in (20), which should only confirm the genetic relationship between the two constructions, although there is a small but revealing semantic twist involved. While the locus of effect is expressed by a directional complement in the dialectal examples, such as the accusative-taking use of *v* 'in(to)' in (20), the standard Czech version of AC only allows forms that express a purely static location. This is shown by the locative-taking use of *v* 'in' in (21a). In contrast, the directional complement, headed in standard Czech by the genitive-taking preposition *do* 'into', does not occur (21b).

(20) *Štípe mne v oči.* (Bartoš 1886)
pinch.PRES.3SG 1SG.ACC in eye.ACC.PL.F
'I feel stinging [getting] into my eyes.'

(21) a. *Štípe mě v očích.*
pinch.PRES.3SG 1SG.ACC in eye.LOC.PL.F
'I feel stinging in my eyes.'
b. **Štípe mě do očí.*
pinch.PRES.3SG 1SG.ACC into eye.GEN.PL.F
*'I feel stinging [getting] into my eyes.'

In standard Czech, the use of the directional forms requires the presence of a nominative NP that expresses the instigator of the sensation, even if the instigator's identity may be left extremely vague. For comparison with the dialectal data in (20), consider the set of examples in (22). Consistent with the dynamic nature of typical transitive events, the full expression of the transitive valence in (22a–c) is compatible only with a directional, not static, locative adjunct, such as *do zad* 'into the back'. Truly locational expressions, such as *v/na zádech* 'in/on the back' used in (22b–c), impose a more static reading of the whole situation, which clashes with the inherent meaning of the transitive predicates. The severity of the clash may further depend on the referent of the agentive argument: the generic inanimate pronoun in (22b) seems somewhat less offensive in this context than a more specific cause of the effect, present in (22c). Finally notice that (22a) contrasts sharply with (22d): the latter is an instance of AC and shows that the use of a directional complement is impossible.

(22) a. *Něco / dřevo ho píchalo / škrábalo / řezalo*
something / wood.NOM.SG.N 3SG.M.ACC stab/scratch/cut.PPL.SG.N
do zad.
into back.GEN.PL.N
'Something/a piece of wood was stabbing/scratching/cutting into his back.'
b. ??*Něco ho píchalo / škrábalo / řezalo v / na*
something.NOM.SG.N 3SG.M.ACC stab / scratch / cut.PPL.SG.N in/on
zádech.
back.LOC.PL.N
'Something was causing a stabbing/scratching/cutting pain in [his] back.'

c. **Dřevo ho píchalo / škrábalo / řezalo*
something.NOM.SG.N 3SG.M.ACC stab / scratch / cut.PPL.SG.N
v / na zádech.
in / on back.LOC.PL.N
'A piece of wood was causing a stabbing/scratching/cutting pain in [his] back.'

d. **píchalo / škrábalo / řezalo ho do zad.*
stab / scratch / cut.PPL.SG.N 3SG.M.ACC into back.GEN.PL.N
'He felt a stabbing/scratching/cutting pain in [his] back.'

Thus the pattern attested in the regional dialects, shown in (20), is semantically still true to the inherent transitivity of the head verbs and the only special feature is the absence of the agentive argument. In contrast, AC represents a tangible modification of the dynamic nature of its head verb, by imposing a purely stative/existential reading of the event. This shift, of course, only contributes further to the idiomatic status of the construction. Summarizing the empirical observations, AC can be informally described as shown in (23).

(23) **A-Construction**
Properties contributed by the head predicate:
a. Expect a (semantically) transitive verb as the head predicate.
b. The patient argument must be animate.[9]
Constructional properties:
c. Suppress the agentive argument contributed by the head predicate.
d. Introduce a locative element, specifying that its referent must be a body part.
e. Construe the patient as an experiencer, thus conforming to the overall meaning of the construction ('report the existence of a spontaneously occurring physical state located in a body part').

It follows from (23) that the clause structure of AC, too, reflects a composite valence built from two sources: the *head verb* contributes a patient argument, as a remnant of its transitive valence, while the *construction* must supply a locative element. Moreover, the description in (23) tells us exactly what constitutes the crystallization of the more general agent-demoting construction into the more restricted AC. Both constructions require a transitive verb as the head predicate and both suppress the agent; i.e., they share the properties listed in (23a) and (23c). But AC imposes additional restrictions both on the patient and on the constructionally supplied locative: (i) the referent of the former must be a sentient being (the example in 14b shows that this is not a

requirement in the plain agent-demoting pattern), (ii) the affectedness of the patient is confined to a body part, and (iii) the body part is cast as a static location in which a state exists, rather than a target toward which a dynamic action is directed. Consequently, at the level of the construction, the patient can be construed as an 'experiencer' of a state and the overall pattern interpreted as an existential expression, in spite of the inherent semantics of the head predicate.

Thus, in comparison to DC, AC represents an even more dramatic instance of a pattern in which the complement structure of the sentence cannot be a simple projection of the head predicate. Not only does it require the presence of a participant that is not in the valence of the head verb, but the construction manipulates the inherent semantics of its head verb to the point of reconfiguring the participants originally contributed by the predicate.

4. The accusative construction as a grammatical idiom

Once the reinterpretation that results in AC as captured in (23) is established as an independent grammatical pattern, we can expect other idiosyncratic properties to appear as well. One obvious candidate is the dative marking on the 'patient'. The configuration of participants and the overall construal of AC are conspicuously reminiscent of DC. Both patterns serve as expressions of spontaneous experience, affecting a target that is not in control of the experience but that represents, by virtue of its animacy, an autonomous entity not directly dependent on the event. Consequently, it is no surprise that the accusative in AC might invite replacement by the dative, as the more common and productive form associated with experiencer roles in this language and generally in Slavic (cf. Janda 1993 and especially Dabrowska 1997 on similar phenomena in Polish).

This accusative-to-dative shift analysis is also supported by the distributional facts in that the dative in AC is quite restricted. For one thing, many speakers altogether reject the dative as ungrammatical, even in casual speech, or at least perceive it as very marked in comparison to the accusative. But even when the dative form does occur, it seems to favor only certain types of nominals. The sequence in (24) below shows that there is a difference in the acceptability of datives between pronominal experiencers (24a–c) in contrast to full nouns (24e). Full nouns are noticeably more awkward in the dative than personal pronouns, as indicated by the double question mark in (24e): some speakers marginally accept the dative noun, while others reject it.

(24) a. *Píchlo mě/mi u srdce.*
stab.PPL.SG.N 1SG.ACC/DAT at heart.GEN.SG.N
'I felt a sharp pain in [my] chest.'

b. *Škrábe ji/jí v krku.*
scratch.PRES.3SG 3SG.F.ACC/DAT in throat.LOC.SG.M
'She has a scratchy throat.'

c. *Škrábe ho/?mu v krku.*
scratch.PRES.3SG 3SG.M.ACC/?DAT in throat.LOC.SG.M
'He has a scratchy throat.'

d. *Tebe / ??tobě už zas bolí v krku?*
2SG.ACC / DAT already again hurt.PRES.3SG in throat.LOC.SG.M
'You have a sore throat again?'

e. *Tátu/??tátovi píchlo u srdce.*
dad.ACC.SG.M/??DAT.SG.M stab.PPL.SG.N at heart.GEN.SG.N
'Dad felt a sharp pain in [his] chest.'

As (24c–d) indicate, however, not all pronouns appear in the dative with equal ease either; for example, the alternation *ho*/*mu* (24c) is considerably more questionable than, for example, *ji*/*jí* in (24b). This difference is very likely due to phonetic factors. For example, the suppletion involved in the masculine pronoun in (24c) may very well interfere with the case alternation and lead to the less definite judgment on its acceptability. On the other hand, some personal pronouns may be more conducive to interchangeable case marking because the phonetic difference between the two case forms is only minimal (the 1st pers. sg. in (24a), for example) or even non-existent in the spoken language, as is the case of the feminine pronoun shown in (24b); the accusative form *ji* has essentially disappeared. Nevertheless, examples such as (24d) suggest that the potential for the alternation is not just a matter of similar enough phonetics. The sentence-initial, full-form pronoun (as opposed to the second-position clitic forms used in 24a–c) marks greater discourse prominence of the referent, draws attention to it as a clearly individuated, focused participant. In such contexts, the dative is distinctly dispreferred.

Finally, the strong preference for the accusative in (24d) on semantic-pragmatic grounds is also consistent with the fact that accusative case marking remains the only option with syntactically 'heavier' NPs, as illustrated in the two pairs of examples below, where (25) contains a branching structure and (26) a coordination structure. The syntactic heaviness evidently correlates with richer semantic content than can be associated with unstressed, contextually bound pronouns.

(25) a. *Oba nás bolelo v zádech.*
both.ACC.M 1PL.ACC hurt.PPL.SG.N in back.LOC.PL.N
'We both had a back pain.'
b. **Oběma nám bolelo v zádech.*
both.DAT 1PL.DAT hurt.PPL.SG.N in back.LOC.PL.N

(26) a. *Janu i Petra píchalo v boku.*
Jane.ACC also Peter.ACC stab.PPL.SG.N in side.LOC.SG.M
'Both Jane and Peter had a stitch.'
b. **Janě i Petrovi píchalo v boku.*
Jane.DAT also Peter.DAT stab.PPL.SG.N in side.LOC.SG.M

Restrictions of this kind contrast with DC, where the categorical, syntactic, or semantic status of the dative nominal is irrelevant; clitic pronouns, illustrated in (2), as well as full pronouns, nouns or noun phrases, all shown in (27), occur with equal ease.

(27) a. *Tobě zvonilo v uších?*
2SG.DAT ring.PPL.SG.N in ear.LOC.PL.N
'Your ears were ringing?'
b. *Tátovi zvonilo v uších.*
dad.DAT.SG.M ring.PPL.SG.N in ear.LOC.PL.N
'Dad's ears were ringing.'
c. *Janě i Petrovi zasvítilo v očích.*
Jane.DAT also Peter.DAT light.up.PPL.SG.N in eye.LOC.PL.F
'Jane's and Peter's eyes lit up.'

Thus, the acceptability of the dative in AC is governed by several factors. What makes its presence possible in the first place is the overall experiential flavor of the construction, which recasts the inherent patient as a more autonomous experiencer. But whether the dative actually occurs appears to be further constrained by the relative semantic and discourse prominence of the referent: as contextually bound, non-focus elements, pronouns have the least prominent status (reflected also in their low prosodic prominence) and, subject to additional phonetic factors, are thus the most receptive to the shift in case marking. In contrast, syntactic 'heaviness' reflects relatively higher semantic and discourse prominence of the referent and here clearly correlates with resistance to the change in form.[10]

Whatever the reason for the distributional gaps, though, the fact that these gaps exist should be enough to make it doubtful that AC and DC represent a single grammatical pattern. It is, therefore, consistent with the linguistic facts to conclude that AC mimicks the form of DC and not the other way around,

as traditionally claimed, and the contamination is motivated by the shared constructional meaning. A similar development is evidenced in occasional colloquialisms such as (28b), as compared to the standard form in (28a). In cases like these, the patient-hood and the accusative marking of the relevant argument, shown by *mě* in (28a), has never been questioned as the expected, unmarked pattern; this example represents a basic transitive structure with the nominative-accusative marking of an <Agent, Patient> valence.

(28) a. *Přešla mě chuť na všechny*
pass.PPL.SG.F 1SG.ACC appetite.NOM.SG.F for all.ACC.PL.F
dobroty.
goodie.ACC.PL.F
'I lost all interest in any of the goodies.' (lit. 'any appetite for the goodies passed me)'

b. *Přešla mi chuť na všechny*
pass.PPL.SG.F 1SG.DAT appetite.NOM.SG.F for all.ACC.PL.F
dobroty.
goodie.ACC.PL.F

The highly marked use of the dative in (28b) is clearly motivated by the semantic similarity with dative-experiencer constructions; the kind (*ne*)*chce se mi* 'I (don't) feel like', which represents a very robust pattern in Czech, suggests itself as a particularly strong candidate in this case:

(29) *Nechce se mi nic jíst.*
NEG.want.PRES.3SG RF 1SG.DAT nothing.ACC eat.INF
'I don't feel like eating anything.'

Another feature that can be related to the idiomatic status of AC has to do with the form of the locative element. Some of the predicates allow alternations between a prepositional phrase and the nominative. The latter form suggests that the body part is cast as the causer (rather than just the locus) of the sensation. Examples of the nominative/oblique alternation are given in (30) and (31).

(30) a. *Pálilo ho v očích.*
burn.PPL.SG.N 3SG.M.ACC in eye.LOC.PL.F
'He felt burning in [his] eyes.'

b. *Pálily ho oči.*
burn.PPL.PL.F 3SG.M.ACC eye.NOM.PL.F
'[His] eyes were burning.'

(31) a. *Bolelo* *ho* *v* *zádech.*
hurt.PPL.SG.N 3SG.M.ACC in back.LOC.PL.N
'He felt pain in [his] back.'
b. *Bolela* *ho* *záda.*
hurt.PPL.PL.N 3SG.M.ACC back.NOM.PL.N
'[His] back hurt.'

On the face of it, it seems equally plausible to analyze these alternations as a shift from nominative to oblique, as the other way around. However, there is at least negative evidence that the nominative might be an innovation facilitated by the idiomatic nature of the construction, perhaps responding to a pressure to restore formally the inherent transitivity of the head predicate through reconfiguring the available arguments. In other words, we could treat the examples in (30)–(31) as a case of linking the locative argument to the unfilled slot provided by the valence of the head verb. Several observations may speak in support of this analysis: (i) presence of a nominative-marked causer is in conflict with the basic clause structure (agent-demotion) of AC, (ii) the 'causer' interpretation of the body part is incompatible with the canonical linking relations in Czech and with the meanings of the predicates that typically occur in AC, and (iii) the alternations are generally very unstable and predicate-specific.

Let us first point out that the oblique form and the nominative are not necessarily in free variation, in spite of what the examples in (30)–(31) might suggest; the meaning difference there is extremely subtle, if any at all. More often than not, though, a change in case marking correlates with a (sometimes very slight) semantic difference, as is consistent with Czech case marking in general (Daneš 1968; Nichols 1983; *Mluvnice Češtiny* 1986). The oblique vs. nominative coding in the (a) vs. (b) variants in (32) and (33) below reflect real differences in meaning, corresponding, roughly, to the partitive-holistic distinction that has been observed with similar alternations on locative complements in other contexts (Anderson 1971; Salkoff 1983).

(32) a. *Svědilo* *ho* *v* *nose.*
itch.PPL.SG.N 3SG.M.ACC in nose.LOC.SG.M
'He had an itch in his nose.'
b. *Svědil* *ho* *nos.*
itch.PPL.SG.M 3SG.M.ACC nose.NOM.SG.M
'His nose was itching.'

(33) a. *Bolelo* *ho* *u* *srdce.*
hurt.PPL.SG.N 3SG.M.ACC at heart.GEN.SG.N
'He had a chest pain.'

b. *Bolelo ho srdce.*
hurt.PPL.SG.N 3SG.M.ACC heart.NOM.SG.N
'He had a heartache.'

The oblique form in (32a) implies that the sensation affects only a part of the nose (the inside, to be exact), while the nominative in (32b) is uncommitted with respect to any partitioning of the locus. The difference may be even more pronounced in (33), where the holistic reading of (33b) is reinforced by the metaphorical sense it has acquired. (33a) reports physical pain located in a particular region delimited by the proximity of the body part, whereas (33b), as a metaphorical expression of emotional pain, associates the experience with the heart as a whole.

However, the alternations in form do not stretch beyond these three verbs. Most of the verbs occurring in AC do not allow the nominative coding, presumably because of a clash between the holistic-partitive construal of particular body parts and the inherent meaning of specific head predicates. For example, the fact that the sentence in (34a) below does not have a variant with the body part in the nominative, as shown in (34b), may have to do more with the meaning of the verbs *dusit* 'choke' and *svírat* 'squeeze' than with the possibility of a holistic vs. partitive construal of the body part involved.

(34) a. *Na prsou ho dusí a svírá.*
on chest.LOC.PL.N 3SG.M.ACC choke.PRES.3SG and squeeze.PRES.3SG
'He is short of breath.'

b. **Prsa ho dusí a svírají.*
chest.NOM.PL.M 3SG.M.ACC choke.PRES.3PL and squeeze.PRES.3PL

It seems that the act of choking or squeezing requires an outside force, albeit unidentified explicitly, rather than allowing the body part to be reinterpreted as the instigator (and the same is true for the acts of scratching, pinching, making warm/cold, etc. – to list some of the other verbs for which the nominative is impossible). The most we can conclude from this about the nominative form is that its presence is inherently incompatible with AC and AC's typical head predicates and it can 'leak' only in a few highly restricted cases: the verbs *bolet* 'hurt' and *svědit* 'itch' are dedicated to reporting physical sensations and as such may very well have a lexically marked variable valence to begin with, and the verb *pálit* 'burn' as used in AC could be treated as a case of lexicalization, in which the literal meaning of the verb ('burn by applying fire

or intense heat') has shifted into a new (metaphorical) sense, associated with a new coding pattern.

In sum, all the alternations (accusative/dative and oblique/nominative) can be attributed to the tension between the inherent semantics of the head verb and the semantics of AC as a whole, and this tension opens up two different paths for further shifts. Formal pressures that follow from the transitivity of the head verb lead to the possibility of recasting the locative participant in a more 'active' role, while a semantic pressure, motivated by the event construal associated with the entire grammatical pattern, leads to the change in case marking on the patient role. Note, however, that neither alternation is entirely predictable nor do they occur with full regularity, which is just what we would expect in an idiom.

5. Case marking and construction grammar

The previous discussion has established the following: (i) DC and AC are two distinct grammatical patterns that differ in their internal structure but share some external semantics and pragmatics; (ii) AC is a syntactic idiom that shares certain linking properties with regular transitive valences but imposes its own idiosyncratic features that result in a new overall construal and restricted distribution; and (iii) the conventionalization of certain features in AC leads to further shifts in both form and meaning. In order to bring out the crucial similarities and differences between both constructions, let us now turn to their representation, which will also help in addressing the issue of case marking.

5.1 Constructional representation of DC and AC

In this section, I will translate the empirical generalizations about DC and AC, as presented above, into a more formal representation that will make more explicit the constructions' relationship to other parts of Czech grammar. But first, two points of theoretical nature must be introduced as necessary background.

In dealing with the semantic dimension of constructions, I assume a frame-based approach to meaning, in which central importance is given to the notion of 'interpretive frame' – an analytic and representational tool for organizing human experience into grammatically relevant semantic structures (e.g. Fillmore 1982; Fillmore & Atkins 1992; Atkins 1994; Petruck 1996). A frame provides, among other things, schematized information about the background scene and its participants as it is modeled by a specific expression, be it a single

word or a more complex grammatical pattern. Crucially for the data at hand, a single frame may be evoked by a number of linguistic expressions, each of which encodes a particular aspect of the same background scene.

A fundamental feature of both DC and AC is their experiential construal: they both evoke a frame that can be called HUMAN EXPERIENCE. This frame represents a semantic generalization, or a knowledge structure, that exists independently of DC and AC and consists, minimally, of three participants: an experiencer, a trigger, and a ground (a more elaborate structure of this frame is proposed by Atkins (1994), based on her analysis of English verbs of perception). The frame is associated with a number of individual words expressing experiences of various kinds, but as our material demonstrates, it can also be evoked by larger grammatical patterns that create the same experiential effect by stretching the meaning of inherently non-experiential verbs. This means that the interpretation of any DC or AC construct represents an integration of the inherent meaning of the head predicate with an experiential overlay provided by the construction in which it occurs.

Support for this analysis comes from the types of predicates that are attested in DC and AC. While both constructions take verbs that do not automatically evoke the HUMAN EXPERIENCE frame, the verbs that are likely to turn up in DC or AC come from particular semantic classes. DC is most commonly associated with verbs of emitting light or sound (such as *svítit* 'give off light', *zatmět se* 'turn dark', *blýskat* 'flash', *znít* 'sound', *zvonit* 'ring', *kručet* 'rumble', *praštět* 'make a cracking sound', etc.) and AC is largely limited to verbs of direct physical contact (*štípat* 'pinch', *škrábat* 'scratch/scrape', *píchat* 'stab/pierce', *svírat* 'squeeze', *pálit* 'burn (tr.)', *hřát* 'make/keep warm', *studit* 'make/keep cold', *mrazit* 'freeze (tr.)', etc.) All of these predicates describe situations that have the potential to affect the senses of a sentient being – by creating a visual, auditory, or tactile effect. It is, therefore, no coincidence that such predicates should be compatible with the conceptualization of spontaneous, uncontrolled experiences and can thus be made to accommodate the additional semantic layer in DC and AC.

The second point is more specific to the Czech grammar; it concerns the organization of linking relationships in Czech as manifested in regular case assignment. I assume that there is a basic inventory of linking constructions, each of which represents a regular, predictable association between a specific event role and its canonical case form. Thus, transitive patients are linked to the accusative, various types of locative relations have their corresponding expressions, etc. With respect to dative nominals in particular, we need to note that they are licensed by a family of linking constructions in which the dative form is

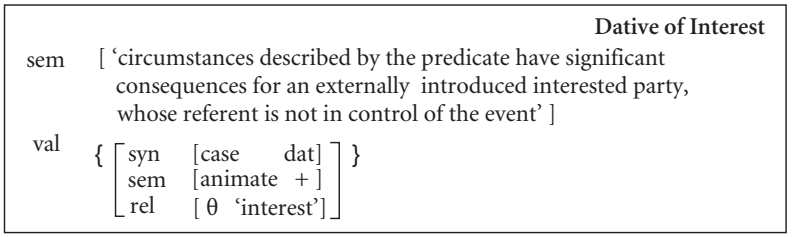

Figure 1. Dative-of-Interest linking construction

conventionally aligned with what can be broadly characterized as an endpoint that is not fully or directly affected (in contrast to transitive patients); cf. also Kemmer & Verhagen 1994 on the notion of 'indirect affectedness'. This semantic relation subsumes a number of narrower interpretations, such as possession, experience, belonging, etc.

In the context of this chapter, the crucial subtype of this special kind of affectedness is a role that is restricted to animate referents and provisionally labeled as 'interest'. It represents a very robust meaning-form relation in Czech, independently of DC or AC, and as I argue elsewhere (Fried 1999a), it is related to the kind of affectedness associated with the second argument of two-place predicates of action for someone's benefit/to someone's detriment (e.g. *pomoci* 'help', *vládnout* 'reign over', *ublížit* 'cause harm'). It is commonly inherited by other structures as a way of introducing an interested party into a sentence, as an extra element (Poldauf 1962; Fried 1999b). The basic features of the construction that capture this particular linking relationship, labeled Dative-of-Interest, are summarized in Figure 1. The representation tells us that the semantic notion 'interest' is regularly linked to the dative form, must be instantiated by animate referents, and those referents are interpreted as not exercising any control over the event in which they participate.

With these background assumptions and with the use of a slightly simplified version of the Construction Grammar formalism, the internal organization of DC can be represented as in Figure 2. The symbol # indicates coindexing that keeps track of all relevant participants for the purpose of unification. The inner box represents the head predicate as follows. Through the 'frame' attribute, it identifies its semantic class. The parenthesized frame element (FE) indicates that the predicate may or may not contribute a participant that will have an argument status, depending on whether the predicate is intransitive or atransitive (i.e. one without a valence). If the head predicate does provide an argument that would normally be encoded as a specific NP (in case of intransi-

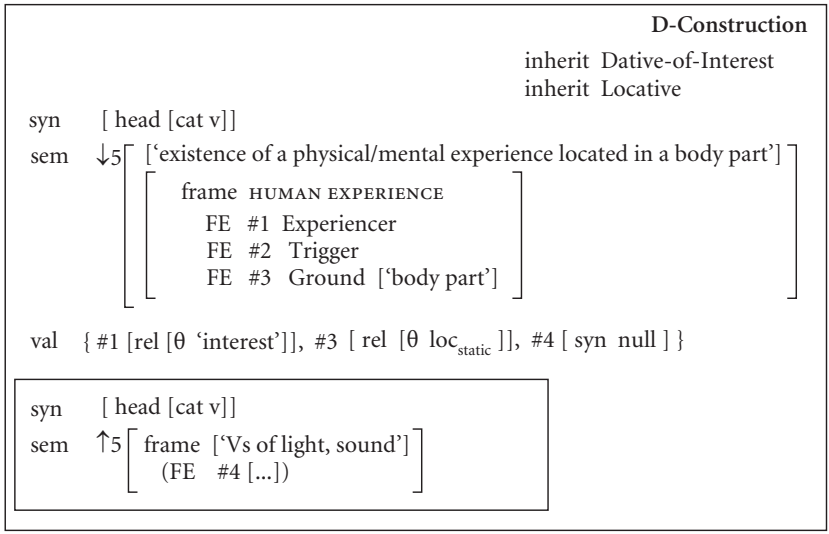

Figure 2. D-Construction, partially spelled out

tive verbs), that argument (#4) will remain unexpressed in this construction, as indicated in the constructional valence. The upward pointing arrow (↑ 5) indicates that the meaning of the head verb must be incorporated in the semantics of the construction as a whole, in order for a DC construct to receive full interpretation. As already noted, the semantics contributed by the construction is based on the HUMAN EXPERIENCE frame consisting of three participants (#1–#3) and the frame has its corresponding valence consisting of two arguments co-indexed with the experiencer and the ground (#1 and #3, respectively). Neither of these two arguments is supplied by the head predicate. They both are licensed by independent ‘adjunct’ linking constructions (cf. Kay & Fillmore 1999) that DC inherits; each linking construction contains information about a particular semantic role, its canonical morphological form, and whatever other idiosyncratic features may be associated with its use. (For detailed explication of the theoretical notions, such as inheritance, linking, unification, etc., I refer the reader to Chapter 2 in this volume.)

For comparison, the internal structure of AC is shown in Figure 3. The inner box represents the transitive head verb with the appropriate construction-specific restrictions: the semantic class of an ideal candidate and the animacy of the patient argument. It is also a property of the head verb to expect that its patient argument be accusative-marked, as follows automatically from its

semantic transitivity; this is ensured by inheriting the Accusative linking construction. The experiential flavor of AC is again represented as an external property of the construction, through the presence of the HUMAN EXPERIENCE frame and the constructional valence. In contrast to DC, however, the alignment between required arguments and available linking options leads to less straightforward unification with respect to the experiencer participant. The representation in Figure 3 results in an alignment between the accusative-marked patient argument contributed by the head verb and the 'interest' relation in the constructional valence. Accommodation of this conflict is forced by the fact that there is no other candidate to satisfy the external semantic requirement, and it is facilitated by the fact that in AC, both roles involved ('interest' and patient) require animate entities that are not in control of the event, even though they inherently differ in the degree of affectedness; that distinction becomes neutralized in this construction.

As demonstrated by speakers who do allow the dative in AC, the patient-experiencer accommodation can be pushed a step further. This possibility is captured in Figure 3 by the parenthetical notation around the dative linking construction, indicating its optional status. By not making the availability of the dative, as the expected form for the 'interest' relation, an explicit requirement, Figure 3 reflects the fact that AC constructs tend to maintain the accusative marking associated with the semantics of the head verb. However, the presence of the 'interest' argument in the constructional valence provides the necessary window of opportunity for switching the case marking from the predicate level to the optionally available constructional one. Once the constructional option is selected, the difference between DC and AC is effectively obliterated: the neutralization of a semantic feature (affectedness) is now directly manifested by the attendant change in form.

These two representations now make very clear what exactly DC and AC have in common. What they share amounts to a semantic valence that is associated with a semantic frame, which, in turn, provides the background scene common to all experiential expressions in Czech. The valence reflects a particular instantiation of that scene, which could be called 'localized experience', by highlighting only the experiencer and the ground. We can thus maximize the generalization about AC and DC and the knowledge Czech speakers must have about them by keeping the semantic valence as a specific piece of lexico-semantic structure that is available to both AC and DC. This semantic generalization amounts to positing a 'sub-frame' in the spirit of the process known as 'perspectivization' in Fillmore's (1977) work on structuring inherent meaning for the purposes of syntactic organization of sentences. Put differ-

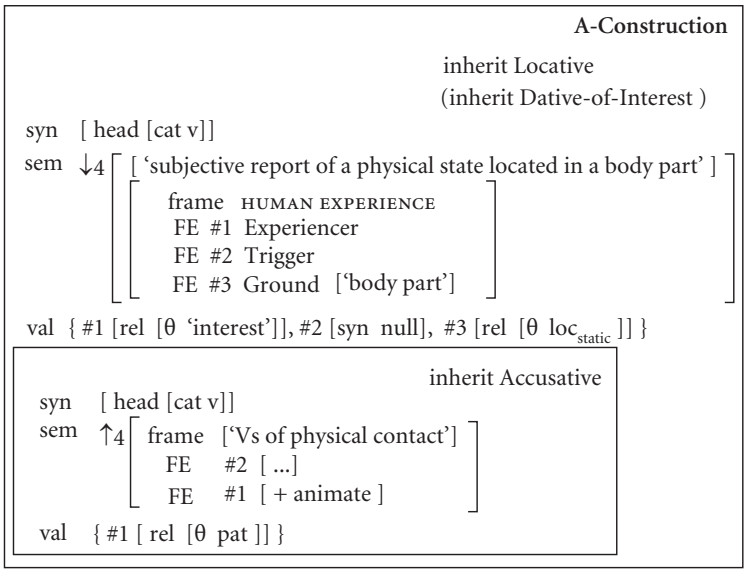

Figure 3. A-Construction, partially spelled out

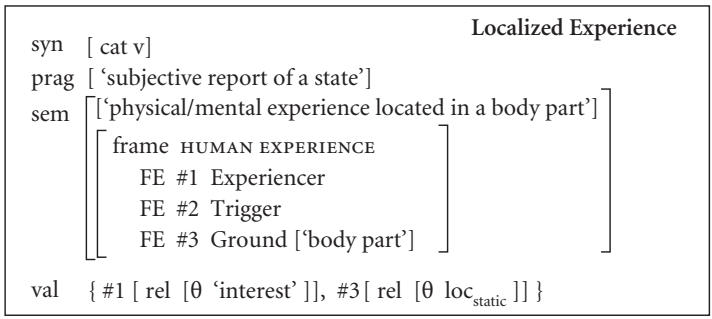

Figure 4. Localized Experience frame

ently, the LOCALIZED EXPERIENCE subframe represents a specific perspective on the participants inherited from a larger background scene (namely, HUMAN EXPERIENCE) and casts them, through the associated valence, as event roles in a particular mutual relationship, without constraining the roles to specific forms. A possible representation of the LOCALIZED EXPERIENCE frame is shown in Figure 4.

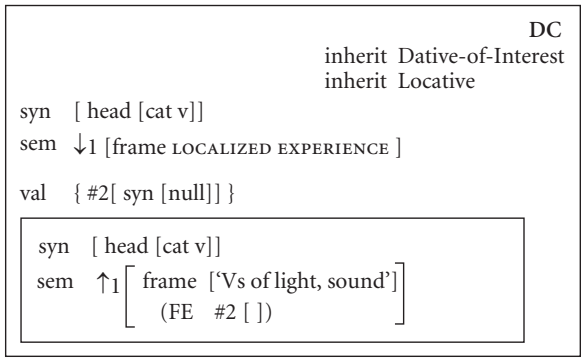

Figure 5. D-Construction

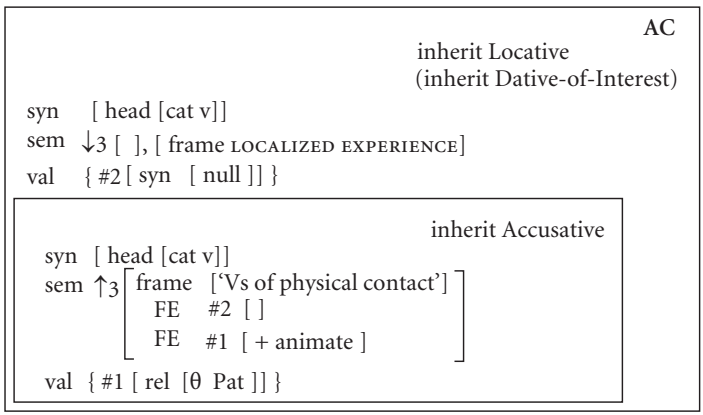

Figure 6. A-Construction

It should also be noted that this analysis is markedly different from Goldberg's (1995) notion of 'argument structure constructions', which include linking information about syntactic function or form associated with each argument. The notion of frame, with its associated valence, deals only with the semantic side of argument structures and leaves the particulars of their expressions to linking constructions. This separation of domains (lexical semantics organized in frames vs. grammatical patterning organized in grammatical constructions) is necessary for ensuring enough flexibility in linking proper, as called for by the Czech data.

To summarize, the representation in Figure 4 shows an experiential event of a certain type, while DC and AC create specific subtypes of this general pattern, by providing the details of linking the valence associated with the LOCALIZED EXPERIENCE frame to specific case forms. DC and AC, then, need to carry only the information shown in Figures 5 and 6, respectively.

Based on these representations, we can summarize the relationship between DC and AC as follows. First of all, neither construction can be fully accounted for on the assumption that sentences are just projections of their heads: it is clear that additional pieces of linguistic structure also contribute to the overall complement structure of each construction and must be incorporated in the representation. Second, both constructions serve to express the same background scene, evoking the same semantic frame, although each configures the frame participants slightly differently, depending on the type of head verb it unifies with. Third, both constructions discard the potential trigger of the experience by suppressing the argument that could be interpreted as such (the single argument of the intransitive verb and the agent of the transitive one); this property leads to the existential flavor of the result. The rest, however, depends on the transitivity of the head predicate. In order to satisfy the instantiation of the constructional valence, each construction takes as much as it can from what the head predicate offers. In case of intransitive or atransitive predicates, the construction has to provide everything. In case of transitive verbs, it can use the patient argument to connect with the experiencer, even if the match seems imperfect, and supply only the locative. It can, however, improve this imperfect meaning-form fit based on the overall event construal by ignoring linking patterns called for by the head predicate in favor of constructionally licensed linking.

The overall character and behavior of each construction then follows from this basic difference in their internal organization. DC displays greater transparency and compositionality in relating semantic content to form and as such, perhaps, has a better chance at being more productive. In contrast, AC presents a less than perfect match between an event construal and available arguments. The gap between the meaning of the head predicate and that of the whole construction leads to a more opaque, non-compositional interpretation and a more 'exceptional' feel to it. Not surprisingly, then, AC shows lower stability in form.

5.2 Case marking

This brings us to the more general problem of case marking and particularly the search for predictable semantic correlates of morphological cases. With respect to the specific case forms found in our two constructions, the answer is relatively straightforward. In all instances, case assignment follows regular principles that apply throughout the Czech grammar and neither the dative in DC nor the accusative in AC constitute any unexpected pattern that Czech speakers would have to learn as exceptional. The only difference is in the origin of the relevant linking constructions. In DC, like in many other constructions that contain a non-lexical dative (cf. Fried 1999b for the discussion of the other types), the dative is an extra element, added onto the valence of the head predicate – notice that the dative linking construction is inherited at the external level of DC. In AC the accusative is linked to an argument of the head predicate and the whole construction has to accommodate this contribution one way or another; put differently, the accusative linking construction is inherited internally, at the level of the head verb.

It is clear that the case marking in DC and AC is not arbitrary. But can we say that the use of the accusative vs. the dative reflects a difference in meaning? And if so, can we make a generalization about the difference? One way of answering these questions is to focus on the internal structure of both constructions, which reveals that each case form is linked to an inherently different argument role, 'interest' in (2) and a patient in (1), as a consequence of the difference in transitivity of the predicate types associated with each construction. From this perspective, the difference between dative and accusative marking indeed signals a difference in meaning, exactly the same way it does throughout the Czech grammar.

The question is how to treat the dative marking in AC (and other, similar grammatical contexts). On the one hand, it is conspicuous that the accusative is replaced by the dative and not randomly by any arbitrary case form. At the same time, dative marking does not appear as an optional variant in place of all, or even most, accusatives in other grammatical contexts. The alternations associated with AC, therefore, call for an explanation and the analysis developed in this paper has relied on the notion of grammatical construction for it. If we consider the role-case relationship only at the external, constructional level, without concern for the specifics of the head predicates, the participant in question is ultimately construed as an 'experiencer' regardless of the case form. This means that a semantic distinction that holds at the level of predicate semantics can be neutralized at another level of semantic parsing and

under the right external circumstances. The result of such neutralization is the accusative/dative alternation, which simply reflects a conflict between lexical and constructional semantics. Apparently, the conflict can be resolved in favor of either level, at least in the context of AC.[11] The inherent lexical requirements of the head have a stronger claim to prevailing, but they may give in to the external pressure that is grounded in a conventionalized construal, especially if there exists another constructional pattern with a sufficiently similar construal and pragmatic force. Which is to say that the variability in case marking is motivated by speakers' knowledge of possible patterns of events and not just by their knowledge of specific lexical items.

To summarize, the forms in DC and AC are best treated as instances of 'semantic' cases, consistent with Czech case marking in general. However, their distribution provides evidence that predictable semantic case marking does not have to be governed exclusively by lexical predicates but that there is such a thing as 'constructional' case assignment – reflecting the same semantic relations that play a role in lexical assignment, but triggered by larger grammatical patterns. This, in turn, means that it is not always possible to identify the 'meaning' of a morphological case only on the basis of all instances of a given case and in opposition to any other case form(s). If we take the opposition-based view, DC and AC introduce two types of exceptions that speakers would have to cope with in the Czech case marking system: (i) not all experiencers in spontaneous experiential events are coded in the dative and (ii) not all accusatives mark transitive patients. The material provided by DC and AC argues for taking a more discriminating view, one that allows for case marking motivated by contextual overlaps, in addition to predicate semantics. Under this view, neither linking pattern requires provisions for exceptional case assignment.

The division of labor between constructions and their head predicates as manifested by DC and AC thus also answers the question of which form should be considered 'regular'. At the predicate level, both constructions display entirely predictable linking; it is not the case, therefore, that one construction is more, or less, regular than the other. It further follows that the alternation in AC must be treated as an innovation from a regular accusative to the seemingly unpredictable dative, rather than from a 'regular' dative to the 'exceptional' accusative, as traditionally claimed (Poldauf 1962; Grepl & Karlík 1989). The direction of change argued for here is undoubtedly helped along by greater productivity of DC, but productivity should not be confused with regularity; the former does not necessarily imply the latter.

6. Conclusions

I conclude that externally idiomatic expressions may have an entirely predictable internal organization and that there is no *a priori* reason to treat apparently exceptional case patterns as idiosyncratic lexical entries. Instead, they can often be handled by the regular linking mechanism, provided that we take into account the lexical meaning of individual predicates as projected into their semantic valence; it is the predicate valence that regular case marking is sensitive to. It follows that semantic correlates of morphological cases cannot be identified in any absolute terms across multiple complex constructions. Those constructions only introduce additional layers of semantic and/or syntactic information that may override the linking relationships contributed by its constituents, giving rise to the appearance of 'exceptional' marking, as the predicate-specific semantic distinctions may get blurred, shifted, or completely neutralized at the constructional level.

Notes

1. A portion of an early version of this work was presented at the First Northwest Conference on Slavic Linguistics in Eugene, Oregon, in May 1997. I wish to thank especially Alan Timberlake, Jan-Ola Östman, Ewa Dabrowska, and Laura Janda for very helpful discussions of various aspects of the topic and for their comments on earlier versions of this chapter.

2. In the past tense, the verb is morphologically a past participle (glossed PPL), which marks only number and gender agreement features. In the absence of an auxiliary, which only marks number and non-3rd person, the subject, if any, is necessarily a 3rd person. This is a general property of the past tense morphology, not of the constructions discussed in this chapter.

3. The data used in this chapter come from a variety of sources: utterances collected randomly by the author from the speech of several Czech speakers, made-up examples tested on those speakers, and data from other publications (especially Grepl & Karlík 1989 and *Mluvnice češtiny* 1986, the academic grammar of Czech that covers both spoken and written language). The grammaticality judgments reflect both the author's speech and the other sources used. The examples are written in standard Czech spelling: *háček* ˇ indicates palatal articulation, the accent mark ´ indicates length.

4. Abbreviations: NOM nominative, DAT dative, ACC accusative, GEN genitive, INS instrumental, LOC locative, M/F/N masculine/feminine/neuter, SG/PL singular/plural, RF reflexive, PRES present, PPL past participle, NEG negative, INF infinitive, PF perfective, NM nominalization.

5. Nor can the whole issue be 'solved' by simply positing two lexical items, *zvonit*$_1$ and *zvonit*$_2$, that just happen to share a portion of their meaning, without providing a mecha-

nism for connecting the two uses. Such a strategy would lack in motivation and necessarily treat the semantic connection as a relatively *ad hoc* one, especially since most of the predicates in question do not even involve any major shift in their basic meaning. The alternative offered in this chapter is, in essence, to posit a single verb with multiple valences and, sometimes, attendant specializations in usage.

6. The reflexive morpheme *se*, glossed RF, is associated with a number of functions in Czech (both syntactic and semantic), none of which have any relevance to the topic of this chapter. In both (3c) and (5), it is simply part of a deponent verb and its presence has no consequences for the structure or meaning of these sentences.

7. I use the term 'unaccusative' only as a convenient label for predicates whose single argument is non-agentive. No theory-internal syntactic claims are implied. Similarly, the term 'atransitive' simply refers to predicates with no valence, such as *zatmět se* 'turn dark'.

8. More precisely, this form is ungrammatical on the experiential reading, along the lines of 'Eve's burning sensation in her mouth'. The presence of the genitive-marked patient invokes an agentive reading, implying that somebody was burning Eve by sticking a hot object into her mouth. On this interpretation, the form is not necessarily ungrammatical, only very awkward, as most nominalizations with multiple complements are in this language.

9. The meaning of many transitive verbs may, of course, impose a similar condition on their second argument; verbs of killing come to mind most readily as an example. What makes the value of animacy different in this context is the fact that it is imposed even on verbs whose lexical meaning does not require the referent to be of a particular type.

10. It should also be pointed out that the preference for pronouns in introducing the dative case into AC is not necessarily a property of the dative case in general. Unlike in Polish, where various 'marginal' uses of the dative sound better with pronouns (Dabrowska 1997), Czech does not seem to exhibit any such correlation. Predictably, dative pronouns of 1st and 2nd person are the only permitted forms in the 'ethical' dative (Fried 1999b), whose sole function is to reference discourse participants. All other uses, however, are equally natural with both pronouns and full NPs (cf. Fried 1999a, b for a detailed treatment of the relevant dative functions).

11. This leaves open the question of whether there are any general principles or constraints that would predict which level (external or internal) wins the competition. However, a lot more research, both empirical and theoretical, will be required in order to settle this issue.

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Chapter 4

Lexically (un)filled constructional schemes and construction types

The case of Japanese modal conditional constructions

Seiko Fujii

1. Introduction[1]

One of the fundamental goals of Construction Grammar (Fillmore 1985, 1988, 1989; Fillmore & Kay 1987, 1995; Fillmore, Kay, & O'Connor 1988; Goldberg 1995; Kay & Fillmore 1999; Michaelis & Lambrecht 1996, *inter alia*) is "to undertake a commitment in principle to account for the entirety of each language. This means that the relatively general patterns of the language ... and the more idiomatic patterns ... stand on an equal footing as data for which the grammar must provide an account" (Kay & Fillmore 1999: 1). This commitment is based on both the methodological conviction that "it is only by giving careful attention to complex structures of the kind that some regard as occupying the periphery of grammars that we can become sensitive to the requirements of the complete account of the grammar of a language" (Fillmore & Kay 1987: 6), and the empirical observation that "most of the structures observed in actual everyday linguistic behavior in fact belong to the so-called periphery of grammar" (ibid.) or what has elsewhere been called "External Language" (as opposed to "Internal Language"). It also represents an attempt to construct a theory and analytical framework that conform to what we know about language use, human interaction, cognition, and language acquisition (cf. Fillmore 1989). What one must learn in mastering a language, for example, encompasses the very large "not-so-regular" part of language, and in fact children seem to acquire relatively idiomatic uses prior to their mastery of fully productive rules (Peters 1983; Tomasello 1992; Wong Fillmore 1976). With this commitment at its

heart, Construction Grammar offers a descriptive and analytical framework to integrate different aspects of grammar – constructions and lexical items on the one hand, and forms and meanings that are associated via constructions on the other hand.

This chapter explores an area of Japanese grammar that demonstrates the need for such an approach to grammar. The case presented here deals with conditional clause-linking constructions (e.g., 1) and deontic modal constructions (e.g., 2), both of which are related to each other in Japanese (as explained in Section 2).[2]

(1) *Muzukasii waza wa itinen kakete sikomanai to*
difficult skill TOP one-year take train.NEG TO (COND-linker)
siai de wa tukaenai.
game in TOP use.POT.NEG
'If I do not train myself for a year to master (new) difficult skills, I cannot use them in a game.'

(2) *Soturon wa daiissyoo o zyuuitigatu ni teisyutu sinai*
thesis TOP chapter.one ACC November in submit do.NEG
to ikenai n desu
TO (linker) bad NMLZ POL
'As for my graduation thesis, I must submit [its] first chapter by November.'

This chapter pursues two related goals: first, it presents an in-depth analysis of deontic modal conditional constructions in Japanese, exploring both general patterns and (semi-)idiomatic expressions; second, it proposes a unified account of these constructions and their (semi-)idiomatic expressions by (i) positing general CONSTRUCTION TYPES and CONSTRUCTIONAL SCHEMES, and (ii) demonstrating the relations among the posited construction types, and articulating these construction types as a family of constructions. The motivation throughout is to seek generalizations and overarching principles governing relatively local, idiosyncratic, and idiomatic aspects of these constructions within a framework that also accommodates their regular productive aspects.

The issue of idiomaticity in language is not limited to what is ordinarily called "idioms" in the narrower sense (e.g., *kick the bucket*). Following Makkai (1972), Fillmore, Kay & O'Connor (1988), in analyzing the *let alone* construction, propose to distinguish "encoding idioms" from "encoding idioms". While some idiomatic expressions are *decodable* by the use of analogies or by extralinguistic cognitive abilities, learners can never produce (encode) them correctly unless they have learned the conventional use of the expression separately. En-

coding idioms may be compositional, in that one can guess and understand the meaning of the expression by knowing the meanings of its parts, but unless the language user has learned such as idiom in its own right, (s)he may not be able to predict the particular combinatory requirements of the specific words and/or constructions involved, and thus may be unable to produce the expression properly for its associated conventional meaning. Nunberg, Sag, & Wasow (1994) also distinguish "idiomatically combining expressions" from "idiomatic phrases"; the meaning of an "idiomatically combining expression", though conventional, is distributed among its parts, whereas an "idiomatic phrase" does not distribute its meaning across its components. Like Fillmore et al. and Nunberg et al., the present study attends to idiomatic expressions which do have parts that contribute to the compositionality of the overall meaning. As suggested by Nunberg et al. (ibid.), Brinton & Akimoto (1999) and Akimoto (1999), there are multiple dimensions to idiomaticity, including conventionality, inflexibility, informality, opacity, (non)compositionality, and so forth. For our purposes here, it is important to recognize, as argued by Nunberg et al. (ibid.), that conventionality does not entail noncompositionality.

Such idiomatically combining expressions, or encoding idioms, are highly conventionalized in several senses, as will be discussed in detail below. First, the combination of certain words may be conventionalized (for example, a particular clause-linker collocated with a certain main-clause predicate); secondly, the pairing between the combinatory form and its meaning may be conventional; thirdly, a certain implicature of a related fuller expression may be conventionalized, and therefore be obtainable even when conditions are insufficient for the implicature properly speaking. These idiomatically combining expressions, moreover, are often half-productive. In this paper, I will propose to capture these aspects of half-productive idiomaticity by positing lexically unfilled CONSTRUCTIONAL SCHEMES that can be instantiated by particular lexemes.

The outline of this chapter is as follows: In Section 2, I will lay out the three CONSTRUCTION TYPES of conditional utterances, comprising what I will call (i) the full bi-clausal conditional construction; (ii) the integrated evaluative conditional construction, including (iii) fixed deontic modal expressions; and (iv) the reduced conditional construction. In demonstrating these distinct construction types, I will also tie them together in a CONSTRUCTIONAL SCHEME, a template which cuts across these general construction types and which at the same time is associated with a particular pragmatic modal function. Section 3 will briefly explain the nature of the data used in this study, and give a quantitative summary of the data. Section 4 will focus on discussion of the first two construction types, (i) full bi-clausal conditional sentences (4.1) and (ii) inte-

grated evaluative conditionals (4.2), demonstrating the different mechanisms whereby each construction type can give rise to the same shared modal function. Section 5 will then examine the third major construction type, reduced conditionals, and show that in the reduced construction an implicit conversational implicature of the fuller construction has been conventionalized and become the construction's essential meaning. Sections 6 will synthesize the various lines of analysis presented in this study. Section 7 will briefly discuss an extension of the proposed framework, showing how it can deal with other linkers and other modal functions involving other constructional schemes. Section 8 concludes the chapter.

2. Construction types and constructional schemes

To capture relations among constructions in this study, I will use the two notions (thus two terms) – construction types and constructional schemes – to be illustrated in this section. Both construction types and constructional schemes are "constructions", pairings of forms and meanings, as defined in Construction Grammar (Fillmore 1988; etc.). But the two specific terms will be used here to show two ways of grouping constructions, thus abstractions over constructions. Construction types and constructional schemes interact with each other, and they together constitute a single family of constructions – the family of Conditional Construction. The overall architecture of various specific constructions as grouped via construction types and constructional schemes should become clearer in the later sections and particularly in Section 7 (see Table 6, which shows the mutual crosscutting of construction types and constructional schemes). But let me first illustrate each construction type, in this section, concentrating on one specific constructional scheme.

2.1 Construction types

This section lays out the different conditional construction types that I will explore in this study – what I call Full Bi-Clausal Conditional construction, Integrated Evaluative Conditional construction, including fixed deontic modal conditionals, and Reduced Conditional construction. Various clause-linkers are possible in these constructions, but all construction types featuring a particular clause-linker and a particular constructional scheme (to be explained in Section 2.2) share a particular functional common denominator. For the purposes of illustration we will focus here on the particular deontic modal

function 'obligation', as shown in (3i) through (3iv) below, all featuring the clause-linker *to*. The morpheme *to* is one of the conditional clause-linking particles in Japanese, and appears (like all clause-linkers in Japanese) at the end of the subordinate clause.

(3) i. *hayaku ikanai to sensei ni mo*
early go.NEG TO(COND-linker) teacher by also
mihanasarete-simau yo.
give.up.PASSIVE-ASP PART
(Lit. 'If you do not go soon, you will be given up on by your teacher.')
'If you do not go soon, your teacher will give up on you.'

ii. *hayaku ikanai to taihen.da yo. / komaru*
early go.NEG TO troublesome PART / 'you will be in trouble'
yo.
PART
'If you do not go soon, it will be troublesome.'

iii. *hayaku ikanai to ikenai yo.*
early go.NEG TO bad PART
(Lit. 'If you don't go soon, it will be bad.')
'You *must* go soon.'

iv. *hayaku ikanai to*
early go.NEG TO
(Lit. If you don't go soon.)
You *must* go soon.

(3i) is an ordinary full bi-clausal conditional sentence. Such a sentence, containing two full clauses linked by a clause-linker, is an ordinary conditional sentence of the type found in many languages and indeed typically studied under the rubric of conditional sentences. In an ordinary discourse context, given our common world knowledge, this sort of full bi-clausal conditional sentence can implicate the illocutionary force of 'obligation'. In other words, the speaker can utter this statement with the intent to carry out a speech act through which s/he attempts to move the addressee to action – in this case, "Go soon".

(3iii) represents a conventionalized deontic modal expression conveying obligation – a function which English would typically express with auxiliary verbs such as "must" (strong obligation) and "should" (weak obligation). The sentence formally involves a conditional structure – two clauses linked by a clause-linker *to*. It literally means 'it would be bad if you did not go soon,' but it clearly conveys the restricted and specialized pragmatic function of 'obligation'. As shown by Akatsuka (1992, 1997), Akatsuka & Clancy (1993), Miyajima

(1964), Lee (1983), Fujii (1987, 1992), Hasunuma (1987), *inter alia*, a characteristic of such deontic modal expressions is that the main clause contains a positive or negative evaluative predicate, for example *ikenai* (bad) in sentence (3iii). *Ii* (good, o.k.), *dame* (bad), and *ikenai* (bad, no good) are the three basic evaluative predicates that have been typically discussed in previous studies. With the exception of Akatsuka's seminal work (1992, 1997) and studies of child-adult interaction by Akatsuka, Clancy, & Strauss (1993), previous work has often dismissed deontic modal expressions like (3iii) as 'idioms', either excluding them from the domain of conditionals or ignoring their functional and formal relations to full bi-clausal conditionals (3i). This type of obligation expression, however, has turned out to be semi-productive, and accommodate a variety of other negative evaluative predicates, as shown in Section 4.2 (see Table 4 for the list of such predicates found in my corpus). I thus take the most grammaticalized fixed deontic modal expression (3iii) as a special case of a more general construction type, which I will call integrated evaluative conditionals (or IEC).

(3ii) above illustrates the IEC construction. This utterance is very similar to the typical deontic modal expression exemplified in (3iii) in that the main clause (that is, the second clause) contains an explicit negative evaluative predicate, here *taihen da* ('troublesome'). But the list of negative evaluative predicates which can participate in this construction type is very long, if not open-ended. To a considerable degree, such predicates have the effect of integrating the two clauses into a single whole (hence the 'integrated evaluative conditionals'), as will be discussed later in this paper. The other definitional characteristic of the Integrated Evaluative Conditional construction should be clear already: the main clause predicate explicitly and semantically expresses the speaker's evaluation – either negative or positive.

Japanese conditionals participate in yet another construction type, which I will call Reduced Conditional construction, exemplified in (3iv). This utterance is exactly the same as the antecedent clause in sentences (3i) through (3iii) above, but here the utterance concludes with the linker *to*, with an ending intonation. The utterance, nevertheless, conveys exactly the same function of 'obligation' as (3i) through (3iii). In Japanese casual conversation, it is very common for the speaker to utter a conditional clause 'bare', that is, with no consequent clause, for the purpose of expressing his/her deontic modal stance (e.g., 'prohibition', 'obligation', 'permission').

The four construction types that I have illustrated thus far (with the middle two combined) are summarized in Figure 1.

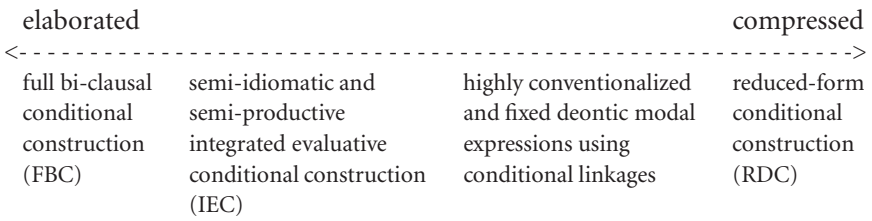


Figure 1. An elaboration-compression continuum of clause-linkage

As shown in Figure 1, these construction types can be arrayed on a cline compatible with the elaboration-compression continuum of clause-linkage discussed by Lehmann (1988). It is my claim that these construction types constitute a family of constructions, a group of constructions mutually related in form and function.

The templates for each general construction type are shown in (4i) through (4iv) – the parentheses indicate optionality:

(4) i. FBC

SYN: bi-clausal SEM: conditional (IF – THEN) PRAG: (modal implicature)
SYN: CLAUSE 1 – LINKER SEM: conditional antecedent PRAG: (evaluated)
SYN: CLAUSE 1 (full-fledged clause) SEM: conditional consequent PRAG: (evaluated)

ii. IEC

SEM: conditional modality PRAG: modality
SYN: CLAUSE 1 – LINKER SEM: conditional antecedent PRAG: evaluated
SYN: PREDICATE SEM: EVALUATIVE

iii. Fixed deontic modal expressions (special case of IEC)

SEM: conditional deontic modality PRAG: deontic modality	
SYN: CLAUSE 1 – LINKER SEM: conditional antecedent PRAG: evaluated	SYN: PREDICATE SEM: EVALUATIVE 'good' or 'bad' lxm: *ii* or *ikenai / naranai / dame da*

iv. RDC

SYN: CLAUSE 1 – LINKER SEM: conditional antecedent PRAG: (evaluated)

In the utterances (3i) through (3iv), these general construction types are instantiated with the particular clause-linker *to* (i.e., the LINKER slot is filled with the linker *to*).

2.2 Constructional schemes

I will next illustrate the notion of CONSTRUCTIONAL SCHEME: a template which cuts across the general construction types illustrated above and which at the same time is associated with a particular pragmatic modal function. Let me first introduce the notion by using the same examples as above. Looking at the various construction types conveying the 'obligation' function (shown in (3)), they all have a structural minimal common denominator which can be laid out as follows:

(5) Constructional scheme: 'obligation'

PRAG/SEM: 'obligation'	
SYN: CLAUSE 1-NEG – LINKER SEM: conditional antecedent PRAG: negatively evaluated	SYN: unspecified (full-fledged clause, bare predicate, or null) PRAG/SEM: negative evaluation *

In this chapter, such a scheme will be called a constructional scheme.

By way of example I have presented the constructional scheme for 'obligation'; but in fact each of the deontic modal functions has its own constructional scheme, representing the structural and functional common denominator of the various construction types that express that particular deontic function. A

constructional scheme is thus a generalization over several construction types sharing a semantic core; it is orthogonal to general construction types and crosscuts them.

To return to the constructional scheme (5), a number of points of details are worth noting. As will be elaborated on in Section 4, the notion of 'negative evaluation' in the second part of the construction (5) may be either pragmatically implicated or semantically encoded. The notion is thus shown as either a pragmatic (*prag*) or semantic (*sem*) specification in (5). Moreover, the formal nature of the second part of the constructional scheme is not specified; it may be either a full-fledged clause or a bare predicate, or there may be no second clause at all (as in the reduced construction).

As indicated, the constructional scheme cuts across all the construction types. More detailed specific templates for each construction type can be obtained from the above overall constructional scheme (5), as given in (6) below:

(6) Constructional scheme: 'obligation' (for each construction type)

i. FBC for 'obligation'

SYN: bi-clausal SEM: conditional (IF – THEN) PRAG: ('obligation')
SYN: CLAUSE 1-NEG – LINKER SEM: conditional antecedent PRAG: (negatively evaluated)
SYN: CLAUSE 1 (full-fledged clause) SEM: conditional consequent PRAG: (negatively evaluated)

ii. IEC for 'obligation'

SEM: conditional, 'obligation' PRAG: 'obligation'
SYN: CLAUSE 1-NEG – LINKER SEM: conditional antecedent PRAG: negatively evaluated
SYN: PREDICATE SEM: EVALUATIVE, NEGATIVE

iii. Fixed deontic modal expressions (special case of IEC) for 'obligation'

SEM: conditional, 'obligation'
PRAG: 'obligation'

SYN: CLAUSE 1 -NEG – LINKER SEM: conditional antecedent PRAG: negatively evaluated lex: *to,* *(r)eba,* *tewa*	SYN: PREDICATE SEM: EVALUATIVE, NEGATIVE 'bad' lxm: *ikenai / naranai / dame (da)*

iv. RDC for 'obligation'

SEM: conditional ('obligation')
PRAG: 'obligation'

SYN: CLAUSE 1-NEG – LINKER
SEM: conditional antecedent
PRAG: negatively evaluated

lex: *to,*
(r)eba,
tewa

As I will show in Section 4, a constructional scheme serves as the template on the basis of which idiomatic phrases like (3iii) can develop and ultimately come to be fixed. It is also the constructional basis for implicatures – construction-specific implicatures that may arise in ordinary regular full bi-clausal utterances such as (3i). Furthermore, as will be discussed in Section 6, a constructional scheme serves as a template on the basis of which related reduced constructions like (3iv) can get grammaticalized through repeated use for specific modal functions. By recognizing such a general constructional scheme, we can begin to make sense of the dynamic processes involved both in the general interpretive mechanism for implicatures (i.e., implicatures coming from regular conditional utterances) and in the idiomaticized and grammaticalized uses.

Having explained the target constructions (the construction types and the constructional scheme of 'obligation'), we now move on to a more detained analysis. Sections 4–6 examine the ways in which each construction type is used in actual spoken discourse, and the mechanisms whereby each construction

type gives rise to a particular shared modal function. First, however, Section 3 provides an overview of the data used in this study.

3. Data

The present study is based on recorded and transcribed conversations (a total of 15 hours, about 108,000 words) of native speakers of Japanese in casual dyadic interactions between same-sex friends of similar ages (17 female pairs and 17 male pairs).[3] All the speakers were young adults (ages 18–29), and in each pair the speakers knew each other very well, and were mostly school or work mates.

This corpus yielded 446 tokens of the *to* linker, among them 87 tokens appearing in a construction conveying the obligation function, as shown in Tables 1 and 2.

As shown in Table 2, of these obligation *to* tokens, the integrated evaluative type (IEC) illustrated by (3ii) and (3iii) in Section 2 constitutes about 50.6%, the reduced type (RDC) as in (3iv), 24%, and the full bi-clausal conditional type (FBC) as in (3i), 25%.

As shown in Table 3, although obligation modality is found with only 19.5% of the total set of *to* utterances, and with less than 7% of full bi-clausal *to*

Table 1. Frequency of *to* utterances: Total, Full Bi-clausal (FBC), Integrated Evaluative (IEC), and Reduced (RDC) constructions

Construction type	Frequency	% (of TO total)
FBC	338	75.78
IEC	67	15.02
RDC	31	6.95
Other	10	2.24
Total	446	100

Table 2. Frequency of obligation (oblg) *to* utterances: Total, Full Bi-Clausal (FBC), Integrated Evaluative (IEC), and Reduced (RDC) constructions

Construction type	Frequency	% (of obligation TO total)
FBC: oblg	22	25.29
IEC: oblg	44	50.57
RDC: oblg	21	24.14
Total: oblg	87	100
	87/446	19.5 (of TO total)

Table 3. Frequency of obligation *to* utterances overall, and as a percentage out of the total Full Bi-Clausal (FLB), Integrated Evaluative (IEC), and Reduced (RDC) constructions, respectively

Construction type	Frequency	% (of each construction type)
FLB: oblg	22/338	6.50 (of FLB TO total)
IEC: oblg	44/67	65.67 (of IEC TO total)
RDC: oblg	21/31	67.74 (of RDC TO total)
Total: oblg	87	19.50 (of TO total)

utterances, more than 67% of the reduced *to* utterances (*to* clauses neither followed nor preceded by any main clause) clearly convey obligation, (rather than other functions such as 'prohibition', 'recommendation', etc.). Further, more than 65% of the Integrated Evaluative *to* utterances convey the obligation function. This fact shows that, whereas the *to* construction itself is 'globally' neutral regarding its pragmatic function, the integrated evaluative *to* and reduced *to* constructions show a clear functional bias toward obligation modality.

4. Different construction types with a shared modal function

Section 4 will examine the use of the Full Bi-Clausal construction and of the Integrated Evaluative construction in spoken discourse, paying particular attention to the mechanisms whereby each type gives rise to the 'obligation' function.

4.1 The Bi-Clausal Conditional construction

We will begin with the Full Bi-Clausal Conditional construction type.

One very common use of the *to* conditional in the Full Bi-Clausal construction is exemplified by the representative example shown in (7):

(7) <LEARNING ENGLISH>

```
648. *12N: aru teido tensei de motteru toka sa .
           keeping up with English by natural personality
           to some degree
649. *12S: un .
           yeah
650. *12S: sensu zyanakute .
           not because of any good sense of English
651. *12N: dakedo ore ne .
           but in my case
```

652. *12N: *nanka ano tatoeba gogaku toka tte sa .*
for learning a foreign language, for example
=>653. *12N: *kekkoo iroiro nankai.mo nankai.mo*
really various many.times many.times
kurikaesi yattekanai to.
repeatedly do.NEG TO (COND-linker)
if I do not practice it repeatedly in
various ways
=>654. *12N: *mi.ni.tukanai mi.ni.tukanai zyanai* ?
acquired.NEG acquired.NEG PM
I cannot master it, can I?
655. *12S: *un* .
yeah
656. *12N: *mi ni tukanai yo ne* ?
I cannot master it, can.I?
657. *12S: *un* .
yeah

In this conversation, which deals with the experience of learning English, Speaker N in lines 653 and 654 says 'if I do not practice it repeatedly in various ways, I cannot master it.' The most natural interpretation of the two clauses in 653 and 654 is to take them together as constituting an ordinary Full Bi-Clausal Conditional, objectively conveying a general contingency relation between the two propositions expressed in the antecedent and consequent clauses. In this context, Speaker N may also implicate that one must practice it repeatedly in various ways in order to master it. In other words, an added characteristic of this sort of double negative bi-clausal conditional [If not X, then not Y] is that the utterance can pragmatically implicate that the proposition X is obligatory for achieving the goal Y.

The implicature, however, is not automatic: in order for the utterance to give rise to this implicature, a crucial subjective assumption is necessary – namely, that the speaker considers the proposition Y to be a desirable goal, and subjectively feels that not achieving this goal Y would be undesirable. In other words, the situation referred to by the consequent is subjectively assessed and considered undesirable. Unless the speaker and hearer subjectively evaluate the situation expressed in the consequent in this way, the utterance will not implicate the deontic modal notion of 'obligation'. This constructional scheme implicating 'obligation' is shown in (6i), repeated here:

(6) i. FBC for 'obligation'

SYN: bi-clausal SEM: conditional (IF – THEN) PRAG: ('obligation')	
SYN: CLAUSE 1-NEG – LINKER SEM: conditional antecedent PRAG: (negatively evaluated)	PRAG: (negatively evaluated) SYN: CLAUSE 1 (full-fledged clause) SEM: conditional consequent

Example (1) shown earlier (and repeated below) and example (3i) also instantiate this same constructional scheme, in which the antecedent clause has a negation on the verb phrase and the situation expressed by the consequent clause can be subjectively taken as undesirable by the speaker and the hearer.

(1) *Muzukasii waza wa itinen kakete sikomanai to*
difficult skill TOP one.year take train.NEG TO (COND-linker)
siai de wa tukaenai.
game in TOP use.POT.NEG
'If I do not train myself for a year to master (new) difficult skills, I cannot use them in a game.'

Given this constructional scheme, the utterance (1) – under subjective evaluation – implicates the speaker's sense of obligation, 'I must train myself for a year to master any new difficult skill so that I can use it in an actual game.' In the typical examples discussed above, the consequent clause also has a grammatical negation on the verb phrase, but this is not necessary (thus no explicit negation in CLAUSE 2 in the constructional scheme shown in 6i). Negatively evaluated undesirable situations can be expressed without grammatical negation – e.g., *sugu ni wasuretesimau* 'I will easily forget (it)', as in (1') below:

(1') *Muzukasii waza wa itinen kakete sikomanai to*
difficult skill TOP one.year take train.NEG TO (COND-linker)
sugu.ni wasurete-simau.
soon forget-ASP
'If I do not train myself for a year to master (new) difficult skills, I will easily forget them.'

4.2 The Integrated Evaluative Conditional construction

Next we will take a closer look at the IEC construction type in discourse. As we will see, this construction type has an implicit semantic structure 'CONTENT – COMMENT', where 'CONTENT' refers to 'what is commented on'.

In the discourse excerpt shown in (8), the two speakers U and N are discussing different modes of communication in the U.S. and Japan. In line 1032, speaker U uses the *to* conditional, now in the integrated evaluative construction.

(8) <MODES OF COMMUNICATION IN THE U.S. AND JAPAN>

```
  1027 *17U: baka da to omowarenai ?
             You would be considered stupid, wouldn't you?
  1028 *17U: aitu wa wakatteru to omowareru n da kedo .
             Though that guy is considered quite knowl-
             edgeable.
  1029 *17U: Amerika dattara gyaku ni ,
             in the United States, to the contrary.
=>1030 *17U: damattetara baka da to omowareru kara ne .
             since you would be considered stupid, if you
             are silent.
  1031 *17N: nan nimo wakattenai to omowareru .
             you would be considered totally ignorant
=>1032 *17U: syaberanai to      dame    da .
             speak.NEG  TO(linker) no.good COPL
             If you do not speak up, it is bad.
             > You must speak up.
  1033 *17U: sono hen ga gyaku da yona .
             Things in Japan are opposite to things in
             the States.
  1034 *17N: gyaku ni .
             Contrary to the situation in the States
  1035 *17N: sono Nihon no kaigi toka da to .
             in case of meetings in Japan
  1036 *17U: un .
             yeah
  1037 *17N: damattete saigo ni sa .
             after being silent, at the end
             (you say something finally).
```

After stating in the preceding lines that in America you will be considered stupid if you are silent, speaker U says, in line 1032, *syaberanai to dame da*, which literally means 'if you do not speak up, it is bad.' The speaker here clearly conveys a sense of obligation, 'you must speak up.'

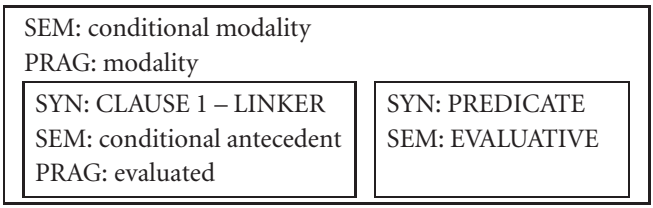
It is interesting to note that speaker U, immediately before his obligation statement using an IEC in line 1032 (discussed above), expresses a very similar idea in line 1030 with a full bi-clausal conditional 'if you are silent, you

will be considered stupid'.[4] In line 1030, however, with a full bi-clausal conditional, the speaker does not present the deontic modality as explicitly as in 1032. The speaker instead states what concrete consequence 'being silent' will cause – i.e., you will be taken to be stupid if you are silent – thereby making it possible to pragmatically implicate that 'one shouldn't be silent' or 'one should speak up in America'. That this conversational implicature is possible is based on our world knowledge and our belief that the consequent situation 'to be considered stupid' is something negative; without such a belief, the utterance would not give rise to a deontic modal implicature of prohibition or warning. Although it would be quite unusual, the utterance could in fact implicate a totally opposite illocutionary force if the discourse somehow involved a belief that 'to be considered stupid' is something positive. We thus see that in a full bi-clausal conditional, a conversational implicature or the illocutionary force of 'obligation' is not automatic or absolute.

The IEC utterance 1032, by contrast, encodes the meaning of obligation in a more transparent compositional manner, and is not open to any other interpretation. In the flow of the discourse, the speaker's intention in uttering the IEC seems to be to reiterate more forcefully his communicative purpose, which in the previous FBC utterance was only implicated.

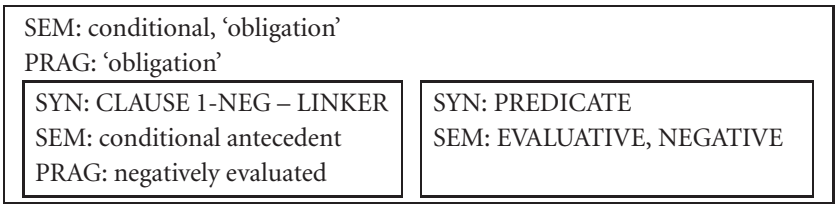
To express the deontic modal function, utterance 1032 makes use of the general IEC construction type shown in (4ii), in which an explicit evaluative predicate follows the conditional marker.

(4) ii. IEC



More specifically, it uses the particular constructional scheme peculiar to obligation modality shown in (6ii), in which the predicate in the first clause is grammatically negated and marked with a conditional marker, followed by a negative evaluative predicate.

(6) ii. IEC for 'obligation'



In 1032, the negative predicate is *dame* 'no good'. As mentioned earlier, *dame* is one of the most common negative evaluative predicates participating in typical deontic modal constructions in Japanese.

(8') 1032 *17U: syaberanai to dame da .
speak.NEG TO(linker) no.good COPL
Lit. If you do not speak up, it is bad.
> 'You must speak up.'

[CONTENT – COMMENT = "'not to speak" is no good'
[CONTENT = 'not to speak'; COMMENT = 'is no good']

Here the main-clause evaluative predicate (*dame* 'no good') expresses the speaker's evaluation of the proposition expressed in the antecedent clause preceding the linker – that is, 'not to speak'. The construction as a whole yields a CONTENT – COMMENT structure: 'not to speak is no good' [CONTENT (= what is commented on) = 'not to speak'; COMMENT = 'is no good'] – even though, grammatically speaking, the content of the proposition commented on is presented conditionally, with a conditional linker. Put differently, we may say that the content expressed in the conditional clause serves as a kind of semantic subject of the main-clause predicate, or as some other semantic element (object or oblique) of the main-clause predicate. It is because of this semantic 'embeddedness' that I consider the construction to be *integrated*, and call it the Integrated (evaluative conditional) construction.

The semantic structure of this constructional scheme for 'obligation' modality in Japanese is reminiscent of the formula for 'necessity' in modal logic, or for 'obligation' in deontic logic, as shown in (9) and (10) respectively.[5]

(9) □ A if and only if ~ ◊ ~A □ necessary; ◊ possible

(10) O p = ~P ~p O (obligation); P (permitted)

If we draw an analogy between the predicate *ikenai* or *dame* 'no good' (or more generally, disapproval or nonacceptance, for IEC) and NEGATED POSSIBILITY or NEGATED PERMISSION, then the constructional scheme of the IEC construction

Table 4. Frequency of main predicates in obligation IEC, and the percentage out of total obligation IEC

predicate	frequency	% (of obligation IEC total)
ikenai 'no good'	17	38.6
dame 'bad'	6	13.6
yabai 'bad'	3	6.8
komaru 'have trouble'	4	9.1
imi(ga)nai 'meaningless'	2	4.5
mazui 'bad'	2	4.5
wakaranai 'incomprehensible/ cannot understand'	2	4.5
other negative evaluative	8	
obligation IEC total	44	

for 'obligation' (6iii)/(6ii) is indeed very like (9) and (10). My purpose here, however, is not to argue for the logical origin of IEC constructions in Japanese. Rather, my point is that the obligation function in the IEC, and especially in the fixed deontic modal conditional, can be obtained *compositionally* and *semantically*, via an explicit negative evaluative predicate taken in conjunction with the semantic structure of the construction as a whole, given in (11):

(11) [BAD IF NOT [action]]

A variety of predicates can instantiate the IEC construction. As mentioned earlier, I thus consider well-entrenched idiomatic expressions (6iii) as a special case of the more general productive construction, IEC (6ii). Other main-clause predicates that frequently instantiate the 'obligation' IEC construction are shown in Table 4, with the frequency distribution found in my corpus. (Examples of "other negative evaluative" include e.g. *iya da* 'hate it', *muzukasii* 'difficult', *turai* 'difficult', and *tukamenai* 'incomprehensible'.)

We will take up further implications of this variety of predicate in Section 6.

4.3 From conditional constructions to the deontic modal function of 'obligation'

A fundamental point in the foregoing discussion is that conditional constructions can yield the deontic modal function of 'obligation' in different ways. In the IEC construction, this 'obligation' function is encoded explicitly via se-

mantic compositionality, as shown in 4.2. In the Full Bi-Clausal Conditional constructions discussed in 4.1, by contrast, the function of obligation is not obtained compositionally but only implicated pragmatically; the deontic modal interpretation relies on conversational implicatures, heavily charged by the speaker and hearer's subjective evaluation, and is not at all automatic.

Thus far I have shown that conditional constructions can give rise to the relevant deontic modal function, either explicitly via semantic compositionality (as in IEC) or implicitly via pragmatic implicature (as in FBC).

5. The Reduced Conditional construction

I move on now to the third major type, the Reduced Conditional construction.

One clear commonality between the Full Bi-Clausal construction and the integrated construction, in addition to the shared function, is the form of the antecedent – i.e., the first clause, the antecedent clause. For the 'obligation' modality, while the consequent part can vary (i.e., it may either contain an explicit negative evaluative predicate or present a negatively viewed situation), the antecedent clause always takes the same form: [VP1 *-(a)nai to*] = [IF NOT VP1]. It is in fact this grammatically negated conditional clause that states the proposition that the speaker takes as necessary or obligatory for his goal or desire. This section examines this grammatically negated conditional clause when it appears alone with no consequent. This, I will argue, is not merely a matter of accidental ellipsis but rather has grammaticalized as a construction in present-day Japanese. This reduced construction (RDC) is given in (6iv) (repeated below):

(6) iv. RDC for 'obligation'

SEM: conditional ('obligation')
PRAG: 'obligation'

SYN: CLAUSE 1-NEG – LINKER
SEM: conditional antecedent
PRAG: negatively evaluated

lex: *to,*
(r)eba,
tewa

Representative examples are shown in the discourse excerpt (12). Here male speakers M and T are talking about a tennis camp organized by a women's college's tennis club that Speaker T plans to attend. Speaker M asks T whether he is going to take his friend Yamamoto to the tennis camp.

(12) <TENNIS CAMP>

174. *67M: *yamamoto toka mo tureteiku no*?
Are you going to take Yamamoto (to the women's camp)?
175. *67T: *doo siyoo ka na*.
I'm wondering what I should do.
=>176. *67T: *yamamoto turete-itte-agenai to ne*,
Yamamoto take-go-give.NEG TO(linker) PART
Lit. If I do not give the favor of taking Yamamoto there.
177. *67M: *un*.
yeah
178. *67T: *demo yamamoto nizyuugoniti sika*,
But Yamamoto can only go after the 25th.
=goniti gurai made tesuto rasii n da.
he has an exam before then.
179. *67M: *huun*.
I see
180. *67T: *ma sono mae ni <@ kitekurenai.@>*
before that
181. *67M: *un.*
yeah
=>182. *67T: *turete-kanai to.*
take-go.NEG TO(if)
Lit. If I do not take (him to the camp).
=>183. *67T: *mada turetettenai n da, zitu wa.*
I have never taken him to tell the truth.
184. *67M: *aa soo*?
Really?
185. *67T: *un. yamamoto zitu wa kekkoo suki desyo*?
well, Yamamoto really likes the female students there.
186. *67M: *e?*
187. *67T: *asoko no*?
of that club.

In line 176, Speaker T replies by saying, *yamamoto turete-itte-age-NAI to ne*, which literally means 'IF I do NOT take him to the camp.' Speaker T's next utterance in line 178, which says 'but Yamamoto can only go after the 25th, because he has an exam before then,' is obviously not the main clause corresponding to the preceding conditional clause in line 176. In line 182, Speaker T repeats *turete-(i)k-anai to*' 'IF I do NOT take him there'. Again, T's next utterance, in line 183, is not the main clause of the conditional clause 182. Line 183 says 'I have never taken him, to tell the truth,' which is in fact one of the reasons why Speaker T feels obliged to take his friend Yamamoto to the camp. Speaker T clearly knows that Yamamoto would love to be invited to attend the tennis camp. For example, T adds in 185 that Yamamoto really likes the female students who would attend the tennis camp. Thus in both lines 176 and 182, by uttering the bare conditional clause 'IF I do NOT take him', the speaker is clearly expressing his strong sense of obligation that he must take his friend Yamamoto; in fact there is no other interpretation possible. Put another way – and this is the point – the reduced conditional utterances 176 and 182 are not open to other conversational implicatures, which might easily be possible with their full bi-clausal counterparts.

I must also emphasize that these same utterances in 176 and 182, even if the conditions for conversational implicatures were insufficient or even if the utterances were taken out of this discourse context, would still clearly convey the same deontic function of obligation. In other words, the interpretation is not merely a matter of inference from the discourse context.

What is highly significant in *to* utterances is that, as shown in Table 5, about 87% of the utterances containing grammatical negation in the *to* subordinate clause involve obligation modality in one way or another (i.e., either explicitly and semantically or implicitly via pragmatic implicature).

The strong functional bias found in *to* utterances with negated *to* clauses gets even stronger in reduced *to* and integrated evaluative *to* constructions (95% and 98% respectively). In these last two types, with only a single exception, *all* of the *to* utterances in the corpus having grammatical negation in the *to* clause clearly convey the obligation function. There was one instance

Table 5. Frequency of obligation *to* utterances involving grammatical negation on the *to* clause ('negation *to*'), and as a percentage out of the total negation *to*

oblg TOTAL: negation	**86**	**86.9%**	**(of negation TO total)**
IEC: oblg: negation	43	97.7%	(of IEC negation TO total)
RDC: oblg: negation	20	95%	(of RDC negation TO total)

of a reduced *to* utterance which seemed to be neutral and undetermined in its pragmatic force; this case can be better treated as regular ellipsis, leaving the interpretation of the unmentioned main clause open. But all the other reduced *to* utterances (19 tokens) uncontroversially invoke the speaker's negative evaluation vis-a-vis the negated proposition expressed in the *to* clause; in all of them the *to* utterance necessarily implicates obligation modality even with no contextual information at all, and cannot be interpreted in any other way. These one-clause bare conditionals should thus be considered as complete independent utterances rather than elliptical subordinate clauses missing a main clause.

All these observations point to the main argument of this section: that such reduced *to* utterances reflect an independent, well-entrenched, grammaticalized pattern. They further provide both qualitative and quantitative evidence that, in the reduced conditional construction type, an implicit conversational implicature of the bi-clausal construction has been conventionalized and become its essential meaning.[6] The next section will go into this issue further.

6. The source of the Reduced Conditional construction

The question that I wish to address at this point is why the reduced conditional as seen in the preceding section, which contains no main clause and thus has neither a negative evaluative predicate nor a statement of negatively evaluated situation, still clearly conveys the same negative evaluation and the same obligation function as fuller constructions (IEC and FBC), and in fact cannot be interpreted in any other way. Section 6 will consider this question, in the process recapitulating and synthesizing the analysis presented thus far and, more importantly, evaluating the analytical framework proposed herein.

6.1 Possible source 1: Fixed idiomatic expressions

One possible solution to this question is that the tendency to collocate the negated *to*-conditional ("... *-(a)nai to*") and the negative predicate *ikenai* 'no good', as in the fixed idiomatic modal expression, is so strong that the idiomatically collocated predicate can always and automatically be recovered even in the absence of this associated predicate. Once the predicate *ikenai* 'no good' is recovered, the obligation function arises compositionally, as discussed in Section 4. This account, appealing to well-entrenched idiomatic expressions and to the collocability of predicates with the conditional linker, is in

fact what I proposed in my earlier papers (Fujii 1987, 1993a, 1993b), dealing with various deontic modal functions. Having found a high frequency, in my conversational database, of the fixed modal conditional expressions using the two predicates *ikenai* and *dame* 'bad' immediately following *-(a)nai to*, I believe that this collocation-based analysis remains an important aspect of the phenomena at hand.

As shown in Table 4 (see Section 4.2 above), 38.6% of the IEC types in obligation function contain the main-clause predicate *ikenai* 'no good'. Other frequent predicates are *dame* 'bad' (13.6%) and *yabai* 'bad' (6.8%). The predicate dominantly associated with *to* in obligation is thus *ikenai* (and its close analogs), and this particular fixed idiomatic expression for obligation might therefore serve as a source of the reduced construction expressing the same 'obligation' function.

6.2 Possible source 2: The Integrated Evaluative construction

It is significant, however, that a fairly large variety of other negative predicates can also participate in the *to* construction expressing the same obligation function – for example, *komaru* 'have trouble' (9.1%), *imi ga nai* 'meaningless' (4.5%), *wakaranai* 'incomprehensible/cannot understand' (4.5%), etc. (see Table 4 for other predicates). This supports the idea that what is involved here is a lexically unfilled general construction involving a negated VP before the *to*-linker and a negative evaluative predicate after it. It is this lexically unfilled general construction for the *to* linker, then, and not the particular form involving *ikenai*, that should more properly be taken as the source of the reduced construction.

This latter analysis has an advantage over the former: it makes it possible to construct an account of reduced conditionals which relates them to the full bi-clausal construction as well as to the integrated evaluative construction, as I will discuss below.

6.3 Possible source 3: The Full Bi-Clausal Conditional construction

On this approach, the IEC construction (and fixed idiomatic expressions) would not be the only source of the reduced construction; full bi-clausal conditionals could also serve as an important source. As discussed in Section 4.1, one very common use of the *to* conditional in the full bi-clausal construction is to implicate obligation modality on the proposition expressed in the antecedent. This bi-clausal type, which literally states that if one does not do X then one

will not achieve Y, is found in contexts where the speaker believes that one must do X in order to achieve Y. The obligation modality here is not absolute; it is not fully general, nor is it a moral or a legal requirement, but rather is conditional and situation-specific: the event or action expressed in the antecedent (X) is believed to be necessary for the particular goal or purpose mentioned (Y). Given the goal or purpose, however, the stated proposition is obligatory and necessary.

Significantly, this type of bi-clausal conditional involves the same constructional scheme as with the integrated evaluative type. Just as with the integrated evaluative construction, the *to* clause involves grammatical negation and the consequent clause presents a negatively evaluated event or state – i.e., assuming that achieving the goal Y counts as something positive, then not being able to achieve that goal (as expressed in this *to* utterance) counts as negative.

To be sure, this is perhaps not the type of obligation modality typically examined under the rubric of "deontic modality" *per se*; but in conversation, where the speaker's purposes and preferences are clearly understood by both participants, this bi-clausal mode of expression is indeed a very common means of expressing obligation modality. This type of bi-clausal *to* conditional implicating obligation modality, therefore, can plausibly serve as a source of the reduced *to* utterances – i.e., the type having no main clause, where the obligation modality now emerges as a purely conventionalized implicature.

The emergence of the reduced construction via this path involves a process whereby one of the implicit optional conversational implicatures of the full bi-clausal construction gets conventionalized, this conventionalized implicature then becoming the essential meaning of the construction. As I discuss elsewhere (Fujii 1995, 1997, etc.), this process is well motivated by the general principle of 'pragmatic strengthening' as proposed in a series of studies by Traugott (1974, 1982, 1986, 1988, 1989), Bybee (1988), Bybee et al. (1994), Horn (1984) and Sweetser (1990) *inter alia*.

6.4 General source: The constructional scheme

What all these observations and considerations boil down to, and the answer that I propose to the question of the source of the reduced construction, is that the existence and significance of the general constructional scheme overarching the three construction types provides the key to the problem. By virtue of this constructional scheme, which is associated indexically with the 'obligation' modality, language users seem to be able to develop mental links which inter-

connect a variety of construction types involving varying forms and varying mechanisms for yielding the pragmatic meaning.

It is this overarching constructional scheme for the 'obligation' modality, then, that should most properly be taken as the source of the reduced construction, which conveys the 'obligation' function even in the absence of any compositional or inferential basis for it.

7. The larger view of the proposed framework

7.1 Other linkers in the constructional scheme of 'obligation'

In the preceding discussion I have limited the major illustrations to examples involving the *to* linker. *to* is indeed one of the most important linkers in the modal domain of obligation. The constructional scheme of obligation presented in this paper, however, can be instantiated not only with *to* but also with certain other conditional linkers – (*r*)*eba, tewa*, and their contracted forms (*r*)*ya* and *tya*.

Representative examples are shown in (13a)–(13c) and (14a)–(14c) below:

(13) (*r*)*ya* (the contracted form of (*r*)*eba*)
FBC
a. *M89: *yappari yasenakya tenisu ga*
still lose.weight.NEG.(R)YA tennis NOM
umaku-naranai naa.
improve-become.NEG PM
'If I do not lose weight I cannot improve tennis.'
IEC
b. *I59: *suutu kite ikanakya ikenai no ka.na ?*
suit wear go.NEG.(R)YA bad NOM Q
'I wonder whether I must wear a suit there.'
RDC
c. *M59: *kawanakya .*
buy.NEG.(R)YA
(Lit. 'If I do not buy (it).')
'I must buy (it).'

(14) *tya* (the contracted form of *tewa*)
FBC
a. *62T: *un dakara demo hatarakanakutya taberarenai zyanai*
yes so but work.NEG.TYA eat.POT.NEG PM
Lit. 'Yeah, but if we do not work we cannot eat, can we?'
IEC
b. *01S: *doniti mo kekkoo oya to issyo.ni inakutya*
weekend too fairly parents with together stay.NEG.TYA
ikenai to omoo
bad QUOT think
'I think that I must stay home with parents even on weekends.'
RDC
c. *01K: *demo menkyo mo toranakutya*
but license too take.NEG.TYA
(Lit. 'If I do not take the license.')
'I must take the license.'

Note that these utterances take the very same general constructional scheme given earlier in (5), and more specifically the individual constructional subschemes seen in (6i), (6ii), and (6iv) respectively (see Section 2.2).

The fact that these other linking morphemes can instantiate the same constructional scheme can be taken as evidence that there exists a lexically unfilled constructional scheme for expressing the 'obligation' modality in Japanese. Furthermore, it is common to all these linkers that this constructional scheme (regardless of which linker it is instantiated with) can take any of the construction types (FBC, IEC, RDC) that I have presented in this chapter. This means that these other linkers also instantiate the family of constructions encompassing the elaborated and reduced construction types, as the *to* linker does.

There are, however, other commonly used conditional linkers that do not behave in this way. The *tara* linker, for example, does not typically instantiate the constructional scheme of obligation (5). The reduced form rarely appears for expressing obligation modality, nor (when it does appear) is it automatically and obligatorily construed as having that particular modal meaning. Reduced *tara* utterances in this constructional scheme (see 6iv) thus cannot be considered grammaticalized in the same way as reduced *to* utterances. The integrated evaluative type in the constructional scheme of obligation (see 6ii and 6iii), if instantiated with *tara*, sounds unnatural and non-idiomatic. The full bi-clausal type is perhaps slightly more flexible in terms of the lexical choice of linker, and one can perhaps make up sentences of obligation modality using

tara, but such utterances are far from idiomatic. In my corpus, there appear no tokens of *tara* conditionals used for obligation modality in any of the RDC, IEC, and FBC types. Even with this result (non-occurrence in the corpus), there is no easy way of confirming the impossibility of *tara* conditionals in obligation modality; but there is surely ample evidence that there are important differences among particular lexical items (here, the various conditional linkers) regarding the specific constructional schemes that each lexical item instantiates.

The advantage of positing the notion of constructional scheme as proposed in this paper is that we can thereby attend to both these general productive aspects of the given phenomena and its idiosyncratic idiomatic aspects. The constructional scheme of obligation can be instantiated with various linkers; it is productively used, and cuts across the multiple general construction types. But certain linkers can be idiomatically combined with this constructional scheme so as to yield both idiomatically combining IEC expressions and well-entrenched reduced construction, whereas other linkers do not participate in these constructions. It is also advantageous to recognize different constructional subtypes (FBC, IEC, and RDC) in sorting out general vs. idiosyncratic aspects, not only because the FEC, IEC, and RDC types in general exhibit different degrees of idiomaticity but also because lexical selectional restrictions (for example, the choice of linker) can be better understood with respect to each individual construction type.

7.2 Other constructional schemes

The above discussion has focused on the particular constructional scheme of 'obligation'. It is beyond the scope of this chapter to go closely into the details of other constructional schemes. But it should be noted in general terms that the same overall analytical framework and the same general phenomena that I have laid out here apply to other constructional schemes conveying other modal functions as well – 'prohibition', 'recommendation', 'permission', etc., as seen in (15), (16), and (17) respectively.[7]

(15) Constructional scheme: 'prohibition'

PRAG/SEM: 'prohibition'	
SYN: CLAUSE 1 – LINKER SEM: conditional antecedent PRAG: negatively evaluated	SYN: unspecified (full-fledged clause, bare predicate, or null) PRAG/SEM: negative evaluation

(16) Constructional scheme: 'recommendation'

PRAG/SEM: 'recommendation'	
SYN: CLAUSE 1 – LINKER SEM: conditional antecedent PRAG: positively evaluated	SYN: unspecified (full-fledged clause, bare predicate, or null)* PRAG/SEM: positive evaluation

(17) Constructional scheme: 'permission'

PRAG/SEM: 'permission'	
SYN: CLAUSE 1 – LINKER SEM: concessive conditional antecedent PRAG: positively evaluated	SYN: unspecified (full-fledged clause, bare predicate, or null) PRAG/SEM: positive evaluation

As mentioned already, these other constructional schemes (like the 'obligation' scheme) crosscut the three construction types, as discussed in detail above for 'obligation': that is, all the constructional schemes can be realized by all the construction types (see Table 6 below). The various constructional schemes are also consistent with the 'obligation' case as regards the mechanisms whereby formally distinct types of conditionals can give rise to particular modal function.

Every constructional scheme, however, is instantiated with its own particular set of possible clause-linkers. To bring out this point, let me briefly compare the constructional schemes for 'prohibition' (15) ('I/you/one must not do ... ') and for 'obligation' (5) ('I/you/one must do ... ') discussed in Section 7.1 and elsewhere in this paper. Although these two constructional schemes share certain semantic properties and are similar to each other (except for the NEG in 'obligation'), these schemes are associated with different *clusters of instances* – here, different sets of lexically instantiated constructions. The constructional scheme for 'prohibition', for instance, can be instantiated with any of the linkers *tara*, *to, tewa*, and the latter's contracted form *tya* (see (15') below). However, unlike the 'obligation' constructional scheme, the linker (*r*)*eba* or its contracted form (*r*)*ya* does not occur (see (15') below).

(5) Constructional scheme: 'obligation'

PRAG/SEM: 'obligation'	
SYN: CLAUSE 1-NEG – LINKER SEM: conditional antecedent PRAG: negatively evaluated	SYN: unspecified (full-fledged clause, bare predicate, or null) PRAG/SEM: negative evaluation *

(5') Lexical instantiation of the LINKER slot:
to, (*r*)*eba,* (*r*)*ya, tewa, tya*
(**tara*, **nara*, **temo*, etc.)

(15) Constructional scheme: 'prohibition'

PRAG/SEM: 'prohibition'	
SYN: CLAUSE 1 – LINKER SEM: conditional antecedent PRAG: negatively evaluated	SYN: unspecified (full-fledged clause, bare predicate, or null) PRAG/SEM: negative evaluation

(15') Lexical instantiation of the LINKER slot:
tara, tewa, tya (*#to*)
((**r*)*eba,* *(*r*)*ya,* **nara,* **temo*, etc.)

Even in the FBC construction, the constructional scheme of 'prohibition' sounds highly unnatural and non-idiomatic if instantiated with (*r*)*eba* or (*r*)*ya*; native speakers normally would not produce such utterances in this function, and no such uses appeared in my corpus. In the IEC and RDC construction types, the unacceptability of (*r*)*eba* or (*r*)*ya* in the 'prohibition' constructional scheme is clearer still. The IEC construction for 'prohibition' categorically excludes (*r*)*eba* or (*r*)*ya*. As for the RDC, a reduced (*r*)*eba* utterance would never be construed as expressing 'prohibition', but rather as expressing 'recommendation'. These particular linker-constraints on the 'prohibition' scheme contrast sharply with the 'obligation' scheme; the latter can readily be instantiated with (*r*)*eba* and (*r*)*ya* but not with *tara*, as discussed in Section 7.1. With the IEC construction, the above restriction – the fact that the IEC for 'prohibition' takes only *tara*, *to*, and *tewa* (or *tya*) but not (*r*)*eba* (or *rya*), whereas the IEC for 'obligation' takes only *to,* (*r*)*eba* (or *rya*), and *tewa* (or *tya*) but not *tara* – results in different sets of idiomatically collocated phrases, that is, different clusters of instances for the two constructional schemes. In every such instance, a specific linker (selected out of a limited set of candidates) and a specific main-clause predicate (likewise drawn from a limited set)

Table 6. Crosscutting of constructional schemes and construction types

(Examples of) CONSTRUCTIONAL SCHEME	CONSTRUCTION TYPE FBC	IEC (including fixed modal)	RDC
Obligation	X	X	X
Prohibition	X	X	X
Recommendation	X	X	X
Permission	X	X	X
:	:	:	:
: (other schemes)	:	:	:
:	:	:	:

serve jointly to instantiate the constructional scheme. The overall family of the lexically instantiated construction types featuring any one specific clause-linker, therefore, shows important differences from other families (featuring other linkers), both in terms of the associated modal function and the formal availability/acceptability of each construction type.

My basic point in the above illustrations is two-fold: (i) different constructional schemes have different linker constraints; (ii) the linker constraints do vary among different construction types even with the same constructional scheme. (Of course, such constraints on lexical instantiations for different construction types and constructional schemes are not limited to the linker slot.) This is one of the reasons why we must recognize both different construction types and different constructional schemes, distinguishing these two notions from each other and keeping apart (in this case) the twelve (3x4) specific constructions shown in Table 6 for detailed descriptions of the grammar at hand. This point should be understood together with the other aspect of my claim: we must be able to articulate the relations among these (twelve) specific constructions, and draw generalizations over them. To this end, I have shown two ways of generalizations via construction types (vertical grouping in Table 6) and via constructional schemes (the horizontal grouping in Table 6), and at the same time treated them all as constituting a single overall family of constructions.

8. Conclusions

This chapter has offered a unified account of both the productive and the idiomatic aspects of conditional utterances used for conveying deontic modality, by positing two notions orthogonal to each other, namely, constructional

schemes (the constructional schemes of 'obligation', 'prohibition', etc.) and construction types (full bi-clausal, integrated evaluative, and reduced conditional construction types). To capture both the productivity and the item-based idiomaticity, I have proposed to recognize the fact of lexically unfilled constructional schemes and construction types and at the same time to carefully investigate how each of these constructions can be lexically filled.

The constructional scheme that I have explored here is regular and productive in many respects. This regularity manifests itself in such a way that i) it cuts across different construction types; ii) the meaning and function associated with the constructional scheme can be accounted for either via general compositionality (IEC) or via the general mechanism of conversational implicature (FBC); and iii) the constructional scheme can be instantiated with various linkers (and of course with a huge variety of lexical items for the other slots in the construction). At the same time, the constructional scheme bears idiosyncratic idiomatic aspects, including the fact that, even among the commonly used, typical conditional linkers, certain linkers can be idiomatically combined with the constructional scheme while others cannot. Further idiomatitcity is observed with respect to the particular predicates that idiomatically collocate with certain linkers in this constructional scheme. In actual uses of these constructions, we find highly skewed distributions of different linkers for a given constructional scheme, not only for the IEC and RDC types but also for the regular full bi-clausal construction type. To capture all these phenomena insightfully, it is important both to recognize the fact of lexically unfilled constructional schemes and to systematically investigate how these constructional schemes are lexically filled.

By the same token, the construction types explored in this chapter also exhibit general aspects as well as idiosyncratic aspects. Different constructional schemes associated with the different modal functions show similar structuring patterns encompassing all these construction types, thereby yielding a family of constructions. We further observe recurrent patterns of functional and formal relations among the construction types, and may thus formulate generalizations about the ways these different construction types are related to each other.

The framework proposed here, appealing to the basic units of constructional schemes and construction types, has the virtue, first, of systematically attending to the seemingly idiosyncratic constraints on the full bi-clausal and reduced construction types, and to the varying local conditions that produce different sets of "idiomatically combining expressions" with the IEC; and secondly (and more importantly) of revealing a deeper consistency across these

seemingly idiosyncratic and disparate phenomena. In other words, generalizations can be drawn across the various construction types and across constructional schemes, even while respecting the different use conditions and different kinds of idiomaticity manifested by each individual construction type and each constructional scheme.

Notes

1. This chapter is an expansion of certain aspects of my doctoral dissertation (Fujii 1993). Earlier papers drawn from this same larger study were presented at the Japanese Linguistics Seminar (1987, 1990), the International Conference on Functional Approaches to Grammar (July 1995), the Annual Meeting of the Linguistic Society of America (Chicago, January 1997), and the 16th International Congress of Linguists (Paris, July 1997). I have benefitted greatly from discussions at these conferences, and particularly from comments and suggestions by Charles Fillmore, Orin Gensler, Jan-Ola Östman, Eve Sweetser, Elizabeth Traugott, and Johan van der Auwera. I also thank the referees and editors of this book for invaluable comments and encouragement. Of course I am responsible for all remaining errors.

2. The abbreviations used in the examples are as follows: ACC = accusative; ASP = aspectual marker; COPL = copula; COMP = complementizer; COND = conditional marker; DAT = dative; GEN = genitive; NEG = negative; NOM = nominative; NMLZ = nominalizer; PART = particle; PM = pragmatic marker; POL = polite form; POT = potential form; TOP = topic marker; QUOT = quotative; VOL = volitional.

3. I developed the corpus in 1993–97 using the conversations that were audio-/video-taped in Tokyo. I wish to thank Yoko Sugimura, Kazue Hara, Kazumi Ohira, Yukari Takahashi, and Hiroki Koga for assisting me with the data collection, and all the 68 speakers who volunteered to participate in this project.

4. This bi-clausal conditional utterance makes use of a different constructional scheme, namely the scheme for 'prohibition'; see Section 7.2 for a brief discussion of this constructional scheme.

5. The notation in (9) is taken from McCawley (1993); the notation in (10) is from Allwood, Andersson, & Dahl (1977).

6. This point pertains to a hypothesis that I have proposed elsewhere (Fujii 1995, 1997) and have been investigating with various linkers and various modal functions.

7. See Fujii (1987, 1992, 1993, 1995, etc.) for these other constructional schemes. Note that the constructional schemes (16) and (17) show similar formal characteristics, but are instantiated with different clusters of LINKER(s) and associated with different pragmatic meanings – 'recommendation' vs. 'permission'. In addition, I elsewhere discuss another constructional scheme, which I call "Futility", but I omit listing it here since its pragmatic function may not be clear without illustrations and full explanations.

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Chapter 5

On the interaction of information structure and formal structure in constructions

The case of French right-detached *comme*-N

Knud Lambrecht

1. Introduction[1]

Spoken French has a particular kind of Right-Detachment construction, in which the detached element is not linked to an argument but to the predicate of the sentence. This construction occurs commonly in spontaneous speech but is not used in the standard written language. Some attested examples are listed in (1) through (4), each involving a minimal discourse context.[2] The relevant portions of the examples are in italics. The comma before the *comme*-N constituent indicates the right clause boundary; it does not indicate a pause. The *comme*-N phrase has the characteristic parenthetical intonation contour of right-detached constituents:

(1) Baby-sitter: Je vais vous raconter une belle histoire, marrante. (Starts telling story)
'I'm going to tell you a beautiful story, a funny one.'
Child: *C'est pas marrant, comme histoire.* (Reiser, G. D.)
'That's not a funny story.'

(2) maman e dit on a l'impression chez elle c'est sombre hein je n'sais pas … t'as jamais été … c'est … *c'est bien, comme appartement* mais (François, 1, 51)
'mom she says you get the impression it's dark in her place, right, I don't know have you ever been … it's a nice apartment but'

(3) y'a une espèce de hangar … *c'est immense, comme hangar* (F.L.)
'there's a kind of hangar … it's a huge hangar'

(4) Tourist in Paris to man in the street:

T: Excusez, Monsieur, pourriez-vous prendre une photo de ma femme et moi devant le Sacré Coeur? (hands camera to man)
'Excuse me, Sir, could you take a picture of my wife and me in front of the Sacré Coeur?'
M: (looking at camera) *C'est cher, comme appareil, ça.* (Reiser, Ph., p.14)
'That's an expensive camera.'

The italicized portions of the examples in (1) through (4) are truth-conditionally equivalent to the standard copular subject-predicate structures in (1') through (4') (the issue of the semantic equivalence between the two sets will be taken up in Section 3):

(1') Ce n'est pas une histoire marrante. 'This isn't a funny story'
(2') C'est un appartement bien. 'It's a nice apartment'
(3') C'est un hangar immense. 'It's a huge hangar'
(4') C'est un appareil cher, ça. 'That's an expensive camera'

Comparing the sentences in the first set with those in the second, we notice that the spoken French construction has the effect of 'dividing up' the content of a standard indefinite predicate NP (e.g. *une histoire marrante* in (1') or *un appareil cher* in (4')) in such a way that a noun modifier of category AP (*marrant* in (1) or *cher* in (4)) occurs in syntactic isolation from the noun it modifies (i.e. *histoire* in (1) and *appareil* in (4)).[3] While the modifier phrase appears in its canonical post-copular predicate position, the modified noun occurs after the clause boundary. In this new position the noun is no longer preceded by the indefinite determiner (*un, une*, etc.) but by the word *comme*, giving rise to a phrase of the form [*comme* N]. I will call the construction illustrated in (1) through (4) the 'Right-detached *comme*-N' (RDCN) construction.

The formal difference between the RDCN construction in (1) through (4) and the canonical copular subject-predicate construction in (1') through (4') is schematically represented in (5) (a more complete representation will be provided later on); the comma between N and AP in (5a) indicates that the two constituents can in principle appear in either order (subject to certain constraints on adjective position in French):

(5) a. Copular Subject-Predicate construction: $_{S}$[*c'est* $_{NP}$[*un(e)* N, AP]]
b. Right-detached *comme*-N construction: $_{S}$[$_{S}$[*c'est* AP] [*comme* N]]

As (5) shows, the predicate denotatum which is expressed in the canonical configuration by a single post-copular NP consisting of an indefinite article, a noun, and an adjective phrase is expressed in the RDCN construction by two

separate constituents, [AP] and [*comme* N], which are separated from each other by a clause boundary.

The existence of the RDCN construction has gone virtually unnoticed both in descriptive grammars and in linguistic analyses of French syntax, even though it is very common in the spoken language and even though it is intuitively recognized by native speakers as a syntactic type. Among the better known modern French reference grammarians, only Wartburg & Zumthor (1973:174) explicitly mention the construction, which they classify among the "procedures serving to emphasize the opposition between the subject of the sentence and the predicate" (translation mine). Their example is *Ce n'est pas bête comme idée* 'That's not a stupid idea'. A related yet different use of *comme*+N is mentioned in Togeby's *Grammaire française* (1982-, volume 4, paragraph 1678; see below, item (32) and discussion). Surprisingly, Damourette & Pichon (1911–1940) do not acknowledge the construction in their monumental work. They do cite one example from a novel by H. Barbusse (the sentence fragment *Quelque chose de soigné comme décoction* '(It was) a total defeat'), but they erroneously assign it to a different construction type (the 'Role-specifying *comme*-N construction' discussed in Section 3.2 below).

Similarly uninformative are modern French dictionaries. Among the works I have consulted, very few quote examples of RDCN sentences under the entry for *comme*, and none mentions the particular meaning this word takes on in the context of the RDCN construction.[4] The *Grand Larousse de la langue française* and the *Trésor de la langue française* each list one example from a twentieth-century writer (*C'est on ne peut plus agréable comme travail* 'It's an extremely nice job' from G. Duhamel and *Il faisait pas joli comme temps* 'It wasn't nice weather' from F.-L. Céline), but neither acknowledges the difference in meaning between the quoted example and other examples cited under the same heading (which again are of the role-specifying type).

For my analysis of the RDCN construction I will assume the theoretical framework of Construction Grammar (CxG) as laid out in Fillmore, Kay, & O'Connor (1988), Kay & Fillmore (1999), and Fillmore et al. (forthcoming; see also Zwicky 1994a, 1994b). In the spirit of CxG, I will view the RDCN structure as a *grammatical construction*, i.e. as a morphosyntactic and prosodic configuration whose form and interpretation cannot be entirely accounted for in terms of other properties of the grammar of the language (or of universal grammar) and which therefore requires independent description.

I will begin by addressing the question of the *form* of the RDCN construction. What are the parts of the construction, what is their relationship to each other, and how do they fit into the larger structure in which they are

embedded? I will argue that the construction belongs to the general syntactic type referred to as 'Right-Detachment' (or 'Right-Dislocation'), of which it inherits a number of formal and pragmatic properties. To make this inheritance relation apparent, I will first provide a brief description of the French Detachment construction (Section 2).[5] I will then present arguments that the RDCN construction is indeed a Detachment construction, although one of a special kind, which cannot be entirely subsumed unter the general type (Section 3.1). Second, I will address the issue of the relationship between *form* and *meaning* in the RDCN construction (Section 3.2). What does the construction mean as a whole, and how does its global meaning relate to the meaning of its parts? More specifically, how can the detachment structure in (5b) have the same meaning as the canonical structure in (5a)? I will argue that the semantic function of the *comme*-N phrase as denoting a primary predicate is construction-specific, i.e., that it arises only in the syntactic environment of this particular construction. The RDCN construction will be shown to be semantically non-compositional in a theoretically interesting way. Finally, I will address the issue of the three-termed relation between *form*, *meaning* and *use* in the construction (Section 3.3). What is the relationship between the given form-meaning pair and the discourse contexts in which it can occur? How does the discourse function of the construction differ from that of its canonical counterpart? My analysis of this issue rests on two fundamental theoretical assumptions, which are justified in Lambrecht (1994). The first is that there exists a direct and conventional relationship between the structure of a sentence and the type of communicative situation in which the sentence can be used to convey some piece of propositional information. The second is that this relationship is governed by principles and conventions of sentence grammar, in a component called *information structure*. In this information-structure component, propositions, as conceptual representations of states of affairs, undergo pragmatic structuring according to the types of utterance contexts in which they are to be communicated. Such pragmatically structured propositions are then expressed in the form of various sentence constructions, i.e. as formal objects with morphosyntactic and prosodic structure.

Using the RDCN construction as an example, I will show how information structure, formal structure, and conceptual structure may interact in a grammar to give rise to unique form-function mappings. I will argue that the syntactic and prosodic form of the RDCN construction reflects in a direct fashion the distribution of *topical* vs. *focal* portions in the pragmatically structured proposition which it serves to express. Inasmuch as the construction differs from its canonical counterpart pragmatically while being equivalent at the level

of semantics, its formal structure can be said to be motivated by principles of information structure. I will also argue that there is a relationship between the information structure of the construction and its semantic structure. Indeed, if the semantic interpretation of the right-detached *comme*-N phrase is dependent on the specific syntactic environment in which it appears, and if the appearance of the predicate nominal in right-detached position is motivated by discourse requirements, we must conclude that form, meaning, and use are interdependent in the RDCN construction.

A secondary purpose of this chapter is to emphasize the importance of the study of *spoken language* for linguistic theory. Inasmuch as the occurrence of the RDCN construction is restricted to spontaneous spoken discourse (to the point that it has been ignored by, or has escaped the attention of, recognized authorities of the French language), and inasmuch as spoken French continues to make use of the canonical subject-predicate construction, the existence of the RDCN construction can be seen as evidence for the spontaneous emergence, in spoken language, of grammatical devices which allow speakers to formally express information-structure distinctions which remain unmarked in the written standard. Here, as so often, the grammar of the spoken language turns out to be more complex and more nuanced than that of the written text.

2. The Preferred-Clause construction and the R-top template

The purpose of this section is to provide the syntactic background which will enable us to understand the nature of the RDCN construction as a member of a larger class: the class of Detachment constructions. In providing this background, I will also introduce and define the information-structure concepts which I will need for the analysis of the discourse function of the construction. For more detailed discussion of these concepts the reader is referred to Lambrecht (1994).

In previous work (Lambrecht 1986, 1987, 1988), I have argued for the existence, in spoken French, of a highly general syntactic pattern which I call the *Preferred-Clause construction*. This construction is composed of a verb preceded by one or more case-marked bound pronouns (so-called 'clitics') and followed by one or more lexical (or free pronominal) argument or adjunct expressions. Examples (1') through (4') above are instances of this construction. Importantly, the Preferred-Clause construction lacks a lexical subject NP. Text counts from a large number of transcripts reveal that this preferred pattern occurs in approximately 95% of all sentences in spontaneous discourse (cf. Barnes

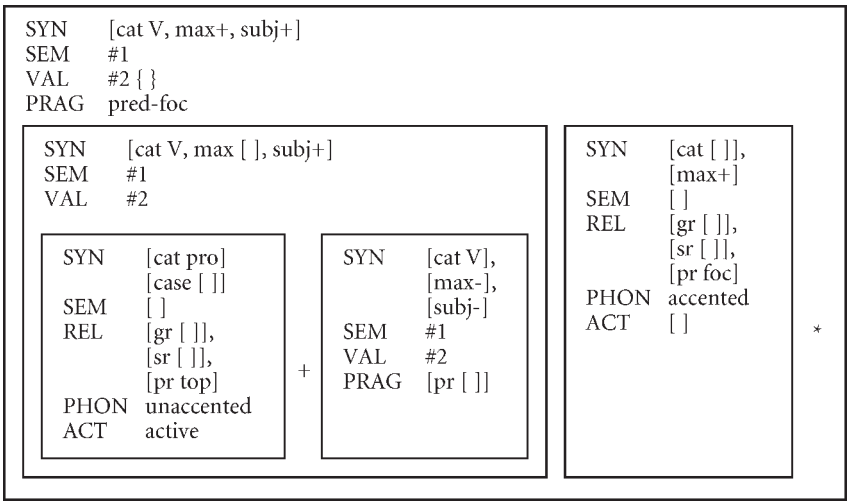

Figure 1. The Preferred-Clause construction

1985; Lambrecht 1987). I regard this fact as evidence that the Preferred-Clause construction represents in some sense the most 'basic' clause pattern of French, which replaces regularly, though not obligatorily, the canonical SV(O) or NP-VP construction in which the subject is a lexical noun phrase, and which is assumed as basic in most traditional and generative analyses of French.

The Preferred-Clause construction is represented in the box diagram in Figure 1. Concerning the CxG formalism in Figure 1, I will content myself with a brief comment. For technical details, the reader is referred to Kay & Fillmore (1999) and Fillmore et al. (forthcoming). For present purposes, the most relevant formal features are those concerning the *information structure* of the construction (not dealt with in the above-mentioned works on CxG). The SYN (syntactic) label in the top left corner of the outermost box in Figure 1 characterizes the Preferred-Clause construction as a sentence headed by a verb whose syntactic and valence requirements are entirely satisfied. The category value of the SYN attribute is the same as that of the lexical head, but the maximality (max) and subject (subj) values change from level to level. The values of the attributes SEM (semantics) and VAL (valence) are also the same as that of the verbal head.[6] The PRAG attribute has as its value the *focus-structure* type to which the construction belongs (Lambrecht 1994), in this case the *predicate-focus* type. In sentences with predicate focus, the subject functions as a topic about which the predicate expresses a comment or piece of new information (cf. below). The innermost left box represents the bound pronoun ([cat pro]),

which forms a single constituent with the verb to its right (see e.g. Lambrecht 1981, 1986; Miller & Sag 1997). As an argument expression, this pronoun has three *relational* attributes: grammatical relation (gr), semantic or thematic relation (sr), and pragmatic relation (pr). The values of the pragmatic-relation attribute are either [top] (topic) or [foc] (focus). A denotatum is said to have a *topic relation* to a proposition if in a given utterance context it is to be construed as a communicative point of departure relative to which the information conveyed by the predication is to be assessed (Gundel 1988). For a denotatum to be construable as having a topic relation to a proposition it must be taken to be of present concern in the discourse, hence to constitute a potential locus of predication (Lambrecht & Michaelis 1998). By definition, the referent of a bound pronoun has a topic relation to a proposition.[7]

In order to constitute a potential locus of predication, a topic denotatum must have a degree of pragmatic *accessibility* in the discourse. In Prince's (1992) terminology, the referent of a topic expression must be both 'hearer-old', i.e. assumed to be known to, or identifiable by, the addressee, and 'discourse-old', i.e., it must have been in one way or another evoked in prior discourse. In Lambrecht 1994 (following Chafe 1987), the pragmatic accessibility of a referent is measured in terms of its degree of *activation*.[8] The activation state of a denotatum is indicated by the attribute ACT, whose values are 'active', 'semi-active', and 'inactive'. The more activated the denotatum is, the more easily it is construed as a topic. Communicatively speaking, the preferred topic expressions are therefore those whose referents are fully active in the discourse, i.e., which are taken to be in the addressee's consciousness at the time of utterance or to be accommodatable by the addressee as such (Chafe 1987; Lambrecht 1994: Chapters 3 and 4). Since fully active referents are normally coded in pronominal form, the preferred topic expressions are pronouns. This is consistent with the fact that the first element of the Preferred-Clause construction is a bound pronoun.

Unlike the bound pronominal argument, the lexical (or free pronominal) argument after the verb has a *focus relation* to the proposition. A denotatum is said to have a *focus* relation to a proposition if its occurrence and role in the proposition is assumed by the speaker to be pragmatically non-recoverable at the time the sentence is uttered. The occurrence of the focus denotatum in a proposition is what makes it possible for the sentence expressing the proposition to constitute a potential piece of information. In the Preferred-Clause construction, the verb and the complement to its right form the *focus domain*, i.e. that syntactic portion which expresses the focus of the pragmatically struc-

tured proposition. In French, as in many languages, the right boundary of the focus domain is marked by the main sentence accent, or *focus accent*.

Although the verb is part of the focus domain, it is formally unmarked for its information-structure status. In a predicate-focus structure, the verb may be non-focal or pragmatically neutral, as e.g. the copula in (1') through (4'). In Figure 1, the value of the pragmatic-relation attribute for the verb is therefore left open.[9] Notice that since the preverbal pronominal constituent is a topic expression, and since this expression is nevertheless morphosyntactically part of V, which belongs to the focus domain, the focus domain contains a topical, i.e. non-focal element. As in many environments, focus structure and phrase structure do not map in a one-to-one fashion in the Preferred-Clause construction (see Lambrecht 1994: Chapter 5).

Typologically, French differs in an important way from English in that a lexical constituent within the focus domain cannot be marked as topical via deaccentuation (cf. Vallduví 1995 for a similar observation concerning Catalán). Compare the English and the French version of speaker B's reply in the following short exchange:

(6) A: How did you like 'Being John Malkovich'?
B: a. I never SAW that movie.
b. ?J'ai jamais VU ce film.
b.' Je l'ai jamais VU, ce film.

In the English answer, the pragmatically accessible discourse entity 'that movie' is marked as topical via deaccentuation of the NP in object position. In French, the topical object must be expressed in unaccented pronominal form, while the lexical NP denoting the referent appears after the clause-boundary in right-detached position.[10] This typological feature of French will play an important role in explaining the discourse function of the RDCN construction

As I have shown in the above-mentioned works (Lambrecht 1986, 1987, 1988), spoken French has a large number of complex sentence-level constructions whose constituent structure exploits the configuration in Figure 1 rather than the canonical sentence structure in which the subject is a lexical NP. These constructions allow speakers to reconcile the formal requirements of morphosyntax and prosody with the pragmatic requirements of information structure by placing constituents with focal denotata in postverbal position and by allowing non-focal arguments to appear in pronominal form before the verb. I call such sentence constructions *preferred-clause-targeted* constructions. I will argue that the RDCN is a special type of preferred-clause-targeted construction.

The class of preferred-clause-targeted constructions which is most relevant to the present argument is that involving *topic* constituents in *detached* position. In these detachment constructions, constituents whose denotata have a topic relation to the proposition but which do not belong to the category 'pro' appear in syntactically isolated position to the left or to the right of the clause, forming with it a larger sentence unit which I will call the *Left-topic* (L-TOP) and *Right-topic* (R-TOP) construction respectively. The basic syntactic structures of the two construction types are shown in (7):[11]

(7) a. L-TOP Construction: $_{\text{L-TOP-S}}[\ _{\text{L-TOP}}[\text{XP}_{(i)}]\ _{\text{S}}[\text{pro}_i\text{+V (XP*)}]]$
b. R-TOP Construction: $_{\text{R-TOP-S}}[\ _{\text{S}}[\text{pro}_i\text{+V (XP*)}]\ _{\text{R-TOP}}[\text{XP}_i]]$

The coindexation symbol on the L-TOP XP is in parentheses because, unlike R-TOP expressions, expressions in L-TOP position may be 'unlinked', i.e., they may lack a coreference relation with an intra-clausal anaphoric pronoun. Notice that the labels L-TOP and R-TOP in (7) do not designate syntactic or pragmatic categories but rather syntactic positions, which may host various kinds of syntactic and functional categories.[12] The L-TOP and R-TOP positions are reserved for denotata which have a non-focal relation to the proposition. There are certain restrictions on the type of phrase that may appear in L-TOP position, which need not concern us here.

Constituents occurring in the L-TOP or R-TOP positions in (7) are always syntactically speaking optional, in the sense that the clause without the detached constituent is always a syntactically well-formed sentence. L-TOP and R-TOP constituents are neither arguments nor adjuncts of the predicate. Rather their function is to provide the referential information necessary to interpret an intra-clausal topical argument or adjunct (see Lambrecht 1994, 2001).[13] Their semantic relation to the predicate is expressed via the anaphoric link to this pronominal argument. In the present paper, I will be mainly concerned with the R-TOP construction in (7b).

Item (8) contains sentences whose structure exploits the R-TOP template in (7b). The syntactic category of the R-TOP constituent is indicated in parentheses after each example:

(8) a. [[Ils$_i$ sont FOUS] [ces Romains]$_i$] (NP)
'They're CRAZY, these Romans'
b. [[J'y$_i$ pense SOUVENT] [à cette affaire]$_i$] (PP)
'I often THINK of this affair'
c. [[C$_i$'est DOMMAGE] [qu'il soit parti]$_i$] (QU-S)
'It's a SHAME that he left'

d. [[C_i'est GENTIL] [de dire ça]$_i$] (*de*-VP-inf)
'It's NICE (of you) to say that'

The postverbal constituents in (8) correspond to the XP constituent of (7b). The clause (minus the preverbal topic pronoun) constitutes the focus domain. Following the XP constituent is the R-TOP phrase, which is coindexed with the preverbal pronominal argument. In all cases, the structure minus the R-TOP constituent (the clause) is a potential complete sentence. The referent of the R-TOP constituent is topical in the discourse, i.e., the predication expressed in the clause is to be assessed relative to this referent (Gundel 1988). The referent is furthermore assumed to be pragmatically highly accessible in the discourse. This pragmatic accessibility of the topic referent is prosodically reflected in the characteristic lack of pitch prominence on the R-TOP phrase (see Ward & Birner 1996 for similar observations about Right-Detachment in English).

Figure 2 contains a formal representation of the R-TOP construction. Only those constituent boxes are annotated which are relevant for the R-TOP template, i.e. the ones for the R-TOP constituent and the bound pronoun. The syntactic category label for the construction is R-TOP-S, i.e., it is a sentence-level construction consisting of a complete sentence and an R-TOP constituent as its right sister. Since the R-TOP construction is of the Preferred-Clause-targeted type, it can be said to *inherit* the Preferred-Clause construction.[14] The referential identity of the R-TOP phrase and the bound pronoun is indicated

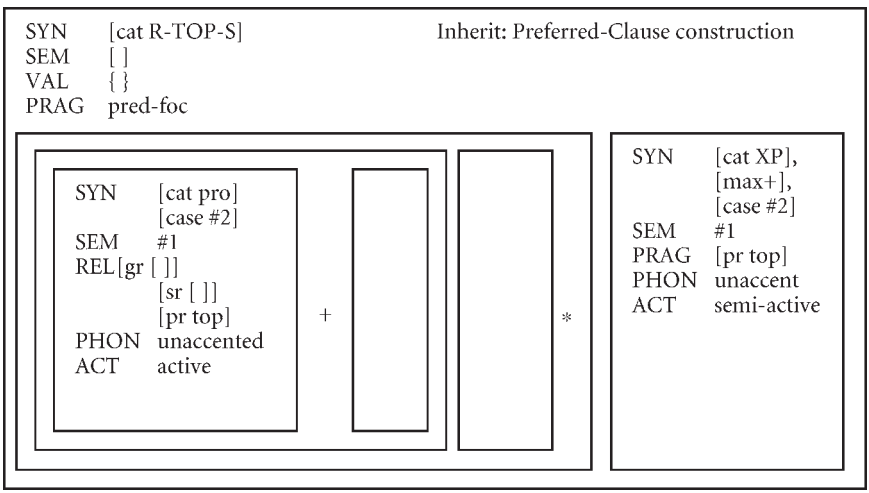

Figure 2. The R-TOP construction

by the identity of the SEM value. The syntactic case feature in the pronoun and the XP boxes indicates that the R-TOP constituent (unlike the L-TOP constituent) must agree in case with the pronoun, as shown in the examples in (8) (cf. Lambrecht 1986 for details). Notice that the R-TOP constituent lacks a REL attribute. This is so because a detached constituent does not have any direct syntactic, semantic, or pragmatic relation to a predicate (except for its case agreement). It merely provides the referential information necessary to interpret the intra-clausal pronominal topic constituent. As for the value of the ACT attribute of the R-TOP constituent, it is indicated as semi-active rather than active because in interpreting an R-TOP sentence the presence of the R-TOP phrase is often (though not always) necessary for correct construal of the pronoun referent. In such cases, the referent of the pronoun is to be pragmatically accommodated as being active. This peculiar referential interdependence between pronoun and R-TOP phrase is conventionally associated with the construction.

3. The Right-Detached *comme*-N construction

3.1 The RDCN construction and the R-TOP template

In this section, I will establish that the RDCN structure presented at the beginning of this chapter is a variety of R-TOP construction, in the sense that it shares with the latter a number of formal, semantic, and pragmatic properties which define Right-Detachment. There are, however, formal and functional differences which make it impossible to simply subsume the RDCN construction under the general R-TOP template.

For the analysis to follow, I will use the simple RDCN construct in (9) as a paradigm example:

(9) [[C'est INTÉRESSANT$_i$] [comme livre]$_i$]
'That's an interesting book.'

A more complete formal representation of the RDCN construction will be provided in Section 3.4, Figure 3. Comparing the structure in (9) with those in (8), we notice that the RDCN construction inherits the following syntactic, prosodic, and semantic features from the R-TOP construction in Figure 2:

i. the construction has two major constituents: a clause of the preferred type in Figure 1 and a postclausal constituent which is sister-adjoined to it;

ii. the structure minus the *comme*-N constituent (the clause) is a potential complete S (e.g. the sequence *c'est intéressant* in (9) is a well-formed complete sentence);
iii. the RDCN has the prosodic structure of the R-TOP construction (the focus accent falls at the right clause boundary and the *comme*-N constituent lacks pitch prominence);
iv. the denotatum of the *comme*-N phrase is semantically connected to an element in the clause.

The vague formulation 'semantically connected' in (iv) will be made more precise as we go along. The RDCN construction also inherits two important information-structural properties from the R-TOP construction, namely the pragmatic accessibility of the *comme*-N denotatum and the non-focal relation of this denotatum to the proposition. These will be dealt with in Section 3.3.

Evidence that the *comme*-N constituent in the RDCN construction occurs indeed in the same right-detached position as regular R-TOP phrases is found in sentences such as (4) (*C'est cher, comme appareil, ça*) in which the R-TOP position contains both types of detached constituents. Compare the attested structure in (10a) with the equally grammatical (10b), where the order of the two R-TOP constituents is reversed:[15]

(10) a. C_i'est vachement COURANT$_j$ ici [comme boisson]$_j$ [le thé]$_i$. (Webb)
'Tea is a very common drink here'
b. C_i'est vachement COURANT$_j$ ici [le thé]$_i$ [comme boisson]$_j$.

If the right-detached NP is in R-TOP position, then so must be the *comme*-N phrase which follows it. As I have shown elsewhere (Lambrecht 1981, 2001), constituents occurring in L-TOP and R-TOP position may be freely ordered with respect to each other in French, in contrast to intraclausal argument constituents, whose order is to a high degree fixed. A similar observation is made by Bresnan & Mchombo (1987) about the syntax of topic NPs in Chicheŵa.

In spite of these similarities, the RDCN construction differs from the regular R-TOP construction in at least the following respects:

i. the *comme*-N constituent is syntactically specified, i.e., it is not an XP;
ii. the *comme*-N constituent is not coindexed with a pro element inside the clause;
iii. the verb must be a copula or a copula-like predicator;
iv. the *comme*-N constituent is not an ordinary referring expression.

Point (i) says that in the RDCN construction the phrase type in R-TOP position cannot be generalized to other phrasal categories, as it can in the ordinary R-TOP construction (see the examples in (8)); the RDCN construction only licenses the *comme*-N phrase. Point (ii) shows that, unlike the R-TOP constituents in (8), the *comme*-N phrase is not the extraclausal lexical instantiation of a pronominal argument of the verb; there is no verb whose valence requires *comme*-N as an argument. Point (iii) refers to the fact that the verb in the RDCN must be either the copula *être* 'to be' or a copula-like verb which allows its complement to function as a primary predicate. Finally, point (iv) refers to the fact that the R-TOP constituent in the RDCN does not have the internal syntax normally required of a French referential expression: it contains neither a determiner, like *ces* and *cette* in (8a) and (8b), nor a nominalizer or complementizer in QU-position, like *que* and *de* in (8c) and (8d).[16] These differences between the RDCN and the general R-TOP construction are consistent with our initial assessment that the *comme*-N phrase denotatum functions semantically as a predicate rather than an argument.

The observation that the denotatum of the *comme*-N constituent in our paradigm example (9) does not have the same relation to the proposition as that of an ordinary R-TOP constituent is confirmed in (11a) (an attested example), in which the subject is an NP instead of a bound pronoun (the phoneme /z/ before *hommes* is a substandard prefixal plural morpheme):

(11) a. Les Français ne sont pas plus BEAUX, comme z'hommes. (H. Frei)
'The French aren't more handsome men'
b. *Les Français ne sont pas plus BEAUX, les hommes.
c. Ils ne sont pas plus BEAUX, les hommes.

While (11a) is well-formed, (11b) is not. An R-TOP sentence of the type illustrated in (8) requires a coreferential bound pronoun in the clause, as in (11c). In the RDCN construction, no such coreference link is required, hence the well-formedness of (11a).[17]

Notice that the difference between the general R-TOP construction and the RDCN subtype cannot be captured by analyzing the *comme*-N phrase as an *adjunct* to the predicate. At first glance, right-detached adjuncts and *comme*-N phrases seem to behave alike. Consider the adjunct phrase *ce soir* 'tonight' in (12):

(12) a. Elle VIENDRA, ce soir.
'She's COMING tonight'

b. Elle VIENDRA, ce soir, ta soeur.
'She's COMING tonight, your sister'
c. Elle VIENDRA, ta soeur, ce soir.
'She's COMING, your sister, tonight'

Like the *comme*-N phrase in the RDCN construction, the adverbial *ce soir* appears in R-TOP position in (12a). This is demonstrated both by the similarity in prosody and by the fact that, just like *comme*-N in (10b), the adverbial may follow another R-TOP constituent, as shown in (12c). And as with *comme*-N, the order of the two elements in R-TOP position is free, as a comparison of (12) (b) and (c) reveals. The *comme*-N phrase and the time adverbial also have in common the fact that they occur without an anaphoric link to a pronominal element within the clause.

But the analogy ends here; the two phrasal constructions clearly obey different formal constraints and receive different semantic interpretations. First, an adjunct phrase may not only appear in R-TOP position, as in (12), but also in clause-final focus position, as shown in (13):

(13) a. Elle viendra CE SOIR.
'She's coming TONIGHT.'
b. Elle viendra CE SOIR, ta soeur.
'She's coming TONIGHT, your sister.'

In contrast, the *comme*-N constituent of the RDCN can only occur in R-TOP position and with R-TOP intonation (cf. the discussion below). Second, while the *comme*-N constituent is fixed in its form, an adverbial adjunct in R-TOP position may appear under any form compatible with its adverbial function. For example, instead of *ce soir* in (12) we could find *ce dernier soir* 'this last evening', or a similar variant. As a corollary, adverbials like *ce soir* can freely cooccur with any predicate (barring pragmatic incongruity), while *comme*-N can only follow a limited number of verbs, i.e. those that may be followed by a predicate nominal. For example, *comme*-N could not cooccur with a verb like *venir* in (13). The adjunct function of *ce soir* distinguishes it sharply from the *comme*-N phrase in the RDCN. While the latter functions predicatively, the time adverbial adds an argument to a proposition, denoting the time at which the event expressed in the predicate takes place.

In sum, while the RDCN construction is similar to the regular R-TOP construction in many respects, it nevertheless differs from it both semantically and grammatically. The *comme*-N constituent does not have the internal and external syntax of an ordinary referential expression and its denotatum functions

neither as an argument of, nor as an adjunct to, a predicate. As we will see in the next section, it is a phrasal category in extra-clausal position which provides the lexical content for an understood intra-clausal predicate nominal.

3.2 Syntax and semantics of the RDCN construction

As a first step towards understanding the different functions of the RDCN construction and the regular R-TOP type, let us compare the meaning of our model sentence (9) with that of the corresponding R-TOP sentence in (14):

(9) C'est intéressant, comme livre.
'That's an interesting book.'

(14) Il est intéressant, ce livre.
'That book is interesting.'

In (14), the R-TOP NP *ce livre* is a topic expression which corefers with the bound pronominal subject *il* and whose purpose is to provide the lexical information necessary to interpret the referent of this subject, while preserving the preferred-clause structure. In (9), on the other hand, the purpose of the R-TOP phrase is to provide the lexical information needed to determine the property being modified by the intraclausal predicate adjective *intéressant.* While (14) predicates of a given book that it is interesting, (9) predicates of a given entity that it is an interesting book. (The latter formulation will be revised later on.) This functional difference between (9) and (14) becomes apparent in examples such as (10) above, in which a referential NP constituent and a *comme*-N phrase cooccur in R-TOP position, one coindexed with the subject, the other with the predicate.

The fact that *comme*-N does not have the referential properties of a regular R-TOP constituent is reflected in its behavior in anaphoric contexts. For example, while it is natural for the denotata of the R-TOP constituents in (8a) and (8b) to be anaphorically referred to with a pronoun in a subsequent sentence, as in (15):

(15) a. Ils_i sont fous [ces Romains]$_i$. Ils_i me font rire.
'These Romans are crazy. They make me laugh.'
b. J'y_i pense SOUVENT [à cette affaire]$_i$. Elle_i m'ennuye beaucoup.
'I often THINK of this affair. It bothers me a lot.

such an anaphoric link would be quite unnatural in the case of the *comme*-N denotatum of the RDCN sentence in (1), as shown in (16a):

(16) a. C'est pas marrant, [comme histoire]$_i$. ??Elle$_i$ est franchement ennuyeuse.
'This isn't a funny story. It's positively boring.'
b. C'est pas [une histoire marrante]$_i$. ??Elle$_i$ est franchement ennuyeuse.
'This isn't a funny story. It's positively boring.'
c. [Cette histoire]$_i$ n'est pas marrante. Elle$_i$ est franchement ennuyeuse.
'This story isn't funny. It's positively boring.'

The anaphoric subject *elle* in (16a) can hardly be construed as referring to the denotatum of the (feminine gender) noun *histoire*. In this, the *comme*-N phrase in (16a) behaves like the canonical predicate NP in (16b). The anaphoric relation is unproblematic, however, if the noun *histoire* occupies the subject position of the preceding sentence, as shown in (16c). The fact that the *comme*-N denotatum cannot be anaphorically referred to with a personal pronoun shows that this constituent does not designate a *discourse referent*, in the sense of Karttunen (1976). This non-discourse-referential nature of the *comme*-N phrase is a natural consequence of the fact that the denotatum of this phrase functions as a predicate rather than an argument. This in turn explains the parallel between (16a) and (16b).

A revealing property of the *comme*-N phrase in the RDCN construction is that its noun may not be freely *modified*. While the clause-final AP position may be filled with any semantically appropriate adjective, the noun within the post-clausal *comme*-N phrase may be modified only by adjectives whose association with the noun can be construed as indicating a *subcategory* of the category denoted by the noun, rather than an *exemplar* of the category. Consider the following sets of examples; each set contains a canonical predicate-NP construct followed by the corresponding RDCN sentence(s):

(17) a. C'est un vin cher. 'That's an expensive wine.'
b. C'est CHER [comme vin]. 'That's an expensive wine.'

(18) a. C'est un bon vin cher. 'That's a good expensive wine.'
b. *C'est CHER [comme bon vin]. 'That's an expensive good wine.'
c. *C'est BON [comme vin cher]. 'That's a good expensive wine.'

(19) a. C'est un vin rouge cher. 'That's an expensive red wine.'
b. C'est CHER [comme vin rouge]. 'That's an expensive red wine.'

(20) a. C'est une belle voiture. 'That's a beautiful car.'
b. C'est BEAU [comme voiture]. 'That's a beautiful car.'

(21) a. C'est une belle voiture chère. 'That's a beautiful expensive car.'
b. *C'est BEAU [comme voiture chère]. 'That's a beautiful expensive car.'
c. *C'est CHER [comme belle voiture]. 'That's an expensive beautiful car.'

(22) a. C'est une belle voiture de sport. 'That's a beautiful sports car.'
b. C'est BEAU [comme voiture de sport]. 'That's a beautiful sports car.'

Among the RDCN constructs whose *comme*-N phrase contains a modified N, those in (19) and (22) are well-formed, whereas those in (18) and (21) are not. This is so because the sequences *vin rouge* in (19) and *voiture de sport* in (22) are compound formations which conventionally denote subtypes of the superordinate categories *vin* and *voiture* in (17) and (20) (their compound status is shown in the fact that no element can intervene between the N and the modifier). In contrast, the modification constructions *bon vin* or *vin cher* in (18) and *voiture chère* or *belle voiture* in (21) do not conventionally denote such types. The generalization that the *comme*-N phrase contains a bare N can thus be maintained. The fact that the nominal element in this phrase must designate an unmodified category will be a crucial element in the information-structure analysis of the RDCN construction in Section 3.3.

It is well-known that in French bare nouns occur only in a limited number of environments. One of these environments is that of the bare predicate nominal in the construction exemplified in (23):

(23) a. Elle est journaliste.
'She's a journaliste.'
b. Je suis balayeur de rue.
'I'm a street-sweeper.'

The occurrence of the bare noun in this construction resembles its occurrence in the *comme*-N constituent of the RDCN construction. In both environments the bare N denotes a category of which the subject is a member. And in both cases, the nominal expression functions predicatively. (In traditional grammars, the N in the bare-predicate-N construction is often categorized as an adjective.) However, the two constructions are clearly not equivalent functionally. Compare the sentences in (24):

(24) a. Elle est connue, comme journaliste.
'She's a well-known journalist
b. *Elle est journaliste connue.
'She's a well-known journalist.'
c. C'est une journaliste connue.
'She's a well-known journalist.'

While the RDCN construct in (24a) is well-formed, its canonical (i.e. non-detached) counterpart in (24b) is not. In the bare-predicate-N construction, the predicate nominal cannot be modified. In order to express the propositional content of (24a) in canonical form the structure in (24c) must be used.[18] Moreover, in the bare-predicate-N construction the nominal is semantically restricted to certain professional functions (*ouvrier* 'worker', *professeur* 'teacher', *instituteur* 'school teacher', etc.), whereas no comparable restriction is found in the RDCN construction. Finally, the type of predicate that may occur in the two constructions is not the same. Compare (25a) with (25b):

(25) a. Ça a l'air marrant comme histoire.
'This looks like a funny story.'
b. *Elle a l'air journaliste.
'She looks like a journalist.'

In the bare-predicate-N construction the verb must be the copula *être* 'to be' or *devenir* 'to become', while in the RDCN certain other copular predicators, such as *avoir l'air* 'to look like', may occur.

Another syntactic environment in which a bare N may occur in French is that of the prepositional phrase headed by *sans* 'without'. Consider (26a):

(26) a. sans argent
'without money'
b. *avec argent
'with money'
c. avec de l'argent
'with money'

The structure in (26a) seems to parallel that of *comme*-N. And as in the case of the bare-predicate-N construction in (24a), the formal similarity between the two structures, [*comme* N] and [*sans* N], has a revealing parallel in semantic interpretation. In both constructions, the noun does not designate a discourse referent (neither expression warrants the use of an anaphoric pronoun; cf. (15) above). In this respect *sans* contrasts with its antonym *avec* 'with', as shown in the contrast between (26) (b) and (c). In the phrase 'with money', the noun is discourse-referential, therefore it cannot occur in its bare form in French. Nevertheless, there is an important difference between *sans* and *comme*. While the former may well be followed by a full NP, as e.g. in *sans mon argent* 'without my money' (in which case the NP is referential), the latter may not: a sentence like **C'est* INTÉRESSANT *comme mon livre* is ungrammatical. The *comme*-N phrase in the RDCN construction is compatible only with bare (non-determined) Ns.

What is, then, the *syntactic category* of the *comme*-N phrase? Since *comme* is not a determiner, it is reasonable to assume that the sequence *comme* + N is not a noun phrase, even though it involves a constituent of category N.[19] This assumption is supported by the fact, established in (17) through (22), that the noun in the *comme*-N phrase may not be freely modified. From this it seems to follow that the *comme*-N constituent can also not be an ordinary prepositional phrase. Indeed, the element headed by *comme* does not have the NP status normally required of the nominal complement of a preposition in French. However, the lack of a determiner does not by itself warrant this conclusion. As we saw in example (26a), the preposition *sans* 'without' may be followed by a bare N. Given the formal parallel between *sans*+N and *comme*+N, preposition status of *comme* can therefore not be excluded in principle. I will tentatively categorize *comme* as a preposition (hence *comme*+N as a PP), but nothing hinges on this categorization. What counts for the present discussion is that, by its internal and external syntax, the *comme*-N phrase does not readily fit any of the major phrasal categories. The idiosyncratic syntactic structure of the constituent parallels its idiosyncratic function as a predicate noun which does not appear in predicate position.

Let us now take a closer look at the semantic function of the *comme*-N constituent. In the syntactic environment of the RDCN construction, the sequence *comme* + N does not have the meaning we might expect given what we know about the meaning of *comme* from other parts of the grammar of French. When followed by a bare noun, the word *comme* ordinarily expresses what might be called a *role-specifying* function, comparable to that of the English word *as*. This function is illustrated in (27):

(27) a. Il a été engagé comme programmeur.
'He was hired as a programmer.'
b. Comme programmeur, il est pas mal, mais comme linguiste, il est nul.
'As a programmer he's not bad, but as a linguist he's a total wash-out.'

In (27), the phrase *comme programmeur* functions as a *secondary predicate* indicating the role of the individual in question in a particular job frame, comparable to the English phrase *as a programmer*. In this role-specifying use, the constituent headed by *comme* differs from that in the RDCN in that it licenses the use of a determiner: instead of *comme programmeur* in (27a) we could also find *comme mon programmeur* 'as my programmer', etc. In contrast, as we just saw, no determiner may occur in the RDCN construction. Moreover, the role-specifying *comme*-N phrase may freely appear in clause-final focus position, as in (27a), and in the sentence-initial TOP position, as in (27b). Syntactically,

role-specifying *comme*-N thus behaves like a regular adjunct phrase (see the discussion of examples (12) and (13)).

The semantic difference between the RDCN construction and the role-specifying *comme*-N construction is further illustrated in (28) and (29) (the @ symbol indicates pragmatic incongruity):

(28) a. Il est DOUÉ, comme mec.
'He's a talented GUY.'
b. @Il est doué comme MEC.
'He's talented as a GUY. / *He's a talented GUY.'

(29) a. Il est BEAU, comme éléphant, Babar.
'He's a beautiful ELEPHANT, Babar.'
b. @Il est beau comme ELEPHANT, Babar.
'He's beautiful as an ELEPHANT, Babar. / *He's a beautiful elephant, Babar.'

(The issue of the homophony of the English glosses in the (a) and (b) examples will be taken up below, ex. (34) and discussion; cf. also Footnote 26.) The (a) sentences in (28) and (29) are instances of the RDCN construction. The (b) sentences, however, in which the *comme*-N phrase is an intraclausal focus expression, cannot receive a RDCN interpretation, hence the star in front of the second English gloss. (28b) and (29b) can only be construed as parallel to (27a), i.e., they necessarily receive the role-specifying interpretation. Notice that while (28a) is perfectly natural, (28b) is odd, to say the least. This is so because the noun *mec* 'guy' is not normally interpreted as designating a role for which one can be more or less talented (although such an interpretation is not unimaginable). Similar remarks can be made about the phrase *comme éléphant* in (29b). It is quite natural to attribute to an elephant the property of being beautiful, as in (29a); but it is difficult to view being an elephant as a role in which an individual can be beautiful, contrasting with other roles in which he might be ugly. Hence the incongruity of (29b). I will return to the constraints expressed in (28) and (29) in Section 3.3, where I will discuss the relationship between form and information structure in the RDCN construction.

Nor does the *comme*-N phrase in the RDCN construction have the meaning 'for a N' or 'as N's go' which one might expect given the use of *as* in English. Our paradigm example (9) does not mean 'It's interesting, as books go' or 'It's interesting, for a book'. We can refer to the function of 'for a N' or 'as N's go' as the *domain-specifying* function. To express this domain-specifying function, a French speaker could use the phrase [*pour un* N].[20] Consider the exemples in (30):

(30) a. Il est pas MAL, pour un Allemand.
'He's not bad, as Germans go'
b. Pour un ALLEMAND, il est pas MAL.
'For a German, he's not bad'

The difference between the function of the *comme*-N phrase in the RDCN and that of *pour un* N in (30) becomes obvious in the contrast in (31). While (31a) is meaningful, (31b) is near-contradictory:

(31) a. Il est assez INTELLIGENT, pour un con.
'He's pretty smart for a jerk.'
b. @ Il est assez INTELLIGENT, comme con.
'He's a pretty smart jerk.'

(31a) presupposes that the individual in question is a jerk: *pour un con* is in R-TOP position, hence its denotatum is pragmatically presupposed, i.e. assumed to be taken for granted by the interlocutor as a topic under discussion. The sentence asserts, then, that on the scale of jerkhood, the individual in question ranks relatively low. (31b) also presupposes that the individual is a jerk, but it asserts that he is a jerk of the intelligent kind, a statement which can be interpreted as meaningful only if being intelligent and being a jerk are not taken to exclude each other logically. I will return to the issue of the presuppositional status of the *comme*-N denotatum in Section 3.3.

Finally, the meaning of the *comme*-N phrase in the RDCN construction is different from (though closely related to) that of the *comme*-N phrase in the construction illustrated in (32), in which the phrase is semantically connected with a *question* word in a direct (cf. (32a, b)) or indirect (cf. (32c, d)) interrogative construction. Notice that in spoken French the interrogative expression in a direct question may either occupy the pre-clausal QU-position or it may appear *in situ*: The question expressions are italicized, for easy recognition:

(32) a. C'est *quoi*, comme film, ça? / *Qu'est-ce que* c'est, comme film, ça?
'What kind of movie is that?'
b. Ça doit aller chercher *quoi*, comme prix, d'après toi? (Curtis, cit. Togeby 1982)
'What kind of price are we looking at, in your opinion?'
c. Elles m'ont demandé *ce qu*'elle avait eu, comme bébé. (Lemoine)
'They asked me what kind of baby she had'
d. A: Maman dit qu'le pot-au-feu c'était un plat économique jadis.
'Mom says that stew used to be a cheap dish in the past.'

B: Ça dépend *c'que* t'achètes comme VIANDE. (François 1, 40)
'Depends what kind of MEAT you buy.'

In the type illustrated in (32), which, like the RDCN, occurs only in the spoken language, the focus element with which the right-detached [*comme* N] phrase is semantically associated is not an adjective but an interrogative marker (*quoi, qu'est-ce que, ce que* etc.).[21] In this particular grammatical configuration, the cooccurrence of the (direct or indirect) question marker with a *comme*-N phrase gives rise to an interpretation which is similar (but not always identical) to that of the English phrase 'what kind of N'. For example in (32a) the sequence *quoi comme film* or *qu'est-ce que … comme film* is (more or less) equivalent to the standard *quelle sorte de film* 'what kind of movie'. This interpretation is absent in the RDCN construction. For example, (9) does not mean 'That's an interesting kind of book', (29a) does not mean 'Babar is a beautiful kind of elephant', etc.[22] Notice also that, unlike the RDCN construction, the construction in (32) is compatible with pitch prominence on the noun of the *comme*-N phrase (ex. (32d)), entailing possible non-detached position of the *comme*-N constituent. Moreover, the verb does not have to be a copula, as (32b, c, d) show. The exact relationship between the RDCN construction and the one illustrated in (32) is subject to further investigation.

To sum up, in the grammatical environment of the RDCN construction, the phrasal unit consisting of the word *comme* followed by a bare noun does not have the function it ordinarily has in French: it is not a secondary predicate and it serves neither the role-specifying nor the domain-specifying function shown in (27) and (30). Nevertheless, it does share one crucial semantic feature with these two uses: the denotatum of the *comme*-N phrase functions *predicatively*. In all bare-N environments, *comme* serves to link a (primary or secondary) subject and a (primary or secondary) predicate. *Comme* is thus a kind of *copula*. As initially suggested in the juxtaposition of the structures in (5), the semantic function of [*comme*+N] in (5b) is analogous to that of the sequence [un(e) + N] in the copular subject-predicate construction in (5a). The post-clausal *comme*-N expression in the RDCN construction is semantically interpreted as denoting the category which is modified by the intra-clausal predicate adjective and of which the subject denotatum is an instance.[23]

Having established the logical equivalence of (5b) and (5a), we must now ask what motivates the considerable formal difference between the two versions, in particular the rather unusual separation of the predicate noun from its adjectival modifier in the RDCN construction. In the next section, I will argue

that this difference is motivated by the requirements of information structure in spoken French.

3.3 Information structure of the RDCN construction

Let us consider again the role-specifying *comme*-N construction illustrated in (27) (a) and (b), repeated here for ease of reference and provided with indications of the main pitch accents:

(33) a. Il a été engagé comme PROGRAMMEUR.
'He was hired as a programmer'
b. Comme PROGRAMMEUR, il est pas MAL, mais comme LINGUISTE, il est NUL.
'As a programmer he's not bad, but as a linguist he's a total wash-out'

In addition to the earlier-mentioned semantic and syntactic differences between this type and the RDCN construction, (33) points to an important *prosodic* difference. In (33a), the phrase *comme programmeur* carries the main sentence accent, indicating that its denotatum has a focus relation to the proposition. The *comme*-N phrase represents the focus domain, or part of the focus domain, of the sentence. (33a) could serve e.g. as a reply to an inquiry about the role the individual plays in a company, such as 'What kind of job was he hired for?' In the reply, the denotatum 'comme programmeur' would fill the variable opened with the WH-phrase in the question, thus providing the element of information requested by the interlocutor. In (33b), the phrases *comme programmeur* and *comme linguiste* appear in the sentence-initial TOP position in the template in (7a) and function as contrastive topic expressions (see Lambrecht 1994: Section 5.5). (33b) could serve as a reply to an inquiry about an individual's performance as a programmer and a linguist. Both in (a) and in (b), the *comme*-phrase necessarily receives a pitch accent.[24]

In contrast to the construction illustrated in (33) (and other constructions involving *comme*), the *comme*-N constituent in the RDCN construction cannot be accented. This prosodic constraint was pointed out earlier in (28b) and (29b). Consider also these variants of the attested RDCN examples in (3) and (4), which parallel the examples in (33):

(3') a. *C'est immense comme HANGAR.
b. ?Comme HANGAR, c'est IMMENSE.

(4') a. *C'est cher comme APPAREIL, ça.
b. ?Comme APPAREIL, c'est CHER, ça.

The unaccentability of the *comme*-N phrase in the RDCN construction is an automatic consequence of the fact that it is confined to the R-TOP position of the sentence, which is reserved for topical denotata which are assumed to have been recently activated in the discourse and which therefore can remain unaccented.[25]

The following obvious question arises now: Why does the *comme*-N phrase of the RDCN construction appear in R-TOP position? To answer this question, let us begin by observing that the standard French subject-predicate construction in (5a), exemplified in (1') through (4'), is pragmatically ambiguous in a subtle way. This pragmatic ambiguity is observable also in the English glosses of all RDCN sentences. Consider (34), the canonical version of our paradigm example (9):

(34) C'est un livre intéressant.
'That's an interesting book'

(34) can be used either to inform the adressee that the entity referred to with the subject pronoun *ç(a)* is an interesting book, or it can be used to inform the addressee that the given entity, which the interlocutor already knows to be a book, is interesting. (34) could answer either the question 'What's that?' or a question such as 'How do you like that book?' In the first case, sentence (34) could be informally glossed as 'This thing is a book, and it's interesting', and in the second case as 'This thing, which is a book, is interesting'. The difference between the two readings is a difference in the scope of the focus in the pragmatically structured proposition underlying the sentence.[26]

The two focus construals of (34) are schematically represented in (35):

(35) a. [C'est $_{NP[+foc]}$[un livre $_{AP}$[intéressant]]]
b. [C'est $_{NP}$[un livre $_{AP[+foc]}$[intéressant]]]

In (35a) the entire predicate NP denotatum is in focus; in (35b) only the denotatum of the modifier *within* the NP is focal. As for the pragmatic status of the copula *est* 'is', I take it to be irrelevant for the information structure of the construction (see Footnote 9). A more explicit representation of the different information-structure construals of the two readings of (34) is given in (35'a) and (35'b):[27]

(35') a. Sentence: *C'est un livre intéressant.*
Presupposition 'entity denoted by subject pronoun *c'* has property x'
Focus: '(is) an interesting book'

Assertion: 'x = an interesting book'
Focus Domain NP (VP)

b. Sentence: *C'est un livre intéressant.*
Presuppositions: (i) 'entity denoted by subject *c*' has property x'
(ii) 'entity denoted by subject *c*' is a token of type book'
Focus: 'interesting'
Assertion: 'x = interesting'
Focus Domain: AP

(The formulation of the presuppositions in (35'b) will be modified later on.) The two versions in (35') have in common the topicality presupposition associated with the unaccented referential subject pronoun *ç(a)* (see the discussion of the Preferred-Clause construction in Section 2), i.e., in both readings the entire proposition is to be pragmatically construed as adding to the hearer's knowledge of the topic entity denoted by the subject expression. But while (35'a) has only this topicality presupposition, (35'b) has the additional knowledge presupposition (ii). This difference correlates with a difference in the focus domain. In (35'a), the focus is the denotatum of the entire NP (or VP, if we take the copula to be part of the focus); in (35'b), it covers only the AP within the NP.

The RDCN differs crucially from the standard French construction in (34) in that it is *not* pragmatically ambiguous in this way. In all instances of use of the RDCN construction, the denotatum of the *comme*-N phrase is presupposed to be *known* as a property of the subject, while that of the intraclausal AP constituent represents the *focus* (or part of the focus) of the utterance. This fundamental pragmatic feature of the RDCN construction is clearly illustrated in the attested examples quoted at the beginning of this chapter. Consider again examples (1) through (4), which are repeated here for convenience:

(1) Baby-sitter: Je vais vous raconter une belle histoire, marrante. (Starts telling story)
'I'm going to tell you a beautiful story, a funny one.'
Child: *C'est pas marrant, comme histoire.* (Reiser, G.D.)
'That's not a funny story.'

(2) maman e dit on a l'impression chez elle c'est sombre hein je n'sais pas … t'as jamais été … c'est … *c'est bien, comme appartement* mais (François, 1, 51)
'mom she says you get the impression it's dark in her place, right, I don't know have you ever been … it's a nice apartment but'

(3) y'a une espèce de hangar … *c'est immense, comme hangar* (F.L.)
'there's a kind of hangar … it's a huge hangar'

(4) Tourist in Paris to man in the street:
T: Excusez, Monsieur, pourriez-vous prendre une photo de ma femme et moi devant le Sacré Coeur? (hands camera to man)
'Excuse me, Sir, could you take a picture of my wife and me in front of the Sacré Coeur?'
M: (looking at camera) *C'est cher, comme appareil, ça.* (Reiser, Ph., p.14)
'That's an expensive camera.'

In example (1), it is obviously known to the speaker (the child) that what the baby-sitter is doing is telling a story. The property denoted by the noun *histoire* can therefore be taken for granted in the utterance context. In (2), the fact that the subject entity described as *bien* is an apartment is inferrable from the preceding discourse, in which this apartment is referred to as *chez elle* 'at her place'. In (3), the fact that the topic designated by the subject pronoun is a hangar is known from the immediately preceding sentence, in which it was referred to as *une espèce de hangar* 'a kind of hangar'. In (4) the entity under discussion is in the speaker's hands, who obviously assumes that its owner knows that it is a camera.

But in order for an R-TOP construct to be used appropriately, it is not sufficient that the denotatum of the R-TOP referent be presupposed to be *known* to the addressee. As we saw earlier, an R-TOP denotatum must also have a high degree of cognitive *accessibility* in the discourse, i.e., it must be assumed to be somehow at the forefront of the addressee's consciousness at the time of utterance or to be accommodatable by the addressee as such. It is easy to see that in all occurrences of the RDCN construction this activation condition is satisfied: since the portion of the predicate which is expressed in the *comme*-N phrase denotes a known property of the subject, and since the subject itself is discourse-active at the time of speech (it is expressed in pronominal form), the known predicate denotatum is necessarily also taken to be discourse-active. It is difficult to imagine how an entity (such as the apartment in (2) or the camera in (4)) whose category membership is known to an interlocutor could be active in the interlocutor's mind without the category of which it is a member (i.e. the category 'apartment' or 'camera') being somehow active at the same time. As I argue in Lambrecht (1994: Section 3.4), every time a token is activated, its type becomes active too.

It will be useful to test this analysis of the information-structure of the RDCN construction with an example of a discourse context in which the con-

struction could *not* be used appropriately. Let us assume the following variant of example (3):

(36) We saw a strange-looking building which aroused our curiosity. We parked in front of it and peeked through one of the windows:
  a. C'était un immense hangar.
     'It was a huge hangar'
  b. #C'était immense, comme hangar.
     'It was a huge hangar'

In this modifed context, the use of the RDCN sentence in (b) is highly inappropriate. This is so because in (36) the fact that the building is a hangar is not known at the time of utterance. In this situation, only the canonical Predicate-NP structure in (a) can be used.

Let us apply the pragmatic generalization suggested by these and similar examples (and supported by native speakers' intuitions) to our paradigm example (9) *C'est* INTÉRESSANT *comme livre.* Unlike its canonical counterpart in (34), this sentence could NOT be used as a reply to the question 'What is that?' i.e., it does not fit the information-structure representation in (35'a), in which the focus domain is NP. In more abstract terms, (9) could not function pragmatically as an assertion in which the denotata 'interesting' and 'book', expressed by the AP and the *comme*-N phrase respectively, would replace the variable in the pragmatically presupposed open proposition 'that entity is x'. Sentence (9) could only answer a question like 'How do you like that book?' It is compatible only with the presupposition in (35'b), i.e., it must be used in a discourse context in which it is assumed to be already known to the addressee that the subject entity is a token of type 'book' and in which the addressee is assumed to be presently aware of this token-type relationship.

The relevant formal and information-structural differences between the RDCN and the standard Predicate-NP construction are schematically represented in (37):

(37) RDCN construction:
[$_{\text{R-TOP-S}}$[$_{\text{S}}$[pro+V[+cop] $_{\text{AP}}$[+foc]] $_{\text{R-TOP}}$[*comme* N[-foc,+act]]]
PREDICATE-NP construction:
[$_{\text{S}}$[pro+V[+cop] $_{\text{NP}}$ [*un(e)* N[+/-foc,+/-act], $_{\text{AP}}$[+foc]]]

As shown in the different feature values on the N in the two constructions, the RDCN is *marked* for two information-structural features with respect to which the standard Predicate-NP construction is *unmarked*, i.e. the non-focal

and discourse-active status of the denotatum of the predicate noun. The difference in syntactic structure between the two constructions reflects thus directly the difference in information structure. By virtue of its occurrence in R-TOP position, the denotatum of the *comme*-N constituent is necessarily construed as being both non-focal and active (or semi-active) in the discourse. It is this combination of a knowledge presupposition with a consciousness presupposition that motivates the inheritance of the R-TOP template by the RDCN construction. We can say that the existence and form of the RDCN construction are pragmatically motivated by the need to disambiguate the canonical Predicate-NP construction with respect to its information structure.

Let us recapitulate. For the RDCN construct in (9) to be used appropriately in a discourse, the following pragmatic conditions must be satisfied (the list includes those conditions which (9) and the canonical version in (34) have in common):

i. the entity denoted by the subject pronoun *c'* must be active in the discourse (e.g. as an object on a table in front of the interlocutors or as an item recently mentioned in the discourse);
ii. this entity must be a topic under discussion and the proposition expressed by the sentence must be construable as conveying relevant new information about this topic;
iii. the fact that this entity is a book must be assumed to be already known to the addressee or to be pragmatically accommodatable as such;
iv. corollary of (i) and (iii): the addressee must be presently aware of the fact that the entity is a book.

The pragmatic assertion made in uttering sentence (9) consists then in providing a comment about the topic entity designated with the subject pronoun *c'* by substituting the denotatum 'interesting' for the variable in the pragmatically presupposed open proposition 'entity *c'* is an x book', where x represents the missing piece of information. In other words, by uttering this sentence, the speaker wishes to inform the addressee that the given token, which is known to be of type 'book', has the property of being interesting.

The information-structure of the RDCN construct in (9) can be summarized as follows:

(38) Sentence: *C'est intéressant, comme livre.*
Presuppositions: (i) 'referent denoted by c' is discourse-active'
(ii) 'referent denoted by *c*′ is topic for comment x'
(iii) 'referent denoted by *c*' is a token of type book'
(iv) 'presupposition (iii) is discourse-active'
Focus: '(is) interesting'
Assertion: 'comment x = interesting'
Focus domain: AP (VP)

Among the presuppositions listed in (38), (i) and (iv) are *consciousness* presuppositions, (iii) is a *knowlege* presupposition, and (ii) is a *topicality* presupposition. These presuppositions are formally evoked by the morphosyntactic and prosodic structure of the sentence. The consciousness presupposition in (i) is evoked by the pronominal coding of the referent: pronouns can be appropriately used only if their referents are assumed to be discourse-active at the time of speech. The topicality presupposition (ii) is evoked by the global topic-comment structure of the Preferred-Clause construction, which is expressed in particular via the presence of a focus accent on the predicate phrase and via the unaccented referential subject pronoun (all unaccented referential pronouns are topic expressions; Lambrecht 1994: Section 4.3).[28] The knowledge presupposition in (iii) is evoked by the global information structure of the R-TOP construction (of which the RDCN is a variety), which requires that the denotatum of an R-TOP constituent be pragmatically recoverable for the hearer in the utterance context. Presupposition (iv), another consciousness presupposition, is formally evoked by the absence of a pitch accent on the noun *livre.* As noted earlier, this presupposition is entailed by presuppositions (i) and (iii).

To counter a possible objection to the representation in (38) I would like to draw the reader's attention to the existence of a general principle of construal which may alter the information-structural features of a construction in a predictable way: these features may be overridden by the properties of larger constructions in which the given construction is embedded in particular discourse contexts (cf. Lambrecht 1994; Lambrecht & Michaelis 1998). For example a proposition which is marked as pragmatically asserted in an independent sentence can become presupposed by virtue of being part of a larger proposition which is itself marked as presupposed. For exemple, the pragmatic assertion in (38), namely the comment that the given book is interesting, becomes knowledge-presupposed in a syntactic environment like that of the cleft construction in (39):

(39) C'est ça qui est intéressant, comme livre.
'That's an interesting book.'

The *c'est*-cleft construction in (39) is an 'argument-focus construction' (Lambrecht 1994), i.e. a construction in which the pragmatic articulation of the predicate-focus construction is reversed. In an argument-focus construction, the predicate portion of a proposition is knowledge-presupposed, while an argument of the predicate is in focus. For example in (39), the open proposition resulting from replacing the focus element *ÇA* by a variable is presupposed to be known to the addressee at utterance time. The pragmatic articulation of (39) is represented in (39'):

(39') Presupposition: 'x is an interesting book'
Focus: 'that'
Assertion: 'x = that'

By virtue of its occurrence within the non-focal portion of the *c'est*-cleft construction in (39), the RDCN construction takes on the pragmatic articulation of the latter. This does not entail, however, that the inherent information structure of the embedded construction gets entirely erased. The construction preserves its own internal topic-focus articulation. While in (39) the proposition 'c'est intéressant' is now an already known element within the larger construction, the denotatum of the predicate nominal 'livre' is still marked as topical with respect to this known proposition. As argued in Lambrecht & Michaelis (1998), the pragmatic relations (topic and focus) between predicates and their arguments can be mentally construed independently of the information status of the proposition as knowledge-presupposed or asserted. Just as in syntax we distinguish between the internal syntax of a constituent (its constituency) and its external syntax (its distribution), in information structure analysis we must distinguish between the internal information structure of a propositional denotatum (its pragmatic articulation) and its external information structure (its pragmatic role within a larger proposition).

3.4 Summary

Figure 3 summarizes the formal, semantic, and pragmatic properties of the RDCN construction inasmuch as they are relevant to the present analysis. The box representing the Preferred-Clause construction is specified for the fact that within the RDCN construction the verb must be either the copula *être* or a copula-like verb which allows the constituent following it to function predica-

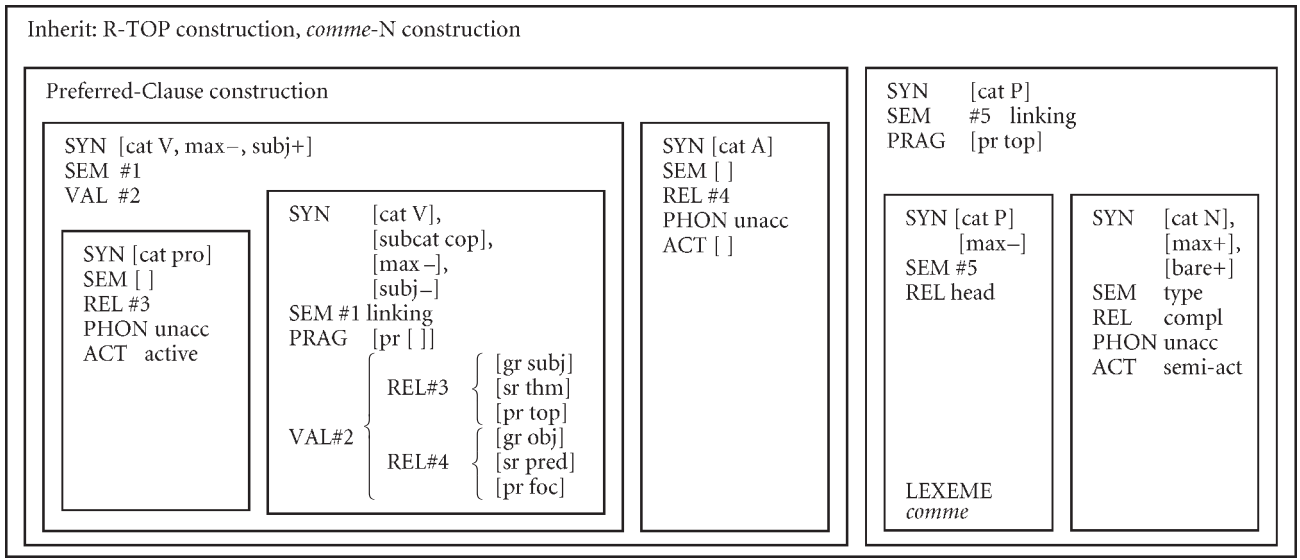

Figure 3. The Right-Detached *comme*-N construction

tively (this is indicated by the syntactic subcategory feature [cop] on the V).[29] The label for the semantics of the copula is 'linking', following traditional grammatical terminology (the copula 'links the subject and the predicate'). As in the R-TOP construction in Figure 2, the right-detached constituent is a sister to the clause in which its denotatum plays a semantic role. But the structure in Figure 3 differs crucially from that in Figure 2 in that the detached constituent is not coindexed with a preverbal pronominal argument. Rather the constituent is semantically connected with the postverbal adjectival predicate. This connectedness is unusual in that, instead of relating a full lexical representation of a referent to its pronominal anaphor, it relates the lexical representation of a predicate nominal to an adjective which modifies it. The fact that the N of *comme*-N is semantically connected with the postcopular A and, together with the latter, denotes a property of the subject is not indicated with a relational feature on the *comme*-N phrase because detached constituents do not take part in the predicate-argument structure of a clause, their relation to the predicate being one of pragmatic construal only (Lambrecht 1994, 2001). The semantic connection between the right-detached *comme*-N constituent and the focal predicate AP is construction-specific, i.e., it must be stipulated as a property of the RDCN construction as a whole. This property is, however, formally highly motivated: since by its internal structure the *comme*-N phrase is marked as predicative (cf. Section 3.2), and since the construction has only one subject which this predicative element can relate to, the correct semantic construal poses no problem.

Idiosyncratic though the constructional relationship between the AP and the *comme*-N phrase may be, it is not different in principle from that between an adjectival modifier and the modified noun in a standard NP construction, or, for that matter, between an NP and a VP in a standard subject-predicate construction. All three relationships have to be stipulated as properties of the constructions in which they occur. It is true that the syntactic relation between the AP and the *comme*-N phrase is not one between two sister constituents but between a 'niece' (the AP) and an 'aunt' (the R-TOP phrase). The RDCN construction thus violates what Zwicky (1994b) refers to as the principle of 'Strictly Local Determination', whereby the external and the internal syntax of an expression must be determined by its strictly local external and internal environment. But as Zwicky points out, such violations are in fact quite common.

One well-known example of such a violation is the English WH-construction (or the French QU-construction), in which a left-isolated constituent (Kay & Fillmore 1999) is semantically interpreted as if it were a right sister to a predicator inside a lower S following the WH-element. In a sense, the RDCN

construction is the mirror image of the Left-Isolation construction in French. In both cases, a constituent which is the daughter of a higher S (i.e. the constituent in R-TOP or QU- position) is semantically interpreted as if it were a sister to a constituent inside an adjacent lower S (the predicate adjective in the RDCN construction, the verb in the QU-construction). With one important difference: in the RDCN construction, the detached element has no direct grammatical or semantic relation to the predicate-argument structure of the sentence. Its relation to it is information-structural only.

For the sake of completeness, I must mention that not all RDCN constructions satisfy the structure in Figure 3. The *comme*-N constituent may also follow clauses in which the AP is not a primary but a secondary predicate, as in *Je le trouve* BIEN *comme film* 'I find this movie good', where the main predicator *trouver* is not a copular verb and in which the semantic subject of *bien* is the direct object *le*. I have also found examples such as *Ça m'a pas* EMBALLÉ *comme film* 'I didn't find that movie great' (lit. 'This movie hasn't wrapped me up'), where the clause contains no AP at all. It seems that in the latter case the *comme*-N denotatum is associated with the adjectival denotatum which is implicit in the verb *emballer* (like that of the adjective *great* in the English gloss). It is clear that the syntactic analysis of the RDCN construction will have to be extended in order to accommodate such examples. (See also Footnote 22 for another interesting case.)

4. Theoretical implications

The information-structure features listed in (38), together with the formal and semantic features discussed in the preceding sections and summarized in Figure 3, define the French RDCN construction and distinguish it from all other constructions in the language. It is important to acknowledge that these features are not merely implicatures drawn on the basis of the conversational context but are formally evoked by the grammatical structure of the sentence. In the approach to grammar followed here, simple and complex expressions can be formally marked for pragmatic features which restrict the set of discourse contexts in which they can be appropriately used. These pragmatic features are associated with lexicogrammatical structures in the same way that semantic features are associated with them.

Some pragmatic features are extremely common and widely attested across languages, such as the consciousness presupposition associated with pronominal expressions. Others belong to particular constructions or construction

types, such as the cognitive accessibility feature attached to the denotata of R-TOP constituents in the Right-Detachment construction. In the case of the RDCN construction, which belongs to the R-TOP family, the global information structure is rather specific: it restricts the use of a sentential construction (a copular subject-predicate sentence) to discourse contexts in which the denotatum of a predicate NP containing a noun modifier is partly in focus and partly within the presupposition.

In analyzing the RDCN as a grammatical construction in the sense of CG, we are in principle allowing for the fact that it is semantically *non-compositional*, in the sense that at least some aspects of its meaning are not the predictable sum of the lexical meanings of its components. Nowhere else in the grammar of French does the two-word sequence *comme*+N have the meaning it has in the syntactic environment of the RDCN construction. This meaning must therefore be inherent in the particular morphosyntactic and prosodic configuration, i.e. in the grammatical construction as a whole.

One alternative to the constructional approach adopted here would be to stipulate a separate entry for *comme* in the lexicon. This entry would represent the meaning of *comme* within the RDCN environment, thereby saving the postulate that all sentence meaning is projected from the lexicon. However, in this particular case at least, such an alternative approach cannot be correct. Besides the fact that it would be difficult to define the special function of *comme* in lexical rather than relational terms (being a predicate is not a lexical but a propositional property), this approach does not account for the fact that the sequence *comme*+N functions as a primary predicate *only* in the syntactic environment of the RDCN. It is not the projected lexical meaning of *comme* that determines the function of the phrase in the sentence but its occurrence in a highly specific syntactic environment, which involves the relationship between an item in R-TOP position and a preceding intra-clausal focal adjective.

The interpretive mechanism whereby the R-TOP template imparts its meaning to the *comme*-N phrase in the RDCN construction is analogous to the way in which the non-lexically-filled argument-structure constructions discussed by Goldberg (1995) impart their meanings to the verb-complement sequences which instantiate them. To take Goldberg's by now classic example, in the sentence *She sneezed the napkin off the table* the intransitive verb *sneeze* can be said to have taken on an additional construction-specific meaning: that of a transitive verb expressing a caused motion. As Goldberg argues, the verb takes on this additional meaning by virtue of its occurrence in the Caused-Motion construction, which is more typically instantiated by such sentences as *She shoved the book into her backpack* or *She pushed the table against the wall.*

The verb *sneeze* thus *inherits* the caused-motion interpretation from the grammatical construction in which it occurs. In a similar vein, in a RDCN construct like *C'est intéressant, comme livre*, the *comme*-N constituent can be said to have taken on a construction-specific meaning by virtue of its occurrence in the detached position of the R-TOP construction.

There is, however, one important difference between the facts observed by Goldberg and the RDCN phenomenon. In the case of argument-structure constructions, the meaning change occurs with an open class of (semantically appropriate) verbs. In contrast, in the RDCN construction only the phrase *comme*-N is semantically affected by the constructional environment. Moreover, in this construction, it is not only the meaning of the right-detached element that gets shaped by its syntactic environment but also its *pragmatic function* in discourse. Any noun occurring in the N slot of a right-detached constituent will necessarily be pragmatically construed as having the information-structural properties inherent in the R-TOP construction. Parallel to Goldberg's argument-structure constructions, we may speak of the R-TOP template as an *information-structure construction*, which imparts its pragmatic function to the sentences and sentence constituents which instantiate it.

The RDCN construction is also in some sense 'syntactically non-compositional', in the sense that its global syntactic structure is not predictable on the basis of general formal properties of the grammar, even though it is entirely composed of syntactic pieces found elsewhere in the language (such as the ubiquitous preferred-clause structure in (7) and the sequence *comme*+N). Nothing in the grammatical system of French allows us to predict that a predicate noun may appear in the postclausal R-TOP position under the form [*comme* N]. It is of course not impossible to generate the RDCN construction with familiar phrase structure rules, but such generation would involve a number of rather specific conditions. The syntactic categories and subcategories of the constituents of the RDCN are for the most part fixed: the verb must be the copula *être* or a copula-like verb; the predicate must be an adjective (and perhaps some other type of modifier; see Footnotes 3 and 22); and the R-TOP constituent must be headed by the lexical item *comme* whose complement must be a bare noun. The construction is an example of what Fillmore, Kay, & O'Connor (1988) call a 'formal idiom'.

The semantic and syntactic idiosyncrasy of the RDCN should, however, not lead us to assume that the relationship between form and meaning is arbitrary or random in this construction. The RDCN is formally, semantically, and pragmatically *motivated*, precisely because its relevant features occur elsewhere in the grammar of French. And being motivated in this way, the RDCN con-

struction is easy to learn and to use. Two features are salient in this respect. The first is the occurrence of the word *comme* in combination with a bare noun. A French speaker knows that in the construction [*comme* N] the noun functions as a predicate. The second is the occurrence of this *comme*-N construction in the post-clausal position of the R-TOP construction. A speaker of French knows that a denotatum coded in R-TOP position is assumed to be non-focal and active or semi-active in the discourse. We can say that these two features are inherited by the RDCN construction from the secondary-predication construction involving [*comme* N] and from the R-TOP template in Figure 2, respectively. The meaning and discourse function of the RDCN construction can be seen as resulting from the combination of these two features. However, this semantic result cannot be *predicted*. There is no grammatical rule according to which a sentence expressing this meaning under these discourse conditions must have this particular form. It is in this sense that the RDCN construction can be said to be semantically and syntactically non-compositional.

The RDCN construction belongs to a general and frequently-used syntactic template, the Right-Detachment construction, whose function is to place a constituent with a non-focal designatum of high pragmatic accessibility in extra-clausal position, as a right sister to the clause which expresses the proposition in which this designatum plays a semantic role. The form of the R-TOP template, hence that of the RDCN, is pragmatically motivated in the sense that it is a manifestation of a general information-structure principle governing the distribution of phrasal constituents in the French sentence. In spoken French, nominal expressions other than bound pronouns whose denotata have a non-focal relation to the proposition regularly occur in extra-clausal position rather than inside the clause, their semantic relation to the proposition being determined by construction-specific rules of construal. This general information-structure principle can be expressed in the form of a simple maxim: 'Focus in, topic out'. Among the non-focal nominal expressions appearing in extra-clausal position, those whose denotata are pragmatically highly recoverable tend to appear to the right rather than to the left of the clause. This second information-structure principle is captured in another maxim: 'Low topic activation left, high topic activation right'. The principles expressed in these two maxims are clearly manifested in the *comme*-N constituent of the RDCN construction: it codes in extra-clausal position a non-focal denotatum of high pragmatic accessibility.

The general information-structure principle described here is a principle of grammar, i.e., it is not the calculable result of the application of general cognitive or pragmatic principles of interpretation. Its particular manifesta-

tion in the form of the RDCN construction is specific to French. English or German, for example, have no analog to the RDCN construction, although nothing in the structure of these languages would prevent its existence.[30] Pragmatically motivated syntactic configurations like the RDCN construction constitute strong evidence in favor of a view of grammar in which the information-structure component interacts directly with the formal levels of morphosyntax and prosody, rather than being part of a discrete component of 'discourse grammar' which 'interprets' fully generated syntactic structures pragmatically.[31]

Notes

1. The present study is a revised and expanded version of Lambrecht (1996b). I am grateful to Charles Fillmore, Arnold Zwicky, Laura Michaelis, Michel Achard, Jean-Pierre Montreuil, Anne Zribi-Hertz, and especially Jean-Pierre Koenig for advice on this version or earlier ones. Special thanks are due to the editors, Mirjam Fried and Jan-Ola Östman, for their thorough and critical reading of the final version.

2. Throughout this chapter, naturally-occurring examples are followed by a parenthetical indication of the source. Examples without such indication are made up.

3. The modifier phrase in the RDCN is not always of type AP. I found the following example in my data collection, in which the modifier is the bracketed PP:

(i) Tellien c'est plutôt [sur la route de Corneille], comme ville (François 1,13)
'Tellien is a town (that's) rather on the Corneille road.'

Reactions from native speakers to examples like (i) range from 'ok' to 'unusual' to 'absolutely impossible'.

4. The dictionaries I have checked are: Davan, Cohen & Lallemand (1971), the *Dictionnaire Hachette de la langue française* (1980), Girodet (1981), the *Grand Larousse de la langue française* (1972), Hanse (1983), Littré (1870), Robert (1958), the *Petit Robert* (1991), and the *Trésor de la langue française* (1977).

5. For an analysis of the Detachment construction from a universal typological perspective see Lambrecht (2001). For more detailed descriptions of the role of Detachment constructions in the spoken French sentence see Lambrecht (1981, 1986) and Barnes (1985).

6. I am ignoring here the issue of adjuncts to a predicate.

7. The bound pronoun may be non-referential, in which case it cannot be a topic. I will ignore this possibility here. For an analysis of unaccented referential pronominals as topics see Lambrecht (1994: Chapter 4).

8. Strictly speaking, what is 'activated' in the discourse is not the referent of an expression but rather some mental representation of this referent in the heads of the speech partici-

pants (see Lambrecht 1994: Chapter 3). For simplicity's sake, I will ignore this conceptually important but terminologically cumbersome distinction here.

9. For the different status of predicates and arguments with respect to the formal expression of the focus relation see e.g. Schmerling (1976: Chapter 5), Höhle (1982), Selkirk (1984: Chapter 5), Lambrecht (1994: Section 5.4), Lambrecht & Michaelis (1998).

10. To prevent misunderstandings, I should mention that the object pronoun *l(e)* in (6b') may be null-instantiated in spoken French, i.e. a sequence like *J'ø ai jamais vu, ce film*, which superficially resembles the questionable (6b), is acceptable as a right-detachment structure (cf. Lambrecht & Lemoine 1996).

11. The representation in (7) is oversimplified in that it does not reflect the hierarchical structure of the sentence, nor the syntactically optional status of the L-TOP and R-TOP constituents, nor the fact that there can be more than one constituent in L-TOP and R-TOP position. For further details concerning the structures in (7) see Lambrecht (1986: Chapter 6, 1996a).

12. For example, the L-TOP and R-TOP positions also host vocative NPs (see Lambrecht 1996a).

13. The characterization given here does not account for unlinked L-TOP constituents nor adverbial scene-setting expressions in L-TOP or R-TOP position which are not anaphorically represented within the clause.

14. For theoretical statements concerning the relation of inheritance among grammatical constructions in CG see Kay & Fillmore (1999), Goldberg (1995: Chapter 3), Koenig (1993), and Michaelis (1994).

15. In (10), the adverb *ici* is also in R-TOP position; this is irrelevant for the argument at hand.

16. That the word *de* in (8d) is a QU-element, rather than a preposition, is demonstrated, among other things, by the fact that the valence of the predicator *gentil* 'nice' does not include a prepositional complement; see Huot (1981).

17. Given the presence of a lexical subject NP in (11a), this sentence does not strictly speaking instantiate the preferred-clause construction in Figure 1. Though (11a) is grammatical, it would no doubt be more natural in the detached form *Les français, ils sont pas plus beaux comme z'hommes.*

18. The occurrence of the subject pronoun *c(e)* instead of *elle* in (24c) is due to to an idiosyncratic cooccurrence restriction, which is irrelevant for the argument at hand.

19. In the dictionaries and traditional grammars I have consulted, predicative *comme* is almost invariably categorized as an adverb. In Togeby's structuralist grammar, it is called a conjunction.

20. For a discussion of this and other uses of *pour* cf. in particular Cadiot (1991).

21. For the status of interrogative wh-phrases as focus expressions cf. Lambrecht & Michaelis (1998).

22. Interestingly, a question such as (32a) can be answered appropriately (though somewhat redundantly) with an RDCN sentence, such as the attested sentence in (i):

(i) C'est un polar, comme film. (Webb)
'That's a cop movie'

In (i) the NP *un polar* appears in canonical predicate position. Consider also the attested utterance in (ii)

(ii) Tu as fait la Norvège, comme voyage? (Koenig)
'Did you take a trip to Norway?'

which could be a follow-up question to the inquiry in (iii):

(iii) Qu'est-ce que tu as fait, comme voyage?
'What kind of trip did you take?'

Examples like (i) and (ii) suggest the existence of another structural instantiation of the RDCN, which would deserve to be taken into account in a more complete treatment of the issue.

23. Speculating as to why the predicate NP structure [*un*(*e*) + N] becomes [*comme* + N] in detached position one could invoke the principle of preemption: the structure [*c'est* AP, *un* N] is reserved for a different meaning, in which the indefinite NP is necessarily interpreted generically. A sentence like *C'est intéressant, un livre* can only mean 'A book is interesting', not 'It's an interesting book').

24. In Chapter 5 of Lambrecht (1994) I argue – against the prevalent view as represented e.g. in Selkirk (1984) – that sentence accents may fall either on focus or on topic constituents. This accounts for the two accents in (33b): the first is a topic accent, the second a focus accent. With a few motivated exceptions however (such as WH-questions, cf. Lambrecht & Michaelis 1998), any single accent in a sentence is necessarily a focus accent. The accent in (33a) is therefore a focus accent.

25. The status of the (b) sentences in (3') and (4'), in which the *comme*-N constituent appears in left-detached position, is not entirely clear to me. It would a priori be surprising if an element which is licensed in R-TOP position would not also be licensed in L-TOP position. However, as pointed out in Lambrecht (1994, 2001), there are items that may only appear in L-TOP and not in R-TOP position, such as, e.g., the English topic-announcing phrase [*as for* NP] or its French equivalent [*quant à* NP].) One example which may qualify as an instance of non-role-specifying *comme*-N in L-TOP position is (i), from a novel by Jules Romains (cited by Le Bidois & Le Bidois 1971: paragr. 920):

(i) Il paraît que comme chant, c'est tout ce qu'il y a de mieux.
'It seems that's as good a song as you can get'.

Another exemple is (ii) (from Queneau's novel *Le Chiendent*):

(ii) Le trésor du père Taupe, comme rigolade, ça s'posait un peu là.
'Father Taupe's treasure, what a joke!'

It is often difficult to tease apart the specific meaning of *comme*-N in the RDCN and in certain semantically related constructions, and native speaker judgments are correspondingly inconclusive.

26. The pragmatic ambiguity of (34), and especially that of the English gloss, raises the issue of the projection of the focus over sentence constituents larger than the one accented (Höhle 1982; Selkirk 1984: Chapter 5; Lambrecht 1994: Chapter 5). The sentence *That's an interesting book* can be felicitously uttered even in a context in which the book in question has just been mentioned in the conversation, contradicting a narrow iconic view of focus prosody (as defended e.g. in Chafe 1987) whereby any constituent with a recently activated denotatum must remain unaccented unless used 'contrastively'.

27. The representational schema used here is that proposed in Chapter 5 of Lambrecht 1994. In terms of the taxonomy of focus types postulated there, both the RDCN construction and its canonical equivalent have 'predicate-focus' structure.

28. It is important to keep in mind that the topicality presupposition in (ii) is not entailed by the consciousness presupposition in (i). An entity may be active in the discourse without having a topic relation to the presupposition (see Lambrecht 1994: Section 3.5).

29. An apparent exception to this generalization is the occurrence of the verb *faire* 'make, do' in the example by Céline cited at the beginning (*Il faisait pas joli comme temps* 'It wasn't nice weather'). It is clear, however, that in weather expressions such as *faire beau* 'be nice (weather)', *faire mauvais* 'be bad (weather)', etc. *faire* functions as a copula.

30. English does have an information-structure construction which is reminiscent of the RDCN construction in several respects. I have in mind the construction illustrated in a sentence like *How's that for an intuition?* This sentence presupposes the open proposition 'that is an x-kind of intuition' and it asserts (rhetorically) the speaker's desire to know what the value of x is. As in the RDCN construction, the postfocal phrase (here *for an intuition*) denotes a knowledge-presupposed as well as previously activated nominal predicate. As in the French case, this English construction seems to be pragmatically motivated by the need to separate syntactically a focal (*that*) and a non-focal (*intuition*) portion of an NP constituent (*that intuition*). In German, an information-structure construction with comparable pragmatic motivation is the so-called 'Split-Topicalization' construction illustrated in a sentence like *Geld habe ich nur französisches* 'I have only French money' (lit. 'Money I have only French'), in which the denotatum of an indefinite object NP (*französisches Geld* 'French money') is coded in such a way that its focal portion (the adjective denotatum) appears in canonical clause-final focus position, while its topical portion (the noun denotatum) appears in preverbal, sentence-initial position.

31. Such a 'discourse grammar' component is postulated e.g. in Williams (1977) and Culicover & Rochement (1983).

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