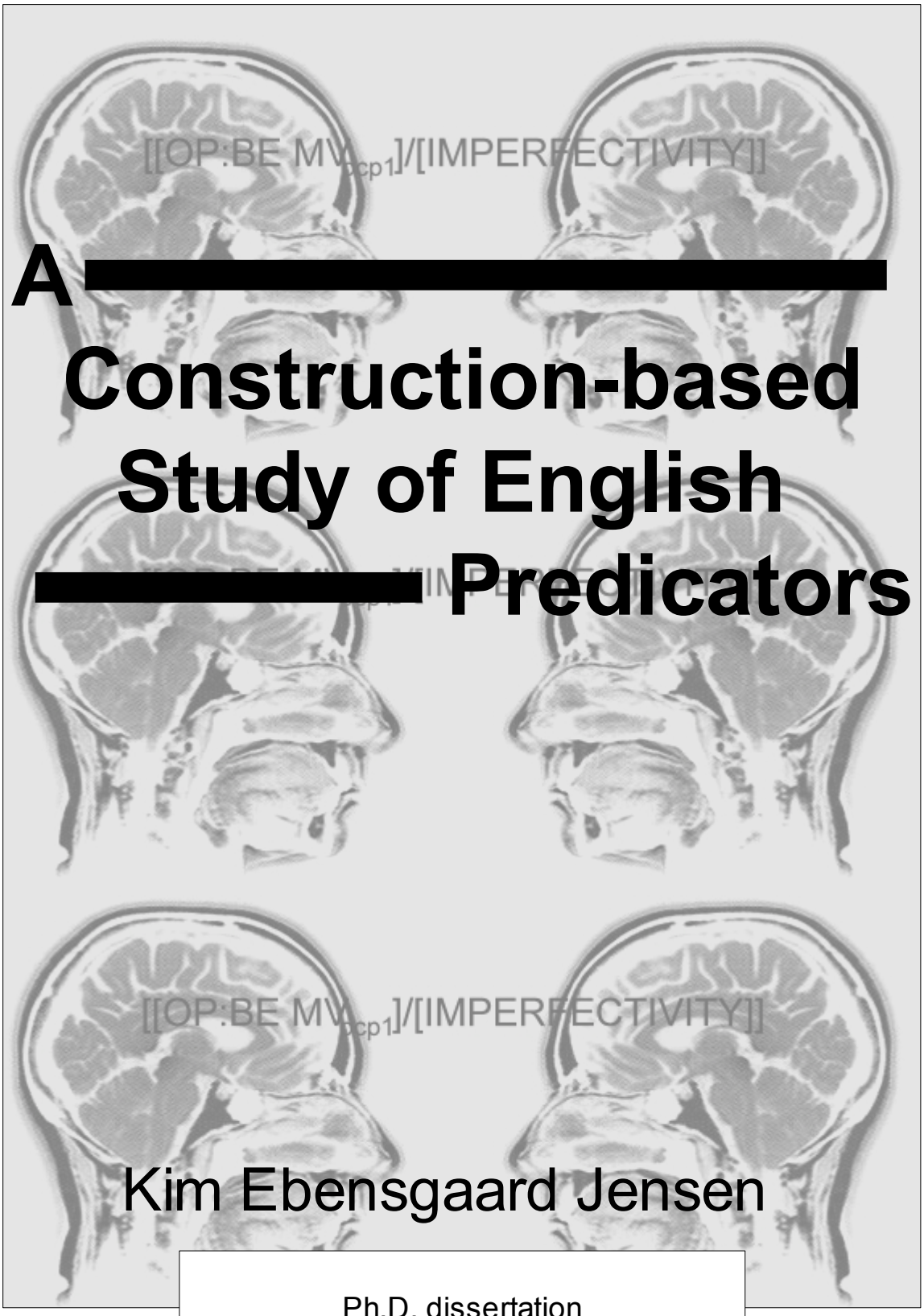

A Construction-based Study of English Predicators

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Ph.D. dissertation
Institute of Language and Communication
University of Southern Denmark

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This piece of work is dedicated to those who died and those who were born over the course of the last three years.

Out of the shadows and into the sun,
dreams of the past as the old ways are done.

Contents

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Abbreviations and symbols

3rd: third person
AUX: auxiliary
cl: clause
Cs: subject complement
CxG: construction grammar
CL: cognitive linguistics
dat: dative
ger: gerund
ICM: idealized cognitive model
imp: imperative
inf: infinitive
MV: main verb
N: noun
$N_{(V)}$: deverbal noun
NP: noun phrase
Od: direct object
Oi: indirect object
OP: operator
P: predicator
pcp1: present participle
pcp2: past participle
PREP: preposition
pres: present
S: subject
sg: singular
V: verb

SMALLCAPS: conceptual/semantic component or structure
CAPITALS: base form of verb
'…': form(al element)
[…]: constructional configuration
[*italics*]: substantival constructional element
[*ITALICIZED CAPITALS*]: lexically substantival but morphologically constructional element
[[*form*]/[CONTENT]]: symbolic unit
{A,B,C}: paradigmatic relation between A, B, and C
X<A,B,C>: holistic structure, or gestalt, *X* containing A, B, and C
X_y: formal specification of X
X^Y: semantic/functional specification of X
$X_{cl(Y)}$: clause structure X with a predicator of form Y.
X > Y: coercion process where X is type-shifted into Y
A B C: profiling (black) and gapping (grey)


: state


: process (durative)


: process (punctual)

: binding

: symbolic link


: continuum


: external features of a construction

1. Introduction

Language is the primary form of human communication. Since humans primarily communicate aspects of human experience, it would make sense to consider language, its structures, and its processes to be embedded in human experience, thus involving structures and processes in general human cognition as well. Language provides humans with the ability to communicate virtually every concept and various different perspectives on the same concept (or mabe the ability to view concepts in various perspectives provide humans with the ability to reflect that linguistically). This is particularly evident in relation to verb phrases, which make it possible to not only communicate events and relational states but also offer the possibility of a wide range of perspectives on the events. For example, the progressive BE + *-ing* verb phrase of English allows speakers of that language to communicate an event while offering an imperfective perspective on it, an imperfective perspective being one that presents the event as being still in progress.

The present study offers an empirically based in-depth discussion of the English progressive construction in which aspects of human cognition and communication are taken into account as language-forming factors.

The purpose of the present study is twofold: I aim to present a constructionist characterization of the English progressive construction that is based on an integrated grammar philosophy and at the same time I want to use the progressive to show the importance of taking into account human cognition when dealing with complex patterns of use of linguistic phenomena.

This study thus offers an overview of the progressive construction and its many aspects of use as well as its relation to cognition as seen from the perspective of construction grammar. The overview is based on an investigation of occurrences of the progressive construction in the *British National Corpus* of naturally occurring English. Given the vast amount of attention the English progressive construction has received over the years, one might wonder if there is anything left to say about it. Indeed, it is very well described and many of its uses have been accounted for by various grammarians, producing valuable knowledge. For instance, Leech (1971) – supplemented by the points made in Leech (2005) – offers a very comprehensive overview of the progressive construction and many of its uses, as do Palmer (1974), Quirk et al. (1985), Bache and Davidsen-Nielsen (1997), and Biber et al. (1999).

There is more to be said about the progressive though. Firstly, our knowledge of its usage-patterns is far from complete. While many uses have been observed, it still remains to be seen which ones are used when, where, and how often. Consequently, not much has been said about the

relationships among the different uses of the progressive. While it is generally accepted that uses like 'They *are playing* our song on the radio' or 'She *is sleeping* right now, come back later' are prototypical, there still are some gaps with regards to status of the other uses. By measuring the frequency of occurrence of each use, one gets an idea of the prototypical status of the uses. While some grammars, like Biber et al., (1999), quantify various aspects of usage of the progressive, there are very few, if any, who have identified and quantified the various senses of the construction. By doing this, the present study aims at offering insights into this relatively unchartered aspect of the progressive construction.

Secondly, not many of the existing descriptions of the progressive construction take cognition into account, and not many studies of the progressive have been made within the framework of cognitive linguistics and construction grammar, though some aspects of it are analyzed in Langacker (1987), Michaelis (1998), Stefanowitsch and Gries (2003) and Croft (MS). In that sense the present study offers a new perspective on the progressive which analyzes it in terms of cognitive structures and processes derived from the body of knowledge and theories of cognitive linguistics and construction grammar.

Thirdly, since the progressive has not been extensively explored in an integrated grammar framework, building on cognitive linguistics and construction grammar. I shall operate with factors not otherwise recognized in traditional grammar as central structures, it is possible to identify some otherwise unexplored uses as well as some otherwise unchartered details of already recognized uses within such a framework. Some 'new' uses did indeed surface in this investigation, which serve socio-pragmatic and conceptual purposes, as did many details of already known uses of the construction, which are typically attributed to the intersection of language, cognition, and communication.

This study is of course not an attempt to make an exhaustive or definitive constructionist description of the progressive construction, but rather a step towards providing the means for such a description. The reader will probably find that, while the description involves some uses of the progressive not previously accounted for, there may also be some uses attested elsewhere, which are not included here. The reason is simply that they do not occur in the corpus. This does not mean that their existence is not acknowledged though. Hopefully, the results of this study may serve as input for future studies into the progressive in a constructionist perspective.

1.1. Language is not just language – grammar is not just grammar

The present study will show that there is more to the progressive construction than what is traditionally considered to be grammar, and also that there is more to grammar than just grammar in the traditional sense. Consider the instances of the progressive construction below:

(1.1)
a. She *was breaking* an egg into a curl of boiling, salty water – the top of the big coal range glowed under a copper saucepan.
b. We'*re going* to the Casablanca Club tonight, Kelly.
c. You'*re staying* where you are.
d. And because they were prepared to go put and speak about their faith people *were being converted* from Buddhism to Christianity in their thousands.
e. The reason why we'*re having to go* to a higher figure now is there are two major areas of land, er, one is the land behind the railway station, the British Rail land, and the other is the land at a location called St Nicholas Field, a former household waste site, both of which we *are taking* steps to bring forward for development.

All of the above utterances involve the progressive verb phrase structure and may at first sight appear quite similar. However, a second look will reveal that, while undoubtedly related, they are actually quite different. They express different types of content and involve different external factors of use. The utterance in (1.1a) presents an event as being still in progress, which is the content usually associated with the progressive. The utterance in (1.1b) does not express an ongoing event, but rather an event in the future that is almost certain to happen. This is another well documented use of the progressive. In (1.1c), a likely future event – namely, that of remaining in the present location – is also expressed, but here it is certain to happen because the speaker has, or believes to have, the authority to make it happen. In (1.1d), not only one event takes place, but several identical event are presented as if they formed one ongoing super-event. The first occurrence of the progressive in (1.1e) does not refer to an ongoing event, but rather to a state of necessity in which it is necessary to engage in a certain event caused by factors outside the participants' control. The second occurrence appears to be an ongoing event like in (1.1a), but there is a major difference in scale in that, whereas (1.1a) is a local event, (1.1e) refers to a large scale event involving the improvement of two lands. The super-event in (1.1d) also covers a large scale as opposed to a local one.

The above utterances differ in terms of factors which many traditional grammarians and other linguists do not typically associate with the progressive. For instance, (1.1b) does not only express futurity, it also involves epistemic modality judgments of the likelihood of the event. So does (1.1c), but unlike (1.1b), this use of the progressive expresses *deontic* modality bordering the

region of imperative mood. It is also embedded in social structures and power relations as the speaker exerts authority over the listener. Likewise, the first instance of the progressive in (1.1e) may have social implications. It surely is a marker of modality, but it may also be a strategy in which the speaker hides their authority over the listeners by presenting the situation as based on factors beyond their control. If this is the case, then the progressive may even be used for interpersonal functions such as politeness. Utterance (1.1d) does not as such involve social factors, apart from being a comment of a type of social phenomenon, but it reveals a conceptualizing function in which several independent, but very similar, events are collected under one large *gestalt*-like event. Even (1.1a), which should be rather straightforward, involves conceptualization. In its deictic function as a marker of present or past tense and in its aspectual function of a marker of imperfective situational focus, the "ordinary" use of the progressive is embedded in conceptualization of perspective, which may ultimately be rooted in perception. This also applies to the future marking function of (1.1b). In their modal functions, (1.1b) and (1.1d), and to a certain extent (1.1c), relate to encyclopaedic knowledge of the world and what is likely to happen under which circumstances. They also relate to communication procedures, as they express the speaker's attitude, or stance, towards their content. The progressive is typically associated with dynamicity and it has been observed several times that otherwise non-dynamic events seem more dynamic when appearing in the progressive. This applies to all examples in (1.1). This way, the progressive also has a categorizing function in that it categorizes situations as being dynamic as opposed to static.

The utterances in (1.1) show that the progressive construction is more than just grammar in the traditional sense. The progressive construction is also, among other things, conceptualization, socio-culture, encyclopaedic knowledge, communicative practice and competence, and perception among other things. All of these factors may be collected under the umbrella term 'cognition'. As mentioned above, the different uses of the progressive are related to each other. The locus of this relation is cognition and experience, and thus cognition has to be taken into account if one wishes to describe the complexity of the progressive construction.

It is of course not just the progressive that is embedded in cognition. The same principles apply to all aspects of grammar and language. Language is not just language, and grammar is not just grammar; they are integrated parts of human cognition. Any model or description of language that would allow one to describe grammatical phenomena like the English progressive satisfactorily as a means of human communication would be one in which grammar is integrated in

human experience. One school of linguistic and philosophical thought that has the potential for developing such an integrated grammar – and is well on its way – is *construction grammar* and its wider theoretical framework of *cognitive linguistics*.

1.2. Integrated grammar and the progressive

Since the birth of modern linguistics, which is attributed to Saussure and some of his contemporaries, language has been viewed as being embedded in social and performance contexts with the notions of *langue* and *parole*. The former is defined by Saussure (1983: 9-10) as follows:

> The structure of a language is a social product of our language faculty. At the same time it is also a body of necessary conventions adopted by a society to enable members of a society to use their language faculty. Language in its entirety has many different disparate aspects. It lies astride the boundaries separating various domains. It is at the same time physical, physiological and psychological. It belongs both to the individual and to society.

The idea of language as a social system implies that it is created to fulfil the needs of a speech community and therefore serves social functions. It also implies that language is a *social system of signs*, pairing a physical form with a semantic content, and that the conventions of its symbolic structures have been agreed upon by the speech community in question. The other important aspect of language in the Saussurean tradition is parole, which is defined as the way the signs in the symbolic system of language are put to use:

> Speech [English translation of 'parole'] is an individual act of the will and the intelligence, in which one must distinguish: (1) the combinations through which the speaker uses the code provided by the language [English translation of 'langue'] in order to express his own thought, and (2) the psycho-physical mechanism which enables him to externalise these combinations (Saussure 1983: 14).

Thus, not only the utterances that combine the elements in the parole but also the communicative and physical *contexts of language use* are part of parole. As Geeraerts (2003: 370) puts it, "language, on this definition, is embedded in social and communicative contexts, but there is also a gap between the two in that the mental capacity [i.e. individual system – KEJ] that facilitates the creativity it takes to put the signs in the langue into use in the parole is absent".

Chomsky's (1957) introduction of *competence* addresses this gap, as he presents grammar as an innate machinery of mathematico-logical syntactic rules for the combination of lexical symbols into grammatical sentences. Competence was a central concept in Chomsky's *generative linguistics*, which dominated the entire latter half of the twentieth century linguistics (Harris 1993). Chomskyan generative linguists maintain a distinction between competence and *performance*, roughly the equivalent of parole. They argue for the primacy of competence over performance, and for the primacy of syntax within competence. Moreover, it is held that syntax is autonomous and

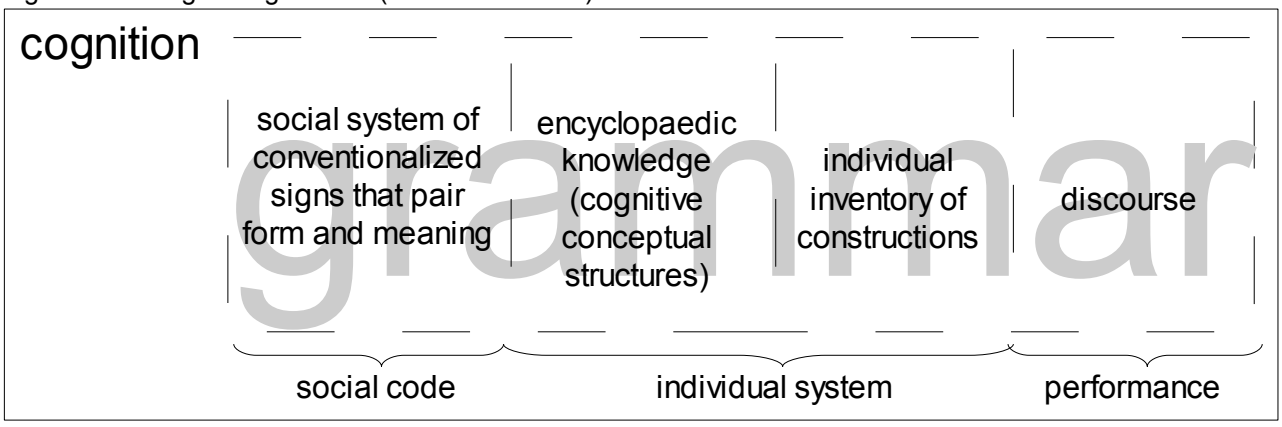
self-sufficient such that the combinatorial rules are not influenced by any external factors. This definition of grammar is an *isolated grammar* (Geeraerts 2003), in which social and usage-based aspects along with meaning and lexicon are considered to have no, or little, relevance to syntax, and are shaved away from linguistic theorizing:

> Meanings constitute the variable, contextual, cultural aspects of language par excellence. Because social interaction, the exchange of ideas, changing conceptions of the world are primarily mediated through the meaning of linguistic expressions, it is unlikely that the universal aspects of language will be found in the realm of meaning. Further, the lexicon is of secondary importance. (Geeraerts 2003: 372)

Isolated grammars tend to be formalist, as the main focus is on the mathematico-logical rules of syntax. Most of disciplines focusing on the aspects of language that were segregated off from the core grammar of syntax, such as *sociolinguistics*, *sociohistorial linguistics*, *discourse pragmatics*, *logical pragmatics*, *cognitive linguistics*, *usage-based linguistics* and others are categorized as *functional linguistics* in contrast to *formal linguistics*.

Functionalists seek to investigate the role of language in context and context in language, arguing that one will not be able to gain fully satisfactory insights into language by segregating syntax from the contexts it exists in. That is, they seek to recontextualize grammar (Geeraerts 2003). Typically each functionalist discipline approaches grammar in the perspective of one aspect of context at the cost of others. This strategy of directed focus in linguistic inquiry has undeniably produced important insights. One could, however, argue that a framework that integrates grammar, or language, fully in all contexts in which it serves communicative and other purposes, and which influence the shape of the linguistic system, would be preferable. Such an *integrated grammar* (Jensen 2004: 28-30) would be one that embedded grammar in the contexts of human cognition and knowledge, culture and society, and discourse and communication, presenting social code, individual system, and performance as equally integrated aspects of language:

Figure 1.1: Integrated grammar (Jensen 2004: 30)



The punctuated line boundaries are meant to indicate that there are no boundaries as such; that is to say, there are no isolated and autonomous modules at play, but that all four aspects of language are equally important and mutually influential. As of now, only very few theoretical frameworks are fully fledged integrated grammar – *systemic functional linguistics* (SFL) (Halliday 1994) and Dik's (1989; 1997) *functional grammar* are the only ones that come to mind. However, within the last few years, cognitive linguistics and construction grammar, which, according to Geeraerts (2003) recontextualize grammar in terms of conceptual meaning and the lexicon respectively, have started to expand into the realms of usage and socio-culture. Croft (2006) has argued for a stronger implementation of the social aspects of language into cognitive linguistics.[1] As a syntactic theory within the framework of cognitive linguistics, construction grammar is increasingly becoming focused on the interplay between performance and competence. Thus it has the potential for becoming an integrated grammar model (Jensen 2004).

It is my belief that cognitive linguistics and construction grammar, if fully recontextualized, will provide a useful framework for linguistic description of various phenomena, basically taking into consideration the role of language in human experience (Wierzbicka (1988: 4-7) makes a similar case). One of purposes of this study is to show, through a constructionist corpus-based analysis of the English progressive construction, the potential of a cognitive-constructional integrated grammar framework in describing grammatical phenomena.

The English progressive is probably the most written about of the central English predicator types. The reason for the vast amount of attention it has received in the literature is undoubtedly the many uses it seems to have. Many, if not all, of these uses are very much dependent on factors external to syntax; factors which are crucial to the language user's understanding of this particular construction. The present study will show that a large number of uses reflect cognitive structures and processes as well as pragmatic factors and conventions of use. A number of these uses are also observed in the literature, albeit described differently and in different perspectives. Regardless of the perspective, these factors require an integrated grammar framework. The present study will also reveal a few uses which involve social factors, such as power relations. Often, the external features appear to be so intertwined with the linguistic ones that functionally describing the English progressive without taking them into account is theoretically and descriptively untenable.

1 As have I in my discussion of semantic looping of slurs (Jensen 2006a) in which I attempted to point out some of the many so-called "extralinguistic" factors involved in this particular process of language change, arguing that one cannot satisfactorily describe such semantic looping without taking into account linguist as well as "extralinguistic" factors.

1.3. Predicator construction

I operate with the term "predicator construction" with reference to what is typically called 'verb phrase' in standard linguistic terminology. I do this mainly to underline the constructionist framework of this dissertation. But there are also other reasons.

As mentioned above, "verb phrase" is the conventional term for those parts of sentences that constitute verbal structures and is widely spread in use in the linguistics community. However, there are some disadvantages to that term and the way it is used in the terminology of linguistics; these disadvantages are amplified in the perspective of the theories that provide the framework for this study. As Chalker and Weiner (308-9) point out, "the terms verb and verb phrase can be ambiguous, meaning either the functional constituent or the formal category." While it is ambiguous, it is still formally biased and it is my impression that the term, in its conventional use, is somewhat incompatible with the functionalist framework of the present study. In order to avoid this terminological ambiguity, and to maintain the functionalist nature of this dissertation, I use 'predicator' with reference to the functional aspect of verbal structures. The term is primarily used in the pedagogical function-based model of sentence analysis known as SPOAC[2] (e.g. Bache 1996, Bick et al. 1996, Bache and Davidsen-Nielsen 1997, Bache et al. 1999) and also in Palmer's (1994) crosslinguistic study of grammatical roles and relations as well as in Bache's (1985, 1997) work on verbal aspect and in Dienhart's (1997, 1998) linguistic analysis of poetry and linguitic discussion of humor. Another reason for using 'predicator' is that it descriptively captures the communicative function of verbal structures. Jespersen (1966: 86) writes that the "verb is a life-giving element, which makes it particularly important when building up sentences". This view is still very much the common assumption of today's mainstream linguistics:

> Functionally, it is the element that can be used as the minimal predicate of a sentence, co-occurring with a subject (e.g. She answered), and generally dictating the number and nature of the other elements in the predicate. Traditionally, a verb phrase is a group of verbs which together have the samesyntactic function as a single verb (e.g. He left/may have left). (Crystal 1999: 357)

The life-giving function is called *subcategorization* or *transitivity* in formally oriented approaches and *predication* in functionally oriented ones. Even though the present study is based on a non-reductionist philosophy in which subcategorization or transitivity are not given any theoretical value as such, verbal structures can still be seen as life-giving elements, be it in a slightly different way from what Jespersen had in mind. In the non-reductionist philosophy of many versions of construction grammar, it is assumed that the meaning of the construction is not merely the sum of

2 The SPOAC-model, also referred to as the Odense model, is named after the labels of its primary functional constituents: subject, predicator, object, adverbial, and complement

the meanings of its parts. Rather, the construction, regardless of the units that realize its slots, has its own content and is thus a symbolic unit in its own right. So, for example, the argument structure associated with the ditransitive construction is not built up from scratch every time a ditransitive verb is used. Rather, it is based on a construction that provides the syntactic configuration and the content of transferring something from one participant's possession into another one's. This also applies to verbal structures. Each verbal structure has its own bit of meaning regardless of the meaning of the main verb.

Verbal structures are life-giving at a more communicative and conceptual level in the present study, which draws on Searle's (1968) and Croft's (1990) treatment of *propositional act functions*. The propositional act function of predicators is conveniently called 'predication' as well, and it is basically the syntactico-semantic establishment of processes and relations that bind together semantic components in events and make the 'reference' to the event. The *main verb* (traditionally defined as the lexical pivotal point of verb phrases) of predicator constructions does the predicating, while the *auxiliary* elements and the *operator* (i.e. the finite element in finite predicators) provide various perspectives on the predicated event such as those relating it to tense, aspect, mood, modality, and voice. Since the function of verbal structures is to predicate at a semantic and formal level, 'predicator' is the best suited term.

'Construction' is simply to indicate that I consider predicators to be constructions in the sense advocated by construction grammar, in which constructions are semiotic units that are ultimately emebedded in human socio-cognition.

1.4. Outline

This section offers a brief outline of the dissertation, which is organized as follows. Chapter 2 introduces basic topics in cognitive linguistics that are relevant to an integrated grammar description of the progressive. Thus the focus is on categorization, construal, and cognitive models. Following this, in chapter 3, construction grammar, which is a cognitively oriented approach to syntax, well on its way to becoming an integrated grammar approach, is introduced and discussed. The chapter starts out by contrasting construction grammar with the componential and atomist model of grammar which has dominated mainstream linguistics since the 1950s, and then presents the notion of grammatical construction and the organization of language in construction grammar. The concepts of synonymy and compositionality are briefly discussed here and incorporated into the present version of construction grammar. Chapter 4 offers a brief presentation of principles

from gestalt psychology. The gestalt principles are given a chapter of their own, short though it is, because it is my impression that they are in fact essential and basic to construction grammar and cognitive linguistics, even though little credit is actually given to gestalt psychology by proponents of those linguistic frameworks; Lakoff (1977), Fillmore (1977), Ungerer and Schmid (1996), and Croft (2001) are among those who do give credit to gestalt psychology. Gestalt principles are also given their own chapter in recognition of the central role they play in the present study. Chapter 5 discusses the gestaltic aspects of the progressive construction. I will argue that gestalt principles apply at several structural levels of the grammatical construction, and that the gestalt principles are also involved in the grammaticalization of the progressive. Chapter 6 provides a description of what I call the verbal domain which is that body of denotative and connotative conceptual content evoked by the progressive construction and predicator constructions in general. Tense, aspect, action, and modality are defined in a cognitivist and gestaltist light, as are the symbolic relations of the progressive construction. Chapter 7 describes the methodology of the corpus-based investigation of the progressive construction, focuses on corpus linguistics and the collostructional analytical technique developed by Stefanowitsch and Gries (2003). Chapter 8 presents the findings of the investigation of occurrences of the progressive construction and goes through the patterns of use identified in the corpus. It is argued that recurrent patterns are the basis of subtypes of the progressive construction and are described as such. In chapter 9, coercive actional subconstructions of the progressive are discussed. The chapter is based on observations of recurrent patterns of actional coercion, or conversion, of the semantics of the verbs functioning as main verbs in instances of the progressive predicator construction in the corpus. Following this, in chapter 10, secondary context-derived uses of the progressive are discussed with focus on the semantic and usage-based interplay between the progressive and the contexts they appear in. Chapter 11 goes through the results of a collostruction analysis of the data to measure which elements are attracted to the progressive and which are repelled. This provides further insights into the prototype structure of the network of uses of the progressive construction. Chapter 12 offers an overview of the different uses and their interrelations by setting up a constructional network of the instances of the progressive as they occur in the British National Corpus. While not to be considered a statement that applies to English in its entirety, it does offer some indication of the usage-patterns of the progressive. In chapter 13, the progressive construction is compared to other imperfective predicator constructions of English with focus on differences in propositional act functions. In this chapter I shall also discuss the relevance of paradigmatics to construction grammar, and how

paradigms may be related to central theoretical concepts in construction grammar. Finally, chapter 14 is devoted to a discussion of the procedural and interactive aspects of constructional meaning, which, I think, can and should be taken into account in constructional descriptions.

2. Topics in cognitive linguistics

The theoretical and philosophical framework of most constructionist theories is that of cognitive linguistics (CL). This particular study draws on many of the central topics of CL. Therefore a short description of this approach to linguistic phenomena is in its place here.

2.1. Language and cognition

Cognition is the way the exterior world is experienced, how experiences are processed mentally and turned into conceptual systems, and the role these systems play in thought and interpretation of stimuli of various kinds. Conceptual systems and processes make up what is called *encyclopaedic knowledge* of the world. CL does not assume that language is autonomous, but a cognitive system of knowledge on par with any other cognitive system. Geeraerts (1997: 9) describes CL as, "the study of language in its cognitive function" and informs us that cognition "is [to be] seen as a repository of world knowledge, a structured collection of meaningful categories that help us deal with new experiences and store information about old ones". Thus, as Hilferty (2001: 191) puts it: "[o]ne of the tenets at the very heart of cognitive linguistics is the hypothesis that natural language is a nonautonomous, nonmodular faculty that draws greatly upon other, more general psychological processes".

Encyclopaedic knowledge is *embodied* because it is gained by interaction with the surrounding world:

> Experience is always an *interactive* process, involving neural and physiological constraints from the organism as well as characteristic affordances from the environment and other people for creatures with our types of bodies and brains. … Meaning comes, not just from "internal" structures of the organism … nor solely from "external" inputs, but rather from recurring patterns of engagement between organism and environment. (Johnson and Lakoff 2002: 248)[3]

The theory of embodiment is backed up by the neurologist Damásio (1994: 88), who states that "body and mind form an indissociable organism", and that this organism's interaction with the exterior world creates schematic visual, auditory, and somatosensory images in the mind, and

3 See also Lakoff and Johnson (1980; 1999), Lakoff (1987), Johnson (1987), and Johnson and Lakoff (2002) for more on the embodiment theory. I also refer the reader to Krzeszowski (2002), Rakova (2002), and Sinha (2002) for some fierce debating regarding embodiment. The need for an embodiment-based theory of language was already expressed in Lakoff (1977: 237).

knowledge of the world is built up from these images; he even argues for the possibility of words and abstract symbols in thought being such images (Damásio 1994: 106-8).

Encyclopaedic knowledge is argued to be a network of concepts organized into generalized schematic representational models. These *cognitive models* vary in specificity. Ranging from the least specific and most basic *image schemas*, which are based on recurrent basic sensorimotor experiences (e.g. Lakoff 1987, Johnson 1987, Talmy 2000a: 407-550, Bergen and Chang 2005), over more complex models based on certain types of situations – like TRANSFER OF POSSESSION or COMMERCIAL TRANSACTION (e.g. Fillmore 1968, Ungerer and Schmid 1996, Croft et al. 2001, Croft MS: §5) – or certain objects and how one interacts with them, to the highly complex and often ritualized ones – such as GOING TO A RESTAURANT (Schank and Abelson 1977: 42-6) or FLYING ON AN AEROPLANE (Ungerer and Schmid 1996: 211-4). All cognitive models are ultimately *idealized cognitive models* (ICM), as Lakoff (1987: 68-117) points out. They are experientially based, but highly generalizing and may not always match reality. The network is stable, but not static, because constant interaction with the exterior world may change the nature of the cognitive models supplely or abruptly, bring about new cognitive models, or change the relations between cognitive models in the network.

If there is no such thing as autonomous linguistic meaning, then linguistic meaning must draw on cognitive structures as a source of semantics. Wierzbicka (1975) argues that the meaning of a word is not just the direct *denotative* meaning, but that it also involves other *connotative* concepts relating to this meaning (see also Haiman 1980). For instance, the adjective 'broken' signifies not only NOT INTACT, but also INTACT as well as the circumstances that cause an ARTIFACT to become NOT INTACT. Likewise, 'dead' not only refers to NOT ALIVE, but also to ALIVE as well as the circumstances that cause an ANIMATE BEING to become NOT ALIVE.

One cognition-based approach to semantics that takes into account the importance of encyclopaedic meaning is *frame semantics* (Fillmore 1977, 1982)[4] whose central theoretical construct is the notion of *semantic frame*. The semantic frame of a sign is that portion of encyclopaedic knowledge that the sign *evokes*. If the language user did not have any access to the frame of background knowledge relating to the meaning of the sign, the sign would not make any sense:

> By the term 'frame' I have in mind any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits; when one of the things in such a structure is introduced into a text, or into a conversation, all of the others are automatically made

4 Frame semantics shares many of its theoretical foundations with Langacker's (e.g. 1987, 1991) *figure-ground* and *cognitive domain* approaches and Talmy's (2000a: 257-309) *windowing of attention* approach.

> available. (Fillmore 1982: 111)

Frames are thus the cognitive models that make up the scope of a denotative concept and thus experiential realism is a main element of frame semantics:

> In the view I am presenting, words represent categorizations of experience, and each of these categories is underlain by a motivating situation occurring against a background of knowledge and experience. With respect to word meanings, frame semantic research can be thought of as the effort to understand what reason a speech community might have found for creating the category represented by the word. (Fillmore 1982: 112)

A frame is not an unordered mass of conceptual background knowledge. A frame comprises a number of cognitive models, and cognitive models are structured in terms of roles and relations.

I shall explain frame semantics, using a somewhat eclectic terminology that is based on Fillmore (1982), Langacker (1987, 1991), Talmy (2000a: 257-309), and Bergen and Chang (2005). The denotative concept is *profiled* (Langacker 1987, 1991). Profiling is a mental operation that involves the concentration of attention towards the denotative concept. The other parts of the frame are then *gapped* (Talmy 2000a: 259), not being the main locus of attention. 'Broken', for example, evokes the BREAK frame and profiles the final state of being NOT INTACT and gaps the rest, while 'dead' evokes the DYING frame and highlights the state of being NOT ALIVE, gapping the preceding events.

A frame typically comprises several cognitive models. An example is the compound noun, 'payphone', which evokes not only knowledge about TELEPHONIC COMMUNICATION, but also COMMERCIAL TRANSACTION. Langacker (1987, 1991) calls constellations of multiple frames a *domain matrix*.[5] There are in principle no limits as to how many domains a domain matrix may include or to how complex and intricate the relations among these.

Very often there is some correspondence between the roles in the different domains in a matrix. Following Bergen and Chang (2005), I will refer to this relation as a *binding*. Typically, bindings involve what Langacker (1987; Taylor 2002: 229) calls *elaboration*, which is the adding of further conceptual information to schematic roles of semantic structures. Such schematic roles Langacker (1987: 304) calls *elaboration sites*, or *e-sites* for short. E-sites are "those facets of one component structure in a valence relation that another component structure serves to elaborate". (ibid.) The elaborating information is imported from part(s) in the other domain(s) of the matrix that the e-site binds with. For example, in 'payphone' the CALLER in the TELEPHONIC COMMUNICATION frame elaborates on the BUYER in the commercial transaction frame creating a binding, while the PHONE CALL itself elaborates on and binds with to the GOODS, and the MONEY of both frames create a binding without elaboration. Linguistic signs are typically *non-monadic*, because one form has

5 Langacker's 'domain' and Fillmore's 'frame' overlap considerably and will be used interchangeably.

several referents within the different frames in the matrix.[6]

The encyclopaedic semantics of a sign also involves usage-based dimensions: "the process of using a word in a novel situation involves comparing current experiences with past experiences and judging whether they are similar enough to call for the same linguistic encoding" (Fillmore 1977: 57). This means that communicative and social aspects must be taken into account as well. Croft (2000: 91), for instance, argues for the social domain as a third dimension of linguistic units along with form and meaning. Geeraerts (1997: 114), looking at the causes of lexical change, argues that connotational contents, such as *emotional meaning* (the attitude of the speaker), s*tylistic meaning* (socio-conventional appropriateness), and *discursive meaning* (conversational value) are so important that they may actually bring about semantic changes. Though more difficult to pinpoint, social knowledge is also part of the scope of predication of a sign. This is especially salient in relation to the establishment of an integrated cognitively oriented approach to grammar.

2.2. Categorization

Categorization is considered one of the main organizational principles of encyclopaedic knowledge (see e.g. Lakoff 1987 and Taylor 1995). It is the process of classifying experiences into different taxonomic types based on commonalities and differences. CL is based on the assumption that concepts are organized into *prototype categories* (Berlin and Kay 1969; Rosch 1973). A prototype category provides the features that are typical of the category. Its members *inherit* the structure of the schema in such a way that they can be said to instantiate it (Taylor 2002: 124-6). Categories are taxonomically structured with the most general or schematic unit in superordinate position. Commonalities that appear to be the most salient are typical features of the category, but not necessary conditions, since members of the category do not necessarily have to share all features with the schema. Some may share all and display a high *degree of prototypicality*. Other members may share some features and are less easily predictable as instances of the category and thus less prototypical, while others are not predictable at all. These *extensions* will have to be learned through convention.

> the … structure of the category is characterized by a dominant core (the prototypical instantiation of the category), surrounded by peripheral instantiations that deviate in one or more features from the central cases. The category does not consist of identical cases with equal weight, but the category is as it were held together by the presence of a predominant central case, less central and less frequent instantiations being related by similarity to the central case (Geeraerts 1997: 43-4)

6 "Monadic" means a bi-unique relationship between form and meaning, while "non-monadic" implies a one-to-many relationship (Bache 1997: 159-66).

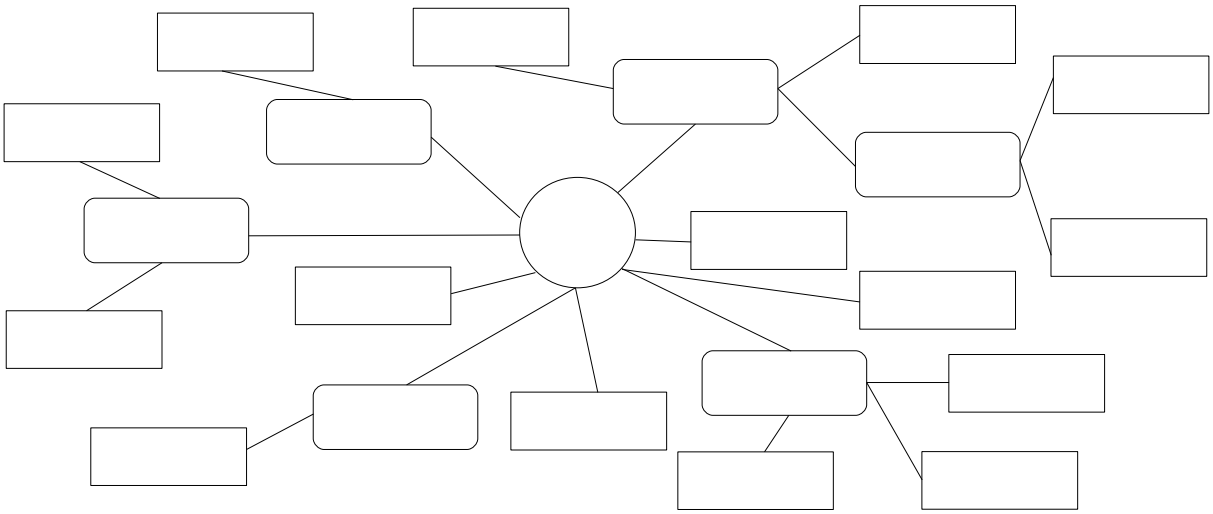
Extensions and less typical members are often *subcategories.* A subcategory is a subset forming a category within the category. Instead of being purely taxonomic, categories are also *radially* structured in a *center-periphery* structure (Lakoff 1987), with the schema at the center and good, or predictable, members close to the center, or dominant core, and bad members and extensions further away from the center.

Categories are also said to be organized into *levels of categorization* (e.g. Lakoff 1987; Ungerer and Schmid 1996; Croft and Cruse 2004) There are three levels:

- basic level: the basic level provides concepts that are generic enough to provide the basic features of a category without being too abstract or too specific. DOG and CAT, for example, are basic level categories. Each provides enough identifiable features such as general shapes and behaviors that all members of the respective categories are believed to share.
- *superordinate level*: the superordinate level provides very abstract concepts based only on a few identifiable features; superordinate level categories subsume basic level categories. PET, FURNITURE, and VEHICLE are examples of superordinate categories which subsume a large number of basic level categories sharing the few defining features provided by the superordinate categories. PET would, for instance, subsume CAT and DOG.
- *subordinate level*: the subordinate level provides very specific subtypes of basic level categories and thus posits a considerable number of specific features. For instance, ALSATIAN, BASSET, and POODLE are subordinate level categories of DOG.

The levels of categorization are hierarchically organized and may also be represented in terms of entailment with subordinate level categories entailed in basic level categories, which are in turn entailed in superordinate level categories as it [PET[DOG[POODLE]]]. However, things are not always that simple – especially when the superordinate level category is function-based as is the case of PET. In some cases there are subordinate levels subsumed under a superordinate level, but the basic level is excluded. This is the case of GOLDFISH and BUDGIE, both of which are considered PETS, but their basic level categories, FISH and BIRD, are typically not subsumed under the superordinate level category PET. Also superordinate level categories may "borrow" traits from basic level categories in what is called *parasitic categorization* (Ungerer and Schmid 1996). For instance, since PET does not specify a gestalt, it is possible that whenever encountering the word *pet,* the language user will associate it with the form of, say, a CAT or a DOG, even though no specific reference is made to those animals. Below is an illustration of a generic radial structure of a category:

Figure 2.1. Radial taxonomic structure



The circle at the center represents the prototypical center of the category, while the rounded rectangular boxes represent centers of subcategories, and squares proper represent instances or exemplars.

Conceptual categories have *fuzzy boundaries*. Many of the fringe members of a category often display features of another category. Very often these borderline cases form subsets of their own and may be seen as *hybrid categories*. Category boundaries are thus more like *transition zones*. They also seem to be mobile, such that a concept may be judged differently in terms of membership status on different occasions. Several structural aspects of a category may be remodeled if the context calls for it (Croft and Cruse 2004: 97-104). Not only do conceptual categories display radiality, asymmetry, and prototypicality, they also display a certain amount of dynamicity.

Geeraerts (1997: 129-30) argues that economical principles, like the principle of *informational density*, are important factors in categorization:

> it is cognitively advantageous to lump as much information as possible into one's conceptual categories. Making conceptual categories as informatively dense as possible enables one to retrieve the most information with the least effort

That is, when interpreting an experience one has easy access to the relevant background knowledge. He points to two other principles that are closely interrelated:

> the cognitive system should combine structural stability with flexibility. On the one hand, it should be flexible enough to adapt itself to the ever-changing circumstances of the outside world. On the other hand, the categorial system can only work efficiently if it does not change its overall structure any time it has to cope with new circumstances. Again, prototypical categories fulfil the joint requirements of *structural stability* and *flexible adaptability*. On the one hand, the development of peripheral nuances within given categories indicates their dynamic ability to deal with the changing conditions and changing cognitive requirements. On the other hand, the fact that marginally deviant concepts can be

> peripherally incorporated into existing categories indicates that the latter have a tendency to maintain themselves as particular entities, thus maintaining the overall structure of the system. Prototypical categories are cognitively efficient because they enable the subject to interpret new data in terms of existing concepts; as expectational patterns with regard to experience, prototypically organized categories maintain themselves by adapting themselves to changing circumstances." (Geeraerts 1997: 130 – my emphasis)

This allows for categorization of the same item differently according to contextual factors. For instance the prototypical DOG may depend largely on the context. In the context of hunting, the most protytypical referent of the word 'dog' may be RETRIEVER, while in the context of policework, it may be ALSATIAN, and in the context of dog racing it may be GREYHOUND (Ungerer and Schmid 1996) These principles also allow one to expand, modify, revise and maintain the structure of a category; in other words, these principles allow us to constantly learn new things:

> the categorization function of the language imposes a structure on the world rather than just mirroring objective reality. Specifically, language is a way of organizing knowledge that reflects the needs, interests, and experiences of individuals and cultures. (Geeraerts 1997: 9)

This issue basically has to do with stability versus dynamicity and flexibility, which, we will see later, is somewhat of a central issue in relation to the progressive predicator construction.

2.3. Polysemy, metaphor, and processes of meaning construction

In addition to categorization and encyclopaedic knowledge, there are several other issues addressed in CL. In this section, I will briefly discuss some principles and processes of meaning construction, which are relevant to the present study, inasmuch as they may be applied in the construtionist analysis of the progressive construction.

Polysemy is typically defined as "the possession of multiple meanings" (e.g. Chalker and Weiner 1994: 302). In CL, however, polysemy is more specific as the relation between multiple meanings. The source of polysemy is typically diachronic in nature, but synchronically, the meanings are conceptually related (e.g. Croft 2003a: 53), though the relations between the meanings may also be lost. Polysemy is argued to reflect cognitive structures directly. Through its *semiological function*, language provides us with names, or labels, for many cognitive structures and those experiences that they capture, as well as names for parts of cognitive models and members of conceptual categories. Because of humans' general tendency for linguistic and cognitive economy, the semiological and *interactive* functions of language allow for the use of a label for the model or the category with reference to a part or member if specification is not deemed necessary. Polysemy is probably the most widely studied semantic phenomenon within CL. Especially in early studies of lexical semantics and its connection to categorization, polysemy

was almost exclusively the central topic of research. The primary motivation for this "obsession" (Silva 2001: 147-71) of cognitive linguists with polysemy is that it exemplifies the relation between language and cognitive structures very well. Furthermore, it reflects linguistically the economy-based cognitive principles of informational density, structural stability, and flexible adaptability (Geeraerts 1997: 130). As we will see later, the progressive construction, and grammatical constructions in general, may be argued to have more than just one meaning, and that the relation between constructional meanings is much like polysemy.

Metaphor and *metonymy* pervade everyday language and thought (Lakoff and Johnson 1980). Typically, the idea of metaphor is defined *semasiologically* along the lines of "a figure of speech in which a word or phrase is applied to something to which it is not literally applicable" (*COED;* see *MWO*, *MED*, and *CALD* for similar definitions). CL complements the semasiological definition with an *onomasiological* one: a metaphor involves the conceptualization of one experience in terms of another based on a felt similarity between the two. The metaphorical expressions of everyday language reflect such *conceptual metaphors* (Lakoff and Johnson 1980). Conceptual metaphors involve the mapping between two domains. Very often the mapping is straightforward in the sense that the structure of one domain, which is then called the *source domain*, is mapped directly onto another, which is then called the *target domain* (ibid.). Linguistically, the name of the source domain – or the name or names of some part or parts of the source domain – is used with reference to the target domain – or some part or parts of the target domain.[7] Another type of metaphor is a *blend* (Fauconnier and Turner 2002)[8] which may, or may not, be more common than metaphors that involve direct mappings from one domain onto another. Blends imply the picking out of some elements in each of the input domains (also called *input spaces*), creating a third conceptual structure (known as a *blended space*). Contrary to what may be the general belief, grammatical structures may also be metaphorical. There is at least one use of the progressive construction which may be said to be metaphorical – namely, the use of the progressive to express future events. The main line of argument is that futurity is conceptualized in terms of ongoingness in this use of the progressive construction. We will discuss this in more detail later.

Construal/conceptualization[9] is "the locus of meaning and the basis of grammar"

7 See Lakoff and Johnson (1980), Ungerer and Schmid (1996), Clausner and Croft (1997), Özsaliçkan (2003), and Croft and Cruse (2004: 193-221) for more on metaphors in CL.

8 Unlike Fauconnier and Turner (2002), who argue that blending is the single most important process of thought, I, (cf. also Janda 2000), consider a blend a specific type of mental process that is involved in a specific type of metaphoric conceptual structure.

9 'Construal' and 'conceptualization' will be used interchangeably. An alternative term is ception, which is – perhaps more specifically – defined as "the conjunction of perception and conception" which includes "the processing of

(Langacker 1997: 229). According to Langacker (1998: 1), conceptualization is "any kind of mental experience"; that is, any kind of thought activity. Meaning is perceived as the mental processing of experiences for communicative purposes. Such processes are sometimes called *construal operations* (Croft and Wood 2000; Croft and Cruse 2004: 40-73). If the purpose of language is the *verbalization of experience* (Chafe 1977a,b), and semantics is dynamic, then these construal operations are the main tool in linguistic en- and decoding and meaning construction. Construal operations are instances of general psychological processes that language users make use of when interacting with the exterior world (Croft and Cruse 2004: 40-73). Involved in the understanding of one linguistic item is a plethora of construal operations and other cognitive resources. The same experience may typically be construed in numerous different ways. This is reflected linguistically by the fact that there are several different ways of expressing the same truth-semantic content such as voice variation, synonymous lexical units[10], word order variation, and aspect alternation. However, only one construal is possible at the time, since humans do not have the mental capacity to handle multiple construals simultaneously. Conceptualization is not unconstrained by external factors. Cognition is very much a matter of interaction with the surrounding world and is functional in that sense. Cruse (2000a, b, 2001a, b, 2002; Croft and Cruse 2004: 109-59) suggests a number of external constraints on construal such as human cognitive capacities and limitations, what is felt as the nature of reality, and various pragmatic and communicative contexts. Construal is central to the progressive construction in this study, in that one of the main assumptions is that the progressive construes imperfective voice semantics by evoking a number of domains within the encyclopaedic knowledge of the interlocutor.

The conceptualizations and cognitive models activated through discourse constitute what Fauconnier (1994) refers to as *mental spaces*, which are mental constructs evoked and maintained by the linguistic signs occorring in the discourse, and which in turn may be said to also guide the development of the discourse. This way, there is an intimate connection between mental spaces and the notions of *topic* (i.e. the subject of discourse) and *coherence* (i.e. the fact that what is said in a discourse hangs together and makes sense) as defined by Stenström (1994). Mental spaces are relevant to the present study to the extent that an argument can be made, stating that mental spaces influence the interlocutors' understanding of the progressive construction, and, conversely, that the progressive influences the structure of mental spaces activated in the specific discourse in which it occurs.

sensory stimulation, mental imagery, and currently experienced thought and affect" (Talmy 2000a: 139).

10 It should be mentioned that in CL and CxG total synonymy is generally rejected.

Another aspect of conceptualization is language users' *mental simulation* of "perceptual and motor content of experiences described by language" (Bergen fc b: 2) when de- and encoding utterances, and its role in semantic processing (Bergen 2005, fc a, b; Bergen and Chang 2005; Bergen and Binsted 2004, fc). Simulation semantics grounds construal in embodied experiences of the world and is supported by a number of psycholinguistic and neurolinguistic experiment reported in Bergen (fc a).[11] Simulations vary in detail, schematicity and automaticity depending on their basicness and conventionality. Schematic and automated simulations demand less mental effort and processing time, while the more elaborate and/or non-automated demand more effort and processing time. Recent research by Bergen and others suggests that simulation is involved in the construction of constructional meaning, including the meaning of the progressive construction. This issue will be addressed and incorporated into the broader framework of this study.

Another important issue is the *symbolic function of language*. CL recognizes a mutual relationship of influence between language and thought (Johnson and Lakoff 2002), and the basic assumption is that language is always symbolic, serving to pair form and conceptual meaning (Langacker 1987: 11). The symbolic relationship is partially arbitrary, partially motivated, but not objective: "[t]he perspectival nature of linguistic meaning implies that the world is not objectively reflected in the language" (Geeraerts, 1997: 9). There are principally two ways of viewing the relationship between language and the world when investigating linguistic meaning: the semasiological and the onomasiological perspective. Semasiology takes its starting point in the form and then looks at which contents this form may or may not express. Onomasiology goes the other way and takes its starting point in a concept, including pragmatic factors, and then looks at which forms it may or may not be the content of (Grondalaers and Geerearts 2002: 69-70). Langacker (1998: 1) argues for two main functions language: the semiological function, "allowing thoughts to be symbolized by means of sounds, gesture, or writing", and the interactive function, "embracing communication, expressiveness, manipulation, and social communion". Through its semiological function, language provides labels for categories, cognitive models, concepts, and allows us construals, thus facilitating the structuring of conceptual space. Through the interactive function, it allows one to communicate them. Needless to say, all of these aspects of language and communication will be relevant to the present study, given the integrated grammar framework I am advocating.

In CL it is held that *linguistic competence* is amenable to the same principles as

11 Another study, reported in Philip et al. (2004), reveals that words activate the same neural patterns which are activated when the subject interacts physically with objects 'corresponding' to the meanings of the words.

encyclopaedic knowledge. Not only the meaning of a sign is taken to be conceptual, but the entire sign – form included – is given a conceptual value. For instance, linguistic expressions are considered categories themselves (e.g. Geeraerts 1997). That is, a sign pairs up a form and a meaning, but the form has the potential for expressing several different but often related meanings. Some are more frequently used with the form than others, and thus the category of a sign covers prototypical and less prototypical pairings of form and meaning as well as extensions (as in the case of metaphorical or idiomatic uses). Croft (1990, 2001: 87-102, 2003b) argues that *propositional acts* (Searle 1969), which are the relations between linguistic forms and the semantic classes that function as their main semantic components, are a matter of semiotic prototypicality. Croft proposes three propositional act functions (*reference*, *modification*, and *predication*) and three types of semantic class (*objects*, *properties*, and *actions*). Propositional acts were first introduced by Searle (1969: 22-53; 77-96; 97-127) who operated primarily with reference, which "serves to pick out or identify one 'object' or 'entity' or 'particular' apart from other objects" (Searle 1969: 26) while predication sets the relation between the entities. Croft (1990, 2001, 2003b) adds modification as a propositional act: "modifying indicates a secondary referring or predication functions (restrictive and non-restrictive modification respectively)" (Croft 1990: 248). Objects are *non-relational* because they exist independently of other entities, and both properties and actions are relational in that their existence is dependent on other entities (Langacker 1987: 214-7, Croft and Cruse 2004: 67-8). Objects and properties are *atemporal*, because they are stative and typically *summarily scanned*. Actions, on the other hand, are typically *temporal*, and thus *sequentially scanned*.[12] Croft argues that both the propositional acts and semantic classes form two continua. The propositional act continuum ranges from reference to predication with modification as an intermediate while the semantic class continuum ranges from objects to actions with properties as an intermediate. In terms of parts-of-speech constructions, nouns and nominalizations prototypically make reference to objects, adjectives and adjectivizations prototypically modify and typically relate to properties, and verbs and verbalizations prototypically predicate and relate to actions. With this in mind, I suggest that signs may themselves be *semiotic ICMs*, understood such that there are certain pairings of form and meaning that language users feel to be the most correct or natural ones. Often these do correspond to the prototypical pairing of form and meaning, but the language user's conceived prototype, which is praimarilly of an emic nature, may differ radically

12 The notion of scanning stems from Langacker's (1987: 144-5, 248-9) and Croft and Wood's (2000; Croft and Cruse 2004: 53-4) typologies of construal operations. Sequential scanning is the scanning of a scene unfolding in conceived time, while summary scanning presents the scene holistically as an entity.

from the pairing of form and meaning that is actually the most frequent in actual language use, which is primarily of an etic nature. These aspects of meaning construction and communication are taken to be essential to the progressive construction, as well as to language in general, in the present study.

There is also a social aspect to language and cognition which has recently received attention in CL (e.g. Verhagen 2004), but which has implicitly been present all the time with the notion of the interactive function of language. We can assume that speakers use linguistic signs to achieve certain effects in the listeners. A speaker will use a certain formulation or construction to make the listener construe the propositional content of the message in a specific way or to make a specific mental simulation, which is, or should be, somehow beneficial to the speaker. This is sometimes referred to as the *instructional semantics* of linguistic signs (Harder 1996), the hypothesis being that the speaker uses linguistic expressions to instruct the listener to engage in various mental operations so as to construct the intended meanings. This interactive aspect of meaning construction is more procedural than representational to be sure, and it is not generally operated with in CL. The dynamic and interactive aspects of meaning are highly compatible an integrated construction grammar framework, so I will discuss the possibilities of implementing them into the framework advocated in the present study.

3. Construction grammar

Construction grammar (CxG) is a family of syntactic theories that take as their basis many of the above-mentioned principles from CL. What distinguishes CxG from other theories of syntax is that CxG is not atomist; the primary unit of grammar is neither the atomic lexical unit nor the rule that combines them. Rather, it is the *grammatical construction*, which, in accordance with the semiological and interactive functions of language, is seen as a pairing of form and conventionalized meaning which may be independent of the meanings of its atomic constituents.

In the atomist approach, the meaning of a complex structure corresponds to the sum of meanings of the lexical units that it is made of. Idiosyncratic phenomena like idioms, fixed expressions, metaphorically and pragmatically extended uses of certain structures, type-shifting in transitivity, form-meaning mismatches, substandard structures, sociolinguistically based variations, and uses of certain specific words do not fit very well into such models and are often dismissed from the core grammar as irrelevant. The original motivation of CxG was to describe idiosyncratic constructions on equal footing with regular ones, and many of the seminal publications such as Kay

(1984, 1990), Lakoff (1987: 462-585), Fillmore et al. (1988), and Lambrecht (1988) dealt with less central constructions:

> While construction **grammars** have similarities to a number of other approaches to grammar, meaning, and natural language understanding, construction **grammarians** differ from many other workers in the generativist tradition by their insistence on simultaneously describing grammatical patterns **and** the semantic and pragmatic purposes to the fine and fussy details of what might be called the **non-central constructions of a language**. (Fillmore 1988: 36 – emphasis in original)

This tradition of investigating idiosyncratic constructions is carried on today in studies like Kay and Fillmore (1999). Some constructions that could not be accounted for in the generative paradigm, such as the 'kind of' and 'sort of' constructions (Kay 1984) are only considered non-central, because the traditional notions of primitives and rules do not apply; in reality such constructions are so frequent that considering them non-central is quite absurd. In accordance with the original motivation of describing non-central constructions on a par with central ones, CxG was expanded with works like Lambrecht (1994), Goldberg (1995), Michaelis (1998), and Croft (2001), and Bergen and Chang (2005), all of which deal with less idiomatic structures and aspects of structures, and it continues to expand.

Many of the foundational aspects of CxG are directly or indirectly inspired by the principles known from *gestalt psychology* (Koffka 1935, Köhler 1947).

3.1. What construction grammar is not: the componential approach[13]

Before looking at what CxG is, it might be a good idea to look at what it is not, because, as Croft and Cruse (2004: 225) point out,

> Construction grammar, like any other scientific theory, did not arise in a theoretical vacuum. Construction grammar arose as a response to the model of grammatical knowledge proposed by the various versions of generative grammar [which is an atomist approach – KEJ] over the period from the 1960s to at least the 1980s, and other syntactic theories that emerged as direct offshoots of generative grammar.

Generative models of grammar are based on the assumption that the brain consists of a number of autonomous *modules* that carry out different tasks. One such autonomous module is the language module, or the language faculty. The language module itself consists of a number of submodules which also work independently of each other with their own sets of combinatorial rules. Thus linguistic structures are *multistratal*, meaning that atomist grammars are often also *compontentialist* (Croft 2001).

> In the componential model, different types of properties of an utterance – its sound structure, its syntax and its meaning – are represented in separate components, each of which consists of rules operating over primitive elements of the relevant types. (Croft ibid.: 14-5)

13 This characterization of the componential/atomist approach is based on the criticisms in Fillmore et al. (1988), Hopper (1998), Croft (2001), Taylor (2002), Croft and Cruse (2004).

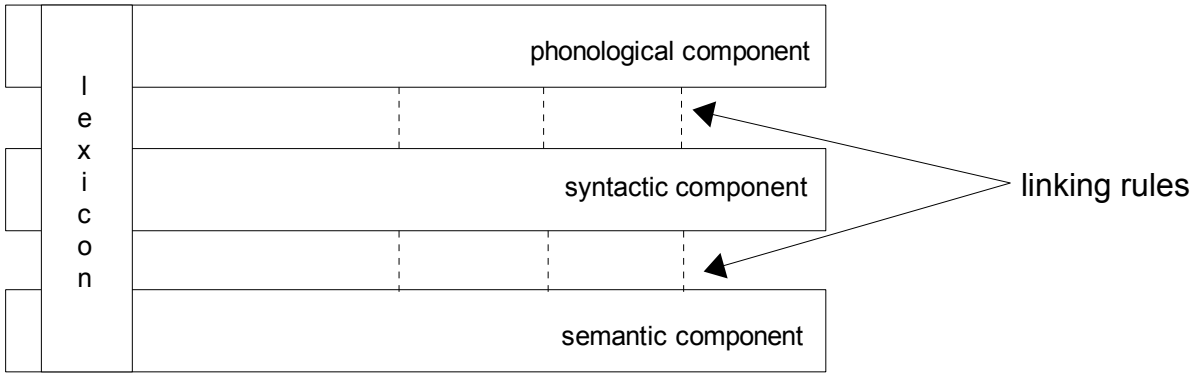
While the exact number of submodules, or *components*, is still a subject of much debate, scholars of the atomist tradition agree that there are at least three components: the *phonological component*, the *syntactic component*, and the *semantic component*. These may be described like this: there is a general tendency among atomist grammarians to focus on the syntactic component; the rules in the syntactic component are *dynamic* in that they often imply the movement of the syntactic constituents into different positions and involve insertion of semantically void auxiliary units as well as empty categories. They are also *derivational*, because they derive structures from other underlying structures.

Another factor is the *lexicon* which cuts across the three components. The lexicon is a list of all the atomic units of the language. The atomic unit, or *lexeme*, or word, has a sound structure, a syntactic category (its part-of-speech class), and a semantic structure. Lexical units have a number of additional features which are considered inherent natural features, such as for example their transitivity (or valence or subcategorization etc.), each structure of the lexeme is governed by the rules of the relevant component when part of a syntactic structure.

While the syntagmatic combination of atomic units is governed by the components, the inter-componential mapping is done via *linking rules*. Linking rules are bi-unique in that they map the information of one unit within a component to one and only one unit in each other component. This is a logical result of the atomist way of dealing with linguistic complexes. If component *X* involves *n* number of constituents when a linguistic complex is being processed, then components *Y* and *Z* also involve *n* number of constituents. This is so because the constituent comes with a fixed and prefabricated linking of form and meaning in the lexicon. Each structural level of a complex construction can be broken up into, or reduced to, a number of atomic units that bi-uniquely correspond to the units of the other structural levels. Examples of linking rules are Chomsky's (1981: 6) *θ-criterion* and Bresnan's (2001: 311) *biuniqueness constraint*. Both criteria link syntactic arguments with semantic arguments.

The componential approach is very much an isolated grammar, in which all contextual intereference is removed. This allows for powerful generalizing models of syntax, phonology, and, to some extent, morphology, but at the cost of social, communicative, and other interactive factors. Below is a diagram (adapted from Croft 2001: 15) of the componential approach to grammar:

Figure 3.1: The componential model (Croft 2001: 15)



It is the atomic unit in the lexicon, the dynamic rules of linear combination in each component, and inter-componential bi-unique linking rules that are the primary units of grammar in atomist grammar. As Fillmore et al. (1988: 503) argue, atomist and similar theories

> provide the principles by which words whose meanings we know, arranged according to grammatical structuring principles whose semantic force we know, figure in the construction of an unlimitedly large set of possible meanings. Under the idealization just discussed [the atomist view – KEJ], any sentence in a language can be resolved into configurations containing only constituents of the designated types, arranged according to the standard rules, and yielding interpretations which follow from the principles which follow from regular compositional semantics.

In other words, a linguistic structure can, syntactically and semantically, be broken down into atomic primitives – the lexemes it consists of – leaving its syntactic configuration a semantically void, and perhaps non-existing, entity.

A necessary consequence is *strict compositionality*: "[t]he meaning of a complex expression is fully determined by (a) the meanings of its component parts, in conjunction with (b) the way the parts are combined" (Taylor 2002: 98), or in Goldberg's (1995: 13) words: "the meaning of every expression in a language must be a function of the meanings of its immediate constituents and the syntactic rule used to combine them" (see also Michaelis 1998: 79).

Strict compositionality has the following implications (Taylor 2002: 98):

a. Each component of the complex expression has a fixed and determinate meaning within the language system.
b. The manner in which simpler terms combine to form complex expressions makes a fixed and determinate contribution to the meaning of a complex expression.
c. The semantic properties of the parts of an expression are fully maintained in the complex expression.
d. There is no 'surplus' meaning accruing to a complex construction that is not attributable to its parts and the manner of their combination.

Isolated grammars are very useful for certain purposes, but if one is interested in viewing language in the context of general cognition and communication, or in the perspective of the semiological and interactive functions of language, then the componential approach presents serious problems.

In a componential model, the meanings of the following examples are all fully determined by the denotative meanings of the atomic units that they are composed of:

(3.1) a. They killed Joan of Arc!
b. Stop me before I kill again.
c. I kept just killing time.

(3.2) a. Jenny gave me a house-warming present of a radio
b. MP Fernando Pulle Jeyaraj gave a graphic description of the torture and detention houses in which JVP "suspects" are held by the security forces.
c. The constable gave him a violent blow to the eye.

(3.3) a. He was kicking the bicycle rack.
b. If you kick at the limits of effective range, then your nearly straight leg will bring the sole of the foot into the side of the opponent's face.
c. Pilgrim kicked the penalty goal.

The major building block is the verb, because it subcategorizes, via its transitivity, for the constituents it co-occurs with. Subcategorization is "in essence the sign's valence, that is, a specification of what other signs the sign in question must combine with in order to become *saturated*" (Pollard and Sag 1994: 23). In (3.1) KILL is assigned meaning of X CAUSES Y TO DIE. Correspondingly KILL is monotransitive and subcategorizes for a subject noun phrase and a direct object noun phrase. In (3.1a), we encounter a sentence whose syntactic make up corresponds to the combinatorial potential of KILL, and the semantics of the sentence also appear to adhere to the principle of strict compositionality. If we break (3.1a) down, we would not be left with any surplus meaning. The same goes for (3.2a) where GIVE means X TRANSFERS Y TO Z CAUSING Z TO OWN Y. It is ditransitive and subcategorizes for a subject noun phrase, an indirect object noun phrase, and a direct object noun phrase. Likewise, (3.3a) seems to obey the strict compositionality principle. In (3.3) KICK, which, like KILL, is monotransitive, means X STRIKES Y WITH X'S FOOT. However, the strict compositionality principle fails in (3.1b), (3.2b), and (3.3b), all of which lack an argument that is subcategorized for. In (3.1b), there is no direct object, but still, when decoding the sign, one understands that there is a victim of the killing. In (3.2b) there is no indirect object, and the graphic description cannot be said to change ownership though there is still a sense of someone receiving it. (3.3) also lacks a direct object although the matrix clause describes how the kick would impact with the opponent's face. There seems to be a mismatch in form and content of these three examples. The examples in (3.1c), (3.2c), and (3.3c) also present a challenge to the strict compositionality principle. Here, there are no form-content mismatches, but the actual meanings of the sentences do not correspond to those of their constituents when analyzed into atomic units. In

(3.1c), nobody literally causes time to die; rather it means that somebody was involved in one or more activities in order not to get bored. In (3.2c), as was the case in (3.2b), no actual transfer of possession takes place. The content is more like X STRIKES Y WITH X'S HAND OF FIST, which cannot be ascribed to GIVE. Finally, in (3.3c), Pilgrim does not literally strike a goal with his foot. Rather, he strikes a soccer ball, such that it lands inside the opponents' goal. Thus, the semantic content of the sign is much more complex than that which KICK is supposed to express.

The above examples show that as soon as metaphorical and other 'non-standard' uses of linguistic units are involved in the utterance, then the principle of strict compositionality is violated. Not surprisingly, it is also violated in idioms and other idiosyncratic constructions that are semantically or syntactically irregular, such as:[14]

(3.4) call it a day; get ants in X's pants; lock, stock, and barrel; pull X's leg; warm the bench; over the moon; under the weather; by the skin of X's teeth; up to X's eyes in work; kick the bucket; paint the town red; throw a wobbly; give intake up; fish out of water; X had better Y; X might as well Y; how goes it?; these sort of people; come to think of it.

Idioms are by definition not exposable to the principle of strict compositionality, since atomic non-predictability is part of their very definition: "their meaning or use can't be predicted, or at least entirely predicted, on the basis of a knowledge of the independent conventions that determine the use of their constituents when they appear in isolation from one another" (Nunberg et al. 1994: 492). Since idioms seem to be more a question of conventionality than of compositionality, atomist grammarians most often argue that idioms are lexical units and should not be included under the core grammar.

3.2. The grammatical construction

In CxG, "the proper units of grammar are more similar to the notion of construction in traditional and pedagogical grammars than to that of rule" (Fillmore et al. 1988: 501). In atomist grammars, the term 'construction' is used for any haphazard string of words that happen to be grammatically acceptable, but otherwise void of semantic content. As Kuzar (1998: 359) informs us,

> [t]he dominant tendency in theoretical linguistics has viewed 'the construction' as a derivative of universal principles, which converge at different syntactic junctions to produce different constructions. Consequently, formalisms developed within G[overnment and]B[inding] and Minimalism consider the construction a convenient pre-theoretical term, but not a necessary component of the theory. In earlier grammatical tradition the construction had been taken for granted and had never been rigorously defined. In order to reinstate the construction as a central component of a theory, it may not be merely retrieved and recycled; it must be rigorously defined and shown to be operative in such a way that it adds explanatory power to the theory and is superior to universal theory that has dispersed with it.

14 The examples are from Spears (1987) and Chalker and Weiner (1994: 195).

This is actually one of the main motivations for developing a theoretic stance like that of CxG as seen in many of the manifestos of early construction grammar:

> [a]s useful and powerful the atomistic schema is for the description for linguistic competence, it doesn't allow the grammarian to account for absolutely everything in its terms. As anyone knows who has worked with practical grammar-writing or with detailed text analysis, the descriptive linguist needs to append to this maximally general machinery certain kinds of special knowledge – knowledge that will account for speakers' ability to construct and understand phrases and expressions in their language which are not covered by the grammar, the lexicon, and the principles of compositional semantics, as these are familiarly conceived. (Fillmore et al. 1988: 504)

In CxG the construction is a central theoretical construct. As argued by Fillmore et al. (1988: 501), a construction is defined as a specific semiotic entity, encompassing all the aspects, which are taken care of in the componential model in different components plus anything else that pertains to the understanding of the construction.

Rather than being just a "sentence, or smaller element of one, that is constructed from other constituents" (Chalker and Weiner 1994: 90) it is treated as a meaningful semiotic template, and both the formal and semantic structures of the construction take up a more gestalt-like nature (I will discuss gestalts further in chapter 4). The construction as a semiotic unit implies that the formal and semantic aspects of the construction are integrated parts of the construction, such that not only the 'horizontal' layers of the construction are gestalt-like, but the entire construction as a sign itself becomes a unified whole.

A number of definitions of the notion of grammatical construction have been offered in the constructionist and cognitivist literature. Though differing in details they all adhere to one principle, "adopt[ing] the traditional grammar idea that a grammar is composed of conventional associations of form and meaning" (Kay 1995: 171). More specifically, some define constructions as syntactically complex patterns that conventionally express some kind of meaning:

> By **grammatical construction** we mean any syntactic pattern which is assigned one or more conventional functions in a language, together with whatever is linguistically conventionalized about its contribution to the meaning of the structures containing it. (Fillmore 1988: 36 – emphasis in original)

As mentioned above, the pattern itself expresses some meaning that is independent of the constituents of the syntactic complex which presupposes that the pattern is a non-derived unit:

> To analyze a linguistic structure as a grammatical construction in the sense of this model is to interpret it as a non-derived grammatical template in which syntactic, semantic, and grammatical properties come together to form one unit. (Lambrecht 1988: 320)

This way, the pattern can be assigned a role as a schematic template, making it more gestalt-like. Constructions are often described as categories, in the CL sense, as the networks vary in complexity of membership:

> a construction can be thought of as a kind of formula consisting of an ordered sequence of slot. Some elements are obligatory to the construction, others might be optional. Each element carries a specification of the kinds of item that can instantiate it. In some cases only very general grammatical categories might be specified … Alternatively, a small set of candidates might have to be exhaustively listed; in the limiting case, there may have to be only one possible candidate. (Taylor 1995: 198).

As mentioned above, the templatic schema expresses a content of its own, and therefore the meaning of the instance is not predictable from its parts alone. Non-predictability is considered one of the characterizing features of idiomatic expressions, and some actually define the notion of grammatical construction as an 'idiomatic' linguistic complex:

> C is a construction iff$_{def}$ C is a form-meaning pair <F$_i$, S$_i$> such that some aspect of F$_i$ or some aspect of S$_i$ is not strictly predictable from C's component parts or from other previously established constructions. (Goldberg 1995: 4)

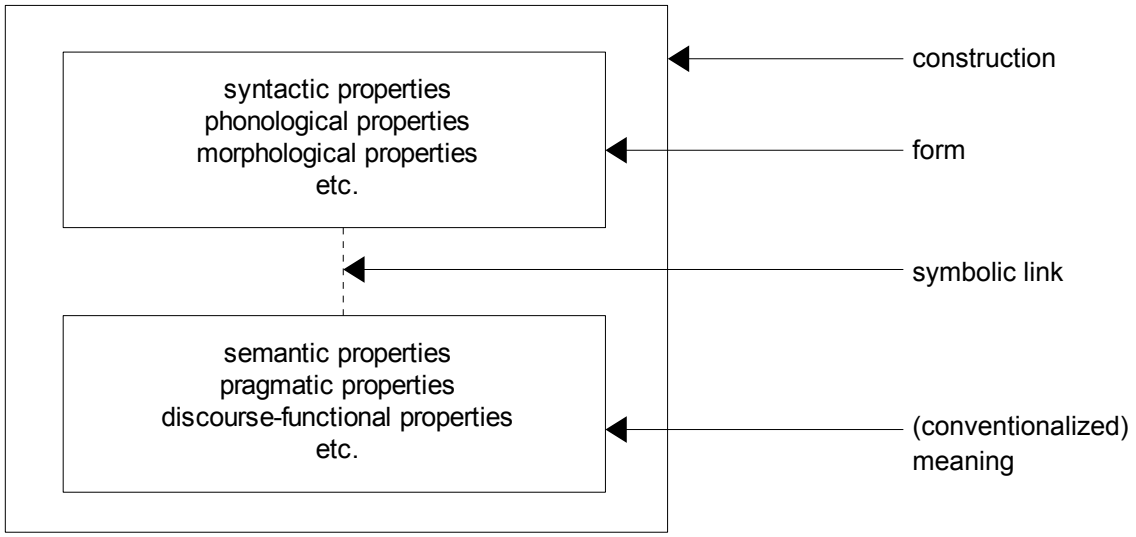
Croft (2005: 274), defines a grammatical construction more generally as "an entrenched routine ..., that is generally used in the speech community ... and involves a pairing of form and meaning", thus allowing for atomic units to be considered constructions too. In recent approaches to construction grammar, we encounter the idea of not only complex, but also lexical and morphological units, as constructions:

> linguistic knowledge at all levels, from morphology to multi-word units can be characterized as constructions, or pairings of form and meaning … language users exploit constructions at these various levels to discern from a particular utterance a corresponding collection of interrelated conceptual structures. (Bergen and Chang 2005: 145).

On this definition, every linguistic unit is assigned some type of content. All structural layers of a construction are holistic and display some gestalt qualities.

In Langackerian (1987, 1991; Taylor, 2002) terms, it consists of a phonological structure, a semantic structure, and a symbolic structure. As mentioned, all three (and more) structural levels are considered integral parts of the construction. The figure below (Croft 2001: 18) shows the generalized anatomy of all construction:

Figure 3.2 The anatomy of a construction (Croft 2001: 13)



Or in the words of Lambrecht (1994: 15): "In CxG morphosyntax, semantics and pragmatics are treated as integrated aspects of grammatical constructions".

3.2.1. Form

The form structure covers phonological structures (including prosody and stress patterns and the like)[15], syntactic, morphological structures, and other formal dimensions.

In early construction grammar, a distinction was made between *internal properties* and *external properties* of a construction:

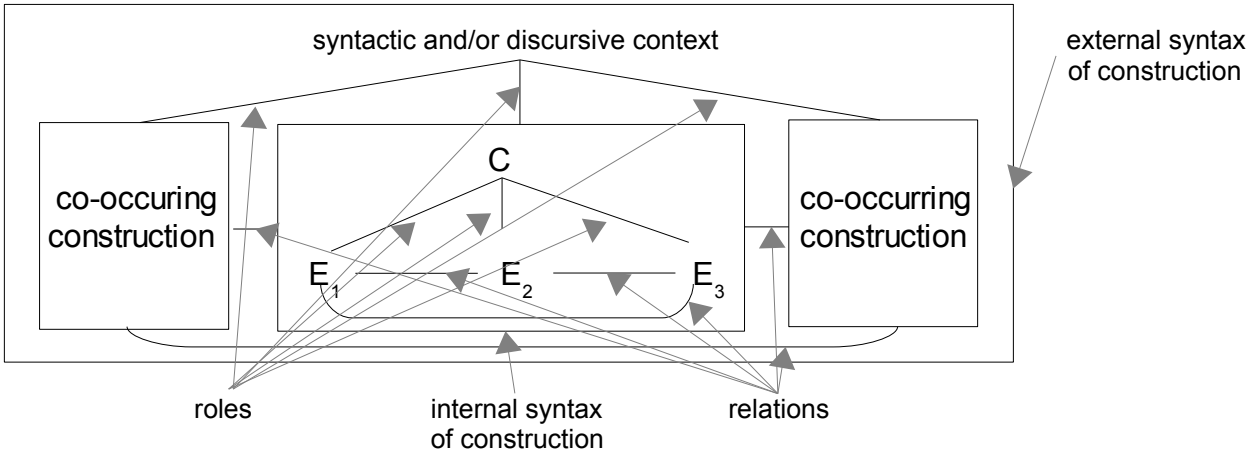
> On the level of syntax, we distinguish for any construction in a language its **internal** and its **external properties**. In speaking of the **external syntax** of a construction we refer to the properties of the construction as a whole, that is to say, anything that speakers know about the construction that is relevant to the larger contexts in which it is welcome. By the **internal syntax** of a construction we have in mind a description of the construction's make-up. (Fillmore 1988: 36 – emphasis in original)

The internal syntax of a construction is its internal constituency, while the external syntax is its relation to the larger whole that it itself may be a constituent of. Fillmore (1988: 36) compares the internal-external dichotomy to the classical transformation rule X → Y Z, and compares the external syntax to X and the internal syntax to Y Z. A less syntax-fixated explanation can be made in terms of meronymic relations in a gestalt-like structure X<A,B,C>. The internal syntax of X is A, B, and C and their interrelations, while the external syntax of, say, B is X and the relations to A and C. Croft (2001) defines the internal properties (though not using this term) in terms of meronymic

15 We shall not pursue phonology in this study, and I refer the interested reader to the discussions in Langacker (1987: 328-48), Taylor (2002: 78-95, 143-63, 243-62), and Vihman and Croft (to appear), as well as Croft (to appear) for some supresegmental aspects of phonology.

relations, such that the part plays a *role* in the scene of the whole, while the part-part relations are simply called *relations*. The parts of the syntactic structure are called syntactic *elements*. The syntagmatic relation between elements is a *syntactic relation*. Figure 3.3 explicates the internal and external properties of the construction, C<E_1,E_2,E_3>:

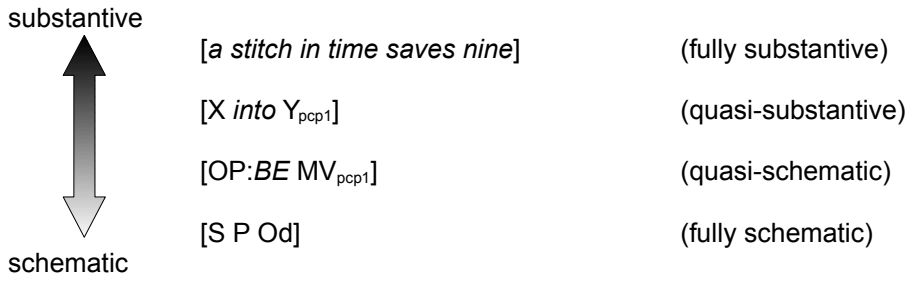
Figure 3.3: Internal and external syntax



Since external syntax is defined both in terms of roles and relations, the function of an element is construction-specific.

An important aspect of the formal structure is the distinction between *substantivity* and *schematicity* (Fillmore et al. 1988: 505). Substantivity implies blockage of paradigmatic change in elements, while schematicity implies that an element is a functional slot to be filled. Substantivity/schematicity is a matter of degree, as pointed out by Fillmore et al. (1988: 505fn3), ranging from completely fixed expressions to completely open ones:

Figure 3.4. Continuum of schematicity



Note that there are essentially two types of substantivity/schematicity, which is a topic that has not been addressed extensively in the literature. Both are, in fact, exemplified by the progressive construction. One is what could be called *lexical schematicity*, which is when a constructional slot is open in terms of which lexeme may fill it, but may or may not be fixed formally. This is the case

of the MV_{pcp1} slot which is schematic in terms of which lexeme may fill it, but is it morphologically substantive since it has to be a present participle. The other type could be called *morphological schematicity*, which is when a constructional element is lexically fixed but shcematic in terms of which morphological form it can appear in. This applies to the OP:*BE*-slot which is invariably realized by BE, but is generally open in terms of which temporal form it may take.

3.2.2. Content

In construction grammar, *content* or *meaning*

> represent[s] all of the CONVENTIONALIZED aspects of a construction's function, which may include not only properties of the situation described by the utterance but also properties of the discourse in which the utterance is found … and of the pragmatic situation of the interlocutors … (Croft 2001: 19)

As in CL, the traditional distinction between semantics and pragmatics is broken down in CxG (cf. Kay 1990: 63fn5), because it is more the rule than the exception that contextual factors determine the meaning of a sign. Many constructions have inbuilt *pragmatic points* and make sense only in particular contexts (Fillmore et al. 1988: 505). As Lambrecht (1994: 15) points out, pragmatics is an integrated part of the construction along with form and semantics – a point that Croft (2001: 19) also makes, stating that the content of a construction covers "the properties of the situation described by the construction", "the pragmatic situation of the interlocutors", and "the properties of discourse in which the utterance is found". In this sense, construction grammar accepts both the structural and pragmatic approach to meaning advocated by Grondelears and Geeraerts (2002).

The semantic structure is basically a huge domain matrix consisting of all the cognitive models that the sign evokes and often complex patterns of binding and elaboration. As we have seen, frames are meronymically structured. Accordingly, semantics can also be described, using Croft's (2001: 24) terminology, in terms of roles and relations. A part of a content structure is referred to as a *component*[16], and it plays a *semantic role* in the domain, enters into *semantic relations* with other components in the same domain, and its external properties constitute its *semantic function*.

The content of a construction, like any other linguistic sign in CL, involves numerous construal operations and contextual constraints of various kinds.

3.2.3. Symbolic relations

In CxG, the mapping between form and content is seen as an internal property of the construction

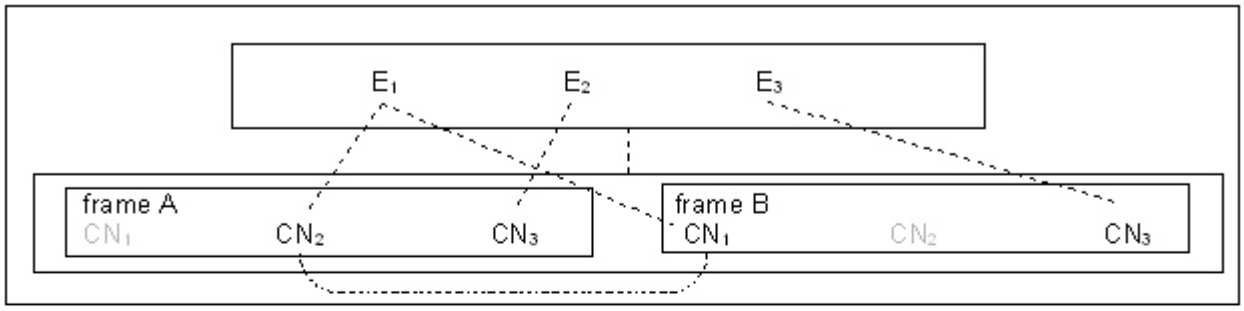
16 Henceforward, the term component will be restricted to parts of content structures. The components of grammar in the componential model will be referred to as *modules*.

> [t]he central difference between componential [=modular – KEJ] syntactic theories and construction grammar is that the symbolic link between form and conventional meaning is internal to a construction in the latter, but is external to the syntactic and semantic components [=modules – KEJ] in the former (i.e. as linking rules). (Croft and Cruse 2004: 258)

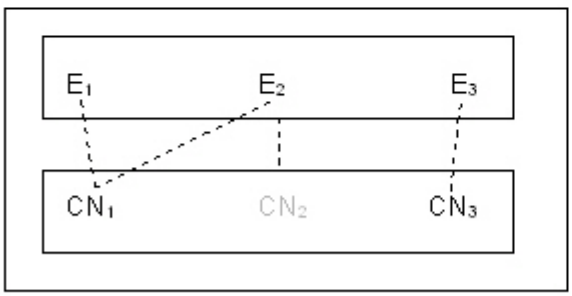
In the holistic view of construction grammar, each construction has its own combination of syntactic, semantic and phonological structures.

Elements symbolically express components via *symbolic links* (Croft 2001: 20). A pairing of an element and a component is a *symbolic unit* (Croft 2001: 24). An element forms a unit with a component if profiling a component against a frame. Since syntactic forms are semiotic templates, the entire form structure will always form a unit with the entire content structure. Furthermore, the elements in the syntactic structure form units with components in the content structure. Monadic symbolization within a construction is probably extremely rare. An element will often symbolize several components in the same or in different frames in a domain matrix as is the case of binding. Likewise, a component may be symbolized by several elements in the syntactic structure. Finally, the number of components need, of course, not match the number of elements:

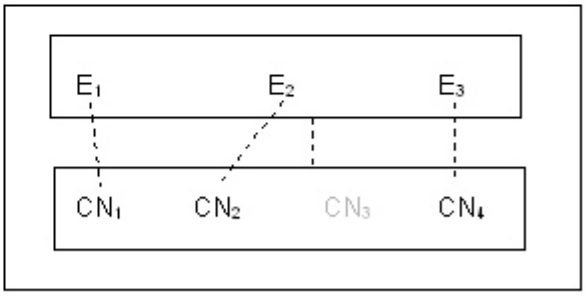
Figure 3.5: Non-monadic symbolization and binding



a. symbolic linking with components in multiple frames (binding indicated by the curved line)



b. multiple elements symbolically linking with the same component



c. non-bi-unique form-meaning correspondence

This way, the constructionist definition of symbolism differs from the classical semiotic one which only operates with monadic relations.

Thus constructions may involve *mismatch patterns*. Mismatch occurs when "[f]ormal

linguistic devices such as words, morphemes, and grammatical constructions are … recruited to perform semiotic functions distinct from those from which they were apparently developed" (Francis and Michaelis 2003: 2). On a broader definition, which is also adopted by Francis and Michaelis (ibid.) a mismatch pattern is any pattern that does not seem to involve a bi-unique mapping between structural aspects of a given sign or expression. Mismatch often results in *coercion* which is "the general term for contextual reinterpretation" (Swart 2003: 237) and "occurs when there is a mismatch between the semantic types required by a given operator and the semantic type with which that operator is actually combined" (Francis and Michaelis 2003: 18). Coercion is thus a semantic type-shifting, or reinterpretation, prompted by an atypical symbolic relation.

3.3. The inventory of constructions

In CxG, grammar is a structured inventory of constructions, and constructions are organized into networks. Constructional networks are taxonomically and radially structured just like those organizing conceptual categories, evolving around schematic central *abstract constructions* (Kay 2000).

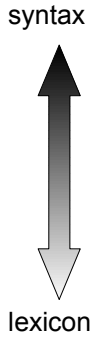
3.3.1. The lexicon-syntax continuum

It is not assumed that any great difference between lexical units and syntactic constructions exists:

> In Construction Grammar, no strict division is assumed between the lexicon and syntax. Lexical constructions and syntactic constructions differ in internal complexity, and also in the extent to which phonological form is specified, but both lexical and syntactic constructions are essentially the same type of declaratively represented data structure: both pair form with meaning. (Goldberg 1995: 7)

Since there is no clearly definable line between lexical and syntactic forms, a *lexicon-syntax continuum* is proposed. The relation between syntax and lexicon is posed as a continuum of complexity in form, content, and symbolic relations. What is traditionally called syntax covers complex multi-unit structures such as clause and idiom structures. What is traditionally called lexicon covers atomic structures like lexemes and morphemes. Despite the difference in complexity, syntactic units and lexical units are essentially the same semiotic type of pairings of form and content:

Figure 3.6: The lexicon-syntax continuum (cp. Croft 2001: 17)



complex and (mostly) schematic	[S P Od]
complex and (mostly) specific	[S *PULL* X's *leg*]
complex but bound	[noun-*s*], [adjective-*er*]
atomic and schematic	[noun], [adjective], [verb]
atomic and specific	[*this*], [*heavy*], [*metal*], [*kill*]

It is the fact that a continuum is posed between the lexicon and syntax which is one of the primary theoretical aspects that sets CxG apart from many other mainstream theories of syntax. Indeed, there are even some constructionally oriented linguists who prefer to differentiate between complex constructions and and atomic signs (e.g. Sag 2004).

3.3.2. Taxonomic networks

Goldberg's (1995) study of the relations between instances of constructions of the same type, showing that constructions are arranged in category networks, which Michaelis and Lambrecht (1996: 3) call *inheritance hierarchies*. That is, they are also based on prototypicality. Taylor (1994: 328) argues that,

> [f]or the notion of prototype to have any substantial impact on linguistic theory, it would be necessary to show that the very categories of linguistic description such as categories of syntax themselves exhibit prototype structure.

The abstract construction may be instantiated in many ways, its meaning being modified by the atomic units that specify the slots. Some atomic units – and let us consider verbs here – may correspond more or less to the construction in terms of meaning:

> Constructions being frames against which the meaning of the parts is negotiated – and even the prototypical cases, where the semantics of the verb and of the construction coincide, the verb semantics is just an elaboration of the meaning of a construction. (Goldberg 1997:386)

Thus, the meanings of the specifying atomic constructions and the abstract configuration work together via s*yntactic accommodation*, which is when "one component may need to be adjusted in certain details when integrated with another to form a composite structure" (Langacker 1987: 75-6), and coercion in construing the meaning of the instance. Less prototypical cases are cases where the transitivity of the verb does not match the argument structure or where the verb is a traditionally non-verbal entity. Still, the meaning of the configuration is present in some form or another. Finally there are cases where the configuration and the specifying atomic constructions

lose their meanings completely, such that the meaning of the instance is not predictable on the basis of knowledge of grammar and vocabulary alone. In cases like this, we deal with constructions with high degree of figuration such as idioms. It should be noted, however, that in accordance with the *principle of semantic compatibility* (Stefanowitsch and Gries 2005: 4), stating that "words can (or are likely to) occur with a given construction if (or to the degree that) their meanings are compatible", instances of constructions where the meaning of the lexical items are closely related to the meaning of the construction are typically most frequent.

Constructional networks are, according to Lakoff (1987: 465), radial structures:

> Syntactic categories and grammatical relations have radial structure, with a prototypical center that is predictable on semantic grounds; the noncentral members constitute extensions which are non predictable on a semantic basis, but which are typically semantically or pragmatically motivated.

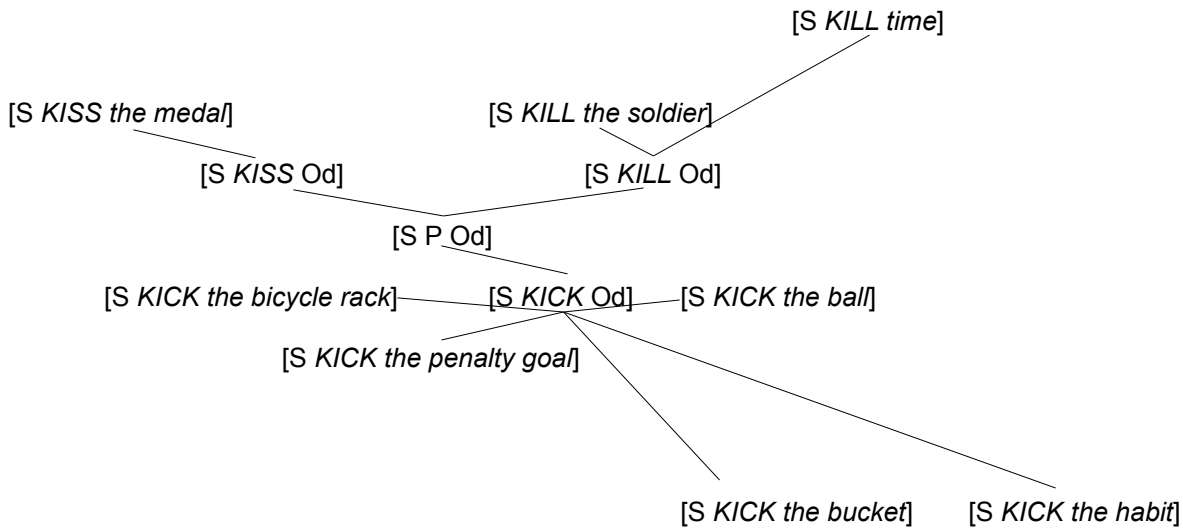
The monotransitive construction, for instance, with its [S P Od] configuration has the prototypical meaning of TRANSFER OF ENERGY. That is, it evokes a model in which an entity acts upon another, in which X DOES SOMETHING TO Y. The schema may be instantiated by verbs like KISS, KILL, or KICK, all evoking models whose force dynamics correspond more or less to that of the schematic TRANSFER OF ENERGY model. It may, though there appear to be certain constraints (Croft 2003a), be instantiated by verbs whose alleged transitivities do not match the argument structure construction:

(3.5) a. He gave a lot of lectures.
b. We danced a little jig.
c. I slept the sleep of the just.

GIVE is normally considered ditransitive, because it evokes the transfer of possession model, but in (3.5a), it is construed in a more 'monotransitive' way. Likewise DANCE and SLEEP in (3.5b-c), which are normally considered intransitive, appear here in the monotransitive model, having a touch of 'monotransitive' construal. These are less prototypical instances of the monotransitive construction. It is also possible for a non-verbal entity to take up the predicator function. Finally, there are idiomatic constructions like [*TICKLE the ivories*] and [*PULL* X'*s leg*], which inherit the monotransitive configuration and content, but whose meaning is not directly predictable, and more metaphoric ones like [*KICK the bucket*] and [*BITE the dust*], whose meanings relate to neither the argument structure nor the constituent parts. All of these instances are related to the abstract construction by virtue of *inheritance links* (Lakoff 1987, Goldberg 1995). Inheritance links are based-on links (Lakoff 1987) in the sense that instances and radial categories are based in more central constructions. I would argue that there are two based-on relations: (1) instances are based on the abstract schematic construction and (2) extensions and other non-central radial variants are

based on central ones:

Figure 3.7: Construction interrelations (cp. Croft 2001: 26)



Construction networks allow for multiple parenting. It occurs in cases where a construction inherits its form from two (or more) syntactic configurations. For instance, 'Pilgrim didn't kick the penalty goal' inherits its form from the negated monotransitive construction with the form [S DO-*n't* Od], which in turn has two parents: the monotransitive construction and the negated construction [S DO-*n't* MV] (cp. Croft and Cruse 2004: 264-5).

The central abstracts *license* the instances in the sense that they motivate their existence. As Lavelle (2000: 166) points out, licensing is a central theme in CxG, where it is the constructionist term for *grammaticality*. Grammaticality is fuzzier than many would like to think, being more like a cline ranging from *acceptable* to *unacceptable* than a question of black-white 'grammatical' versus 'ungrammatical'. Some constructions are unacceptable in some contexts and acceptable in others, and the same construction may be deemed unacceptable by one native speaker, while another one would readily declare it acceptable. This gives licensing a socio-pragmatic aspect, which, in my view, reinforces the idea of pragmatic meaning being an integrated part of the construction's content.

Just as a category may have subcategories, a construction may have a number of subconstructions. Subconstructions typically inherit their form from the construction, but with smaller or bigger constraints or variations, and typically also differ in terms of semantic and/or pragmatic content to varying degrees.

In terms of storage of information and the level of abstractness in the taxonomies, there are

basically four types of models available to the construction grammarian. In the *complete inheritance* model, information is stored only once at the most superordinate level of the network. Instances at all other levels inherit features from the superordinate item. The complete inheritance model does not operate with network redundancy, but with maximal generality. It is a general feature of Kay and Fillmore's (e.g. 1999) version of construction grammar. According to the *default inheritance*, or the *partial inheritance*, model, each network has a default central form-meaning pairing from which all instances inherit their features. It thus operates with a fairly high level of generalization, but does also allow for some redundancy in that it recognizes extensions of different types. Goldbergian (1995) and Lakovian (1987) CxG as well as embodied construction grammar (Bergen and Chang 2005) are based on default inheritance. The *usage-based* model is based on inductive learning, meaning that linguistic knowledge is acquired in a bottom-up manner through use. It allows for redundancy and generalizations, because the language user generalizes over recurring experiences of use, and types may be established at all levels of the taxonomy. Croft's (2001) radical construction grammar and Tomasello's (2003) theory of language acquisition are usage-based. In the *full-entry* model information is stored redundantly at all relevant levels in the taxonomy, which means that it operates with minimal generalization. In order for construction grammars, especially usage-based ones, to be economic in the perspective of pragmatic points and the like, many discard the notion of constructional synonymy. Goldberg (1995: 67-8), for instance, sets up a principle stating that "[i]f two constructions are syntactically distinct, they must be semantically or pragmatically distinct". While constructional synonymy is rejected, constructional polysemy, adhering very much to Geeraerts' (1997) three economy-based principles of categorization, is embraced.

3.4. Compositionality and synonymy

CxG rejects strict compositionality and total synonymy. These positions may seem controversial to proponents of the componentialist-atomist model. They are also subject of debate within the CxG community, as there is no consensus regarding the degree to which they should be rejected.

3.4.1. No compositionality?

Idiomatic constructions are typically characterized as non-compositional, as their meanings cannot be derived from their parts. Since non-idiomatic constructions are also assigned meaning that is not just the sums of their parts, CxG can mistakenly be characterized as a non-compositional theory. This is not true. CxG is not non-compositional: "The Construction Grammar approach does not

deny the existence of compositionally derived meaning" (Michaelis 1998: 79). Yet at the same time, constructionists argue that

> [t]he view of compositionality can be shown to be inadequate. More substantive principles of composition – viewed here as constructions – are needed. This can be demonstrated by the existence of cases in which the requirements of the construction are in conflict with the requirements of the main verb. (Goldberg 1995: 14)

One of the differences between compositionality as viewed in CxG and compositionality as viewed in atomist grammars is that "[i]n a construction grammar model, the general rules of semantic composition correspond to the symbolic relations linking form and meaning in the most schematic or general constructions in the language" (Croft 2001: 180). The abstract construction has some internal symbolic properties between its slots and the components of its prototypical meaning. Part of the construction's meaning provides some conceptual raw material. However, it would be rather absurd to argue that lexical units do not have any meaning; especially since they are considered constructions too. The components of the constructional meaning and the lexical meanings enter into bindings, thus creating non-monadic symbolic relations. This way, the meaning of a prototypical instance of a construction is a combination of the constructional meaning and the meanings of the lexical elements that it consists of.

As phenomena like accommodation and coercion show us, the compositional meaning of a construction may be different than the individual meanings of the specifying lexical constituents.

In CxG, strict compositionality is rejected, but not compositionality as such. Goldberg (1995: 16), along with many other construction grammarians, argues that a weaker form of compositionality is retained in construction grammatical analysis:

> By recognizing the existence of contentful constructions, we can save compositionality in a weakened form: the meaning of the expression is the result of integrating the meanings of the lexical items into the meanings of the constructions. In this way, we do not need to claim that the syntax and semantics of the clause is projected exclusively from the specifications of the main verb.

The meaning of a constructional instance is a combination of the constructional meaning and the construals of the lexical specifiers. In Lakoff's (1987: 465) words, "grammatical constructions in general are holistic, that is, … the meaning of the whole construction is motivated by the meanings of the parts but is not computable from them".

It should be mentioned that some construction grammarians consider even idioms to be compositional. Croft (2001: 180-5), following Nunberg et al. (1994), argues that often the parts of so-called *idiomatically combining expressions* may be analyzed into metaphorically evoked components, even though these components only have those specific meanings in that particular idiom. Nunberg et al. (1994: 496) define idiomatically combining constructions such that

> you will be able to establish correspondences between the parts of structured denotation of the expression … and the parts of the idiom …, in such a way that each constituent will be seen it refer metaphorically to an element of the interpretation. That is, the idiom will be given a compositional, albeit idiosyncratic, analysis.

For example Croft (2001: 182-3) uses the example of 'SPILL the beans', which he paraphrases as DIVULGE THE INFORMATION, to show the compositionality of idioms, arguing for the following symbolic units [[*spill*]/[DIVULGE]] and [[*the beans*]/[INFORMATION]]. It is only in this specific composite structure that these units apply. As both Croft (ibid.) and Nunberg et al. (1994) point out, convention is an important factor for the correct interpretations of idiomatically combining constructions:

> To be sure, there is still an element of conventionality involved, in the sense that the collocation would not be given interpretations solely in virtue of the pragmatic principles that determine the free figural uses of expressions. Still, pragmatic principles in this case can be stated as conditions on the use of each of the constituents of the expression, rather than on the phrase as a whole. (Nunberg et al. 1994: 496)

While this is true, we must not forget that without knowledge of the factors one will not interpret the construction correctly. Moreover, since it is only in this combination, that constituents have their particular idiomatic meanings. There are also cases in English as in many other languages, where the elements do not correspond to the components. Non-idioms and idiomatically combining expressions express compositionality in its weakened form, and from a certain point of view, even 'regular' constructions are idiomatically combining expressions.

In this perspective, constructions that are normally considered non-idiomatic are actually idiomatically combining expressions, since their elements get their specific meanings in the constructions.

3.4.2. No synonymy?

As pointed out above, constructionists operate with a no-synonymy principle, which in Goldberg's (1995: 67-8) version disallows semantically synonymous constructions to be pragmatically synonymous and vice versa. The no-synonymy principle is widespread in functional approaches to language and was initially formulated by Bolinger (1968: 127; 1977) who, arguing against *deep structures*, writes that "a difference in form always spells a difference in meaning", and that a "language that permitted syntactic divergences to be systematically redundant would represent a strange kind of economy".

Synonymy is considered an inherent feature of language and is defined in terms of one content being expressed by several forms and is thus defined in terms of *identity of reference* (Halliday 1994: 331-2); it is argued that synonymous forms are interchangeable. Synonymy is

based on a central principle of structuralist linguistics – namely, the notion of *free variation*, which Meyerstein (1975: 40) describes as "alternative of form contrastive in identical form frames but non-contrastive in function". Free variation applies when different forms appear in the same context without changing the meaning of the overall structure, suggesting that their contents are identical. An example is the belief that passive and active versions of the same experience are identical in meaning, which is embraced in many transformational-generative grammars. However, a precaution always accompanies this definition of synonymy:

> Strictly speaking, there are few, if any 'true' synonyms, that is words [and other structures] that are completely and always interchangeable. But pairs of words such as *close* and *shut* are sufficiently alike to rank as synonymous, even though one cannot be substituted for the other in, for example, *I'm going to close my bank account*, *The meeting closed with a vote of thanks*, or *The water supply was shut off*. (Chalker and Weiner 1994: 389)

Chalker and Weiner inform us that synonymy is a matter of semantic alikeness rather than identity. Functional theories of language typically consider the pragmatic content part of the meaning of the sign, which narrows down the possibilities of synonymy considerably – the cognitivist view of meaning as being a matter of construal puts further limits to synonymy. Croft (2001: 111) points out that "if two grammatical structures occur in the same language to describe the same experience, they will differ in their conceptualization of the experience in accordance with the difference in the two structures." This means that truth-conditionally synonymous variants are confined within different functional spheres, having different social, discursive, and other types of pragmatic meaning.

Instead of operating with synonymy as identity in reference, it might be more useful to think of it in terms of shared areas of content, or *semantic overlapping*. An example is voice: when an active and a passive version of a sentence that makes use of the historical present refer to the same event and construe it the same way, they share some semantic structures but differ pragmatically in terms of information structure. They have a common pragmatic point – namely, that of making "the description of a past situation more vivid" (Bache and Davidsen-Nielsen 1997: 289). They are not synonymous, since they differ in terms of information structure, thus construing the event differently. However, they do show a degree of content sharing.

3.5. Usage-based construction grammar

Having already touched upon some principles that would be essential in a usage-based CxG, such as weakened compositionality, no synonymy, and integrated grammar, we will now move on to discussing usage-based CxG in more detail, starting with usage-based models of language in

general.

3.5.1. Usage-based models of language

A usage-based model[17] of language is one in which linguistic knowledge is modelled on the basis of inductively acquired schemas based on usage, and thus usage-based models do not separate competence from usage:

> structure, or regularity, comes out of discourse and is shaped by discourse in an ongoing process. Grammar is, in this view, simply the name for certain categories of observed repetitions in discourse. It is hence not to be understood as a prerequisite for discourse, a prior possession attributable in identical form to both speaker and hearer. Its forms are not fixed templates but emerge out of face-to-face interaction in ways that reflect the individual speakers' past experience of these forms, and their assessment of the present context, including especially their interlocutors, whose experiences and assessments may be quite different. (Hopper 1998: 156)

Even though many usage-based accounts and theories may differ, sometimes radically, Kemmer and Barlow (2000) identify a number of fundamental usage-based principle, the most basic of which are listed here:[18]

- *The intimate relation between linguistic structures and instances of use of language*: a language user's linguistic knowledge is based on *usage-events*, which Kemmer and Barlow (2000: ix) characterize as "instances of a speaker's producing and understanding language". Schemas are inductively formed on the basis of recurrent patterns in usage-events, and thus linguistic knowledge is experientially based;
- *The importance of frequency*: patterns that are highly frequent in usage-events tend to become more *entrenched* – that is, cognitively routinized – than those that are less frequent. Langacker (1987: 59), arguing that linguistic structures are best viewed as "falling along a continuous scale of entrenchment", describes the effect of frequency on entrenchment this way: Every use of a structure has a positive impact on its degree of entrenchment whereas periods of disuse have a negative impact";
- *Linguistic representations as emergent, rather than stored as fixed entities*: rather than operating with the notion of linguistic knowledge as consisting of stored fixed items and stored fixed rules, units of language are seen as schemas, which ultimately are recurrent patterns of neural activation and are not stored in any specific location;
- *Comprehension and production as integral, rather than peripheral, to the linguistic system*: performance and competence are not separated in usage-based models of language;
- *The interconnectedness of the linguistic system with non-linguistic cognitive systems*: usage-based models of language are based on the idea that linguistic knowledge is not different, or isolated, from other types of knowledge;
- *The crucial role of context in the operation of the linguistic system*: language does not exist in vacuum, but is part of the context of the world that language users live in. Therefore, all types of contexts (linguistic, social, discursive etc.) may have an impact on the linguistic system, and some usage-oriented linguists argue that some contextual factors are inseparable from the linguistic system.

Rather than studying language as if it were an autonomous and immanent entity,

> for usage-based theorists the fundamental reality of language is people making utterances to one another on particular occasions of use. When people repeatedly use the same particular and concrete linguistic symbols to one another in "similar" situations, what may emerge over time is a pattern of language use

17 The term 'usage-based' was first introduced by Langacker (1987). An alternative term is 'discourse-based' (Pustet 2004) or 'emergent grammar' (Hopper 1998).

18 See Newmeyer (2003) for a number of arguments against the usage-based view of grammar.

> schematised in the minds of users as one or another kind of linguistics category or construction. (Tomasello 2003: 99)

One of the keywords is 'frequency'. Usage-based linguistics hold that frequency of usage molds one's competence. The hypothesis is relatively simple and straightforward: "each time a word (or construcion) is used, it **activates** a node or a patterns of nodes in the mind leading to its ultimate storage as a conventional grammatical unit" (Croft and Cruse 2004: 292). High frequency of use of and exposure to a linguistic unit results in a high degree of entrenchment and routinization and thus makes the entrenched unit more easily accessible. The relationship between competence and performance is that of mutual influence. Competence derives from performance in the sense that the language user abstracts the former from the latter, but performance also derives from competence in that future performance will be determined by past experiences and the abstractions thereof. Usage-based models operate with two basic kinds of frequency: *token frequency* and *type frequency*. The former is the frequency of occurrence of a given linguistic form, such as the form 'went', while the latter is the frequency of occurrence of forms that are instances of a schema, such as 'talked', 'jumped', 'listened', 'rocked', and 'rolled' which are all instances of the past tense schema [V-*ed*]. High token frequency forms may be entrenched as types in themselves. High type frequency results in a high degree of entrenchment of the type. Typically, schematic types with high entrenchment subsume tokens that individually have low frequency, but which are collectively highly frequent (ibid.). The acquisition of such schemas, which count substantive and schematic ones, is a process of categorization, in which, the learner groups together into categories those linguistic items that function similarly – that is, consistently play similar communicative roles – in different utterances and constructions (Tomasello 2003: 145). This process of categorization Tomasello (2003: 145, 169-73) dubs *functionally based distributional analysis*. There is a correlation between type and token frequency and the entrenchment of units in the language user's competence. Another correlation, which has been pointed out on several occasions by different functionalist linguists is the so-called *frequency-meaning correlation*:

> A well-known axiom in logic states that the intension or semantic content of an EU [expression unit] is inversely proportional to its extension or range of applicability to extra-linguistic states of affairs. Low intension corresponds to high extension, and high intension corresponds to low extension. Low extension is equivalent to high abstractness of meaning, or lack of semantic specificity. But the more abstract and unspecific the meaning of an EU, the higher the number of contexts it can be used in will be; consequently, the higher the index for what has so far been referred to as semantic scope will be for a given EU. (Pustet 2004: 19-20)

This means that, the more frequent a unit is, the less specialized or more schematic it is in terms of use – that is, it subsumes a large number of members extension and subuses and relates to

numerous varieties of context. Less frequent units are more specific semantically and pragmatically and subsumes only a limited number of subuses. It is probable, however, that specific units that are generally infrequent are more frequent in their proper context than those that are generally frequent.

In functional linguistics, contextual influence is an integrated part of one's linguistic competence. A similar view is stated by Bybee and Hopper (2001: 21):

> frequency and emergent structure involve more than unmediated linguistic behavior. Situations and their participants are also repetitive phenomena, and linguistic routinization is ultimately inseparable from cultural practices in general.

While context is very difficult to handle in scientific and absolute terms (see Levinson 1983; Halliday 1994; Vershueren 1999; Mey 2000 for some proposals), its impact on linguistic competence is noticeable. Context relates to frequency and entrenchment in that if a unit is frequently experienced in a specific type of context, the context becomes associated with the unit. For instance, Hunston and Francis (2000: 37) found that very often a given word seems to recur frequently in similar types of syntactic context, which they call *patterns*: "The patterns of a word can be defined as all the words and structures which are regularly associated with the word and which contributes to its meaning". They suggest the close association between a pattern and a lexeme describing it as "the behaviour of a lexical item, or one of the behaviours of that item" (Hunston and Francis: 247). Likewise, Scheibman (2000; Bybee and Scheibman 1999), in her study of 'don't' in Albueqerque American English, shows that many of its phonological variations actually seem to prefer very specific syntactic contexts. For instance /ɾən/ seems to prefer 'I' as precedent and 'know' as postcedent. In a larger, more discursive context, 'I /ɾən/ know' is used to express lack of belief or disguised disagreement with whatever prepositional content serves as topic primarily, whereas other forms with longer vowels express lack of knowledge of the topic. Certain linguistic units may appear so frequently in specific contexts that contextual information becomes entrenched as part of the language user's competence regarding the unit in question (either as external properties or pragmatic points).

Parsimony, or economy, has always been at the heart of the matter in many types of functional linguistics – especially in relation to *economy of expression*. Usage-based linguistics is no exception in this respect. For example, Bolinger's (1968, 1977) economy-based rejection of synonymy implies that seemingly synonymous forms will always differ slightly in their contruals of the referent. On the other hand, Geeraerts (1997) and Silva (2001) argue that prototype categories and the polysemy they imply are economically advantageous. The polysemy- and the

no-synonymy views minimalize redundancy in the lexicon considerably, but that does not mean that they eliminate it completely. In fact, the no-synonymy view allows for some redundancy, for instance, in terms of truth-conditionality and pragmatic differences, and vice versa.

3.5.2. Usage-based principles in construction grammar

Bybee and Hopper (2001: 14) point out that syntactic structures are also influenced by frequency of usage:

> the kind of constituency normally studied by syntacticians also has its source in language use and frequency of co-occurrence. Thus determiners occur with nouns, auxiliaries with verbs, prepositions with noun phrases and so on. Constructions such as [DET+NOUN], [AUX+VERB], [PREP+NP] are conventionalized through frequent use.

It is through patterns of use that those schemas are established. For instance, frequent exposure to tokens that are very similarly structured – like 'in the bar', 'on the hill', 'for a minute', 'at Bob's place', 'with a belt', 'to my uncle' all of which have the [PREP NP] structure – prompt the creation and entrenchment of a type schema.

However, in CxG, it is not enough to just focus on the formal schemas, since the content is also part of the sign. So, in a usage-based CxG not only the form is abstracted and entrenched, so is the content. If a configuration is repeated sufficiently enough to be entrenched, and there are components of meaning that are also repeated, then a generalization over these components is entrenched along with the form. The symbolic relations between components and elements are also entrenched. For instance, all the preposition phrase tokens just mentioned share one component of meaning: they express a *figure-ground relation*. This is entrenched along with the form. The symbolic relations are also quite clear. The NP represents the ground, while the preposition represents the relation. The figure is whatever the prepositional phrase modifies. The content of a unit may range from the very schematic, like in the prepositional phrase type to the very specific like that of many idioms and specialized lexemes. The frequency-meaning correlation applies to specificity and schematicity of content as well. For instance [PREP NP] is very frequent in English and not restricted to any specific context is much more schematic than constructions like [*the* X *itself*] and [X *and other* Y*s*], which are more specific in content, the former construing a CORE PART or CORE AREA of X, and the latter construing X as a member of the category of whatever is expressed by Y (Croft and Cruse 2004: 156). These two constructions, in turn, are more frequent than [*ya mama so* X Y_{cl}] which is confined to the context of playing the dozens and has very specific semantics (Bergen and Binsted 2004, MS; Labov 1972). On the other hand, if units with the same

configuration are used very differently, they can be stored as different construction rather than instances of the same construction if they are assigned very different usage-patterns and semantic contents. This way, usage, pragmatics, and semantics, as argued by Geeraerts (1997), may be instrumental in the shaping of grammar, or linguistic knowledge. Thus optatives and yes-no interrogatives like 'May the fleas from a thousand camels infest your armpits' and 'Did Indiana Jones eat chilled monkey brain', both of which have the [OP S (AUX) MV X_{cl}] format, are stored as two different constructions.

Biq (2004: 1656) summarizes the basic finding of usage-based analyses of constructions for us:

> Linguists researching the relationship between discourse/interaction and grammar have found that when constructions are examined in actual use, they have the following characteristics: (1) they are lexically skewed, (2) the lexically constrained constructions are processes, stored and accessed as a unit, and (3) these constructions serve interactional functions.

According to usage-based hypothesizing the entrenchment, strength-processing time correlation also holds for complex grammatical constructions: frequency of use may make access of larger units easier as well (Bybee and Hopper 2001: 16).

Two other aspects of CxG that fit well with a usage-based approach are those of external properties and pragmatic point. The following formulaic sequences, 'You're never going to believe this, but X', 'I'll give you X for it', and 'your majesty' only make sense and have the proper illocutionary values in the appropriate contexts of storytelling, bargains, and when addressing a royalty respectively (Wray and Perkins 2000: 14) because these contexts have become associated with the units through frequency of occurrence and convention. Linström (2000) argues that the conversational function of the Swedish [X *och* X] construction is to express disagreement with some of the content of the preceding turn and to initiate a repair of it. Since it appears frequently in this conversational context, one might argue that the context is entrenched along with it. Again, the frequency-meaning correlation seems to apply, as in Swedish the [PREP NP] is more frequent and appears in more discursive contexts than [X *och* X].

In usage-based constructional networks, types are potentially found at all levels of the taxonomy and not just the more superordinate ones, as is the case of partial inheritance and full inheritance models. Usage-based representations of knowledge naturally allow for some redundancy. The question of parsimony and storage of information has caused some debate among construction grammarians. In his criticism of Goldberg's (1995) treatment of the ditransitive construction, Croft (2003a) notes that the subconstructions she proposes are very much based on

semantic commonalities among the verbs. He argues that since the uses of the ditransitive seem to involve specific semantic classes of verbs, it is a type in its own right; a so-called *verb class specific construction* (Croft 2003a: 57). It is placed at a lower level in the ditransitive network and is specified in terms of the class of those verbs that it most frequently appear with. The ditransitive information of permission is stored at the level of this type along with the verb class specifications as well as other specifications of use and symbolic specification. Thus, subconstructions like [[S $V^{REFUSAL}$ Oi Od]/[NEGATION OF TRANSFER OF POSSESSION]] are [[S $V^{PERMISSION}$ Oi Od]/[ENABLING OF TRANSFER OF POSSESSION]] theorized as being part of the constructional network of the ditransitive construction. This should, in principle, apply to all sorts of constructions and all sorts of lexical items, so the term *item class specific subconstruction* is a good umbrella term. Croft also argues, looking at 'Sally permitted/allowed/*let/*enabled Bob a kiss' and 'Sally refused/denied/*prevented/*disallowed/*forbade' him a kiss (originally Goldberg 1995: 130) which are instances of the enabling transfer and negative transfer constructions respectively, for the existence of *verb specific constructions* (Croft 2003a: 58), because the selections of verbs within the same class are restricted. A good umbrella term would be *item-based subconstruction* (see also Hopper 1991). Tomasello (2003: 178) proposes a similar argument:

> First, the more frequently children hear a verb used in a particular construction (the more firmly its usage is entrenched), the less likely they will be to extend that verb to any novel construction with which they have not heard it used.

The token frequency may be so high that eventually the pattern becomes entrenched as an autonomous type in itself (which typically results in phonological reduction). This is what happened to the [OP:*BE going to* MV_{inf}] format, which was once an instance of the progressive construction, but which is now considered a type of its own and on its way to be reduced to [OP:*BE gonna* MV_{inf}] The notions of item class based subconstruction and item-based subconstruction are related to Tomasello's (2003) notion of an *item-based construction*. He uses this in relation to specific syntactic patterns in language acquisition

> in which children use syntactic marking such as word order or grammatical morphology to indicate explicitly some participant roles in scenes, but they do this differently for different item-based constructions (depending mainly on their linguistic experience with each of these (Tomasello: 139)

As indicated above, we can expect to find item-class-based and item-based constructions in adult language as well as in child language. In addition to the examples provided by Croft and Goldberg above, an example of a set of item-class-based constructions would be the body-based aspect constructions of Danish in which a verb of bodily posture or motion is pseudocoordinated with an activity verb to indicate non-perfective aspect, having the following syntactic template [V^{BODY} *og* V];

this set of constructions is verb-class based in that only body-semantic verbs may appear as the first coordinated verb (Jensen 2006b). Some members of this family of constructions are also item-based, in that they only express a specific meaning with one specific verb as the first coordinand verb, such as for example [*RENDE og* V] (literally 'run and V') which expresses negative stance towards the event expressed by the second coordinate verb, but only with RENDE and no other verbs (ibid.)

Bybee and Hopper (2001: 14) argue that from a usage-based perspective, grammar is never completely fixed:

> grammar is not fixed and invariable with a little variation sprinkled on the top, it it is variable and probabilistic to its very core. Patterns of usage and particular choices made by speakers at any given moment are heavily influenced by both immediate and long range experience with language … Clearly, the criteria for such comparisons with past experience are individual, inexact, and scarcely amenable to treatment in terms of precise objective categories.

This means that a usage-based CxG will also be a stochastic CxG. Of course, it is not stochastic in the sense that chance governs language – as Pustet (2004: 18) points out, '[e]ven the non-linguist will object that we do not choose words on the basis of chance as we talk, but rather, on the basis of their meaning' – but in the sense that it permanently amenable to changes due to the non-fixedness of human behavior which involves ever-changing patterns.

3.5.3. The interactional perspective and convention

In an interactional perspective, the contents conventionally associated with a construction are also communicative strategies conventionally associated with the construction in question. The speaker uses a contruction to convey a certain message and to make the listener construe its content in a specific way. This means that part of the function of constructions is to instruct listeners to activate the conceptual structures that constitute their semantic contents.

Entrenchment is not incompatible with this interactional or instructional perspective. If a construction is used frequently in a speech community to achieve the same, or similar, effects in listeners, the principle of entrenchment should apply such that the strategies become entrenched as part of the linguistic knowledge of the sign as procedural communicative knowledge, and the effects, or intended construals, become entrenched as representational content of the construction. This way, the interactive perspective and the more representation-based one are unifiable in the framework of usage-based linguistics.

4. Gestalts

Constructions, as well as cognitive models, are gestalts. The reason for thinking of them as gestalts is that they, as argued in radical construction grammar (Croft 2001), are non-reducible. *Non-reductionism* is one of the main properties of a gestalt, but it is not the only factor characterizing gestalts; there are numerous other factors involved, some of which well be discussed in a moment.

A gestalt is a collection of items that are perceived as parts of an integrated whole in such a way that "the salient parts make an important contribution to the whole without at first being noticed as individual parts" (Ungerer and Schmid, 1996: 34). That is, it is only on 'second thought' that they are perceived as parts. The idea was first developed by the *gestalt psychologists* (Koffka 1935; Köhler 1947) of the early twentieth century. The gestaltist philosophy is in opposition with atomist theories of perception and cognition. Blackburn (1994: 156) outlines the main point of difference between the two philosophies:

> On the atomistic view visual patterns arise from a mosaic of independently existing sensations. But phenomena such as the 'figure-ground' switch or the famous duck-rabbit switch make vivid that to take a scene one way or another goes far beyond having the same blank experience, and then explaining it as the result of one thing or another: the interpretation changes the experience itself. This Gestalt quality is something over and above individual anything determined in the array of individual sensations.

This difference is also present in linguistic theorizing, which we saw in connection with the description of the CxG principles above.

Atomist perception theories hold that perception and behavior are *molecular* consisting of independent sensations, which are also perceptual primitives. The context, or environment, that behavior takes place in is disregarded in the atomist view. The gestaltists argued that perception cannot be molecular and, referring to numerous psychological experiments, showed that humans tend to group individual sensations under units which are seen as wholes. Perceived wholes are themselves considered primitives rather than the atomic parts that they consist of, and which are often not noticed at all (or at least at first sight). Gestalt theory thus holds that perception and behavior are *molar* – that is, a continuous whole. The molar-molecular dichotomy is reflected in the componentialist-cognitivist debate about whether or not language processing is or is to be dissociated from other mental activities, and whether or not language is modular in the sense advocated by the componentialist grammarians.

In gestalt theory behavior directly involves the environment, especially in connection with perception, and it is argued that the environment directly influences the way that humans perceive and process individual sensations. This can be clearly read from Koffka's (1935: 71) discussion of the categorization of things and not-things:

> Some things appear to be things in some contexts and not-things in others. Now it cannot be the purpose of this argument to claim that every part of our behavioral environment is a thing, the very opposite is true: we must distinguish between things and not-things, but this distinction is not permanent in the sense that some real objects will always appear as things or not-things. On the contrary, we have shown many objects may be thing-like or not according to circumstances.

Likewise, Köhler (1947: 56) argues that not only are the perceived objects important, so are contextual conditions: "sensory experience in a given place depends not only on the stimuli corresponding to this place, but also on the stimulating conditions in the environment". In this view, entities do not have permanently fixed functions built into them. Rather, their functions depend on the environment that they are perceived in. This means that an entity may be perceived as X in one context and as Y in another. This also goes for language. Koffka uses (1935: 540) the following pun to show that the meaning of words is in fact dependent on the context of the structure it occurs in as a gestalt:

> "A motorist comes to a big sign: 'Fine for parking' and there he parks". The last word of this sentence changes the meaning of the word "fine". Although puns are particularly fit for demonstrating this transformation [e.g. the transformation of one conventional meaning of a word into another conventional meaning – KEJ], it occurs continually as we listen to speech; words gain their full meaning only from others that precede or follow after them.

There are parallels between gestaltism and CxG. Firstly, Koffka's discussion of puns and transformations of word meanings brings to mind syntactic accommodation and coercion, just like the categorization of something as a thing or a not-thing would depend on the actual context. Secondly, the impact of the environment on behavior or perception virtually corresponds to the inclusion of pragmatic factors under the content of the linguistic sign, both in terms of pragmatic points and general contextual influence.

Gestalt theory is an important contribution to the undermining of the *myth of the given* which holds that "[s]ense experience gives us peculiar points of certainty, suitable to serve as foundations for the whole of empirical knowledge and science" (Blackburn 1994: 253). This would imply that sensations of objects are identical to the objects, and that, as a consequence, one could establish an 'objective' science on the basis of such sensations. The rejection of the myth of the given is very clear in Köhler's (1947: 17) discussion of the physical world and the objective world (i.e. the world of sensations based on inputs from the physical world):

> I was introduced to a manner of thinking in which the term direct experience acquired its meaning. The physical world could not be identical with the objective world which I had around me the whole time. Rather, I learned that physical objects influence a particularly interesting physical system, my organism, and that my objective experience results when, as a consequence, certain complicated processes have happened in this system. Obviously, I realized, I cannot identify the final products, the things and events of my objective experience, with the physical objects from which the influences come … These objects merely establish certain alterations within my physical organism from which the physical objects come.

This reveals another parallel between gestaltism and CL and CxG, viz. the subjectivity that is assigned to construals in CL. Gestalts are characterized as *functional wholes*, meaning that they are configurations of constituent units that are not functionally self-sufficient in any way, but rather dependent on the holistic structure, and they are not necessarily identical to the physical entities that they are based on.

4.1. The gestalt principles

In this section, we shall look at some of the characteristics of gestalts as cognitive models in general. Gestalt psychologists operate with a number of principles, which Koffka (1935) collected in his influential book.

Gestaltists operate with a set of *gestalt principles* that are based on properties of gestalts (the so-called *gestaltqualitäten*), some of which are listed below:

- **unit formation**: the perception of a number of individual items as one unit, or gestalt, which is somehow segregated from its environment; unit formation is a complex mental process that involves some or all of the below principles;
- **prägnanz**: inputs are psychologically organized in terms of a minimum-maximum scale of goodness; the other gestalt principles are also organized in terms of prägnanz;
- **proximity/contiguity**: individual elements with a small distance between them will be perceived as being somehow related to each other as if forming one unit;
- **similarity/equality**: individual elements that are similar tend to be perceived as one common segment;
- **closure**: perceptual organization tends to be anchored in closed figures, which tend to be seen as self-sustaining;
- **continuation**: elements will be perceived as wholes if they only have few interruptions;
- **shape**: it is easier to single out as a unit (a group of) items resembling a recognizable shape, because they are perceived as having that shape;
- **orientation**: the forming of a unit may depend on the orientation and perspective of the viewer;
- **frequency/regency**: frequent repetition of a group of entities as a unit entrenches the group as a unit in the viewer's mind;
- **figure-ground organization**: dual organization of items such that one is outstanding (the figure) against the other (ground) – many of the above principles are also involved in figure-ground organization; the figure may be an autonomous unit (i.e. a gestalt in its own right) or part of a gestalt that has been 'highlighted' for some reason;

The principles are thought of as "working together", thus being parts of the larger, more complex mental operation of unit formation. Not all principles need be involved. In some cases only a limited number of principles are involved in the process of unit formation, while other cases demand the involvement of more principles.

Another very important factor in unit formation is what Talmy (2000a: 50-55, 61-2; see also

Wierzbicka 1988: 499-560) has dubbed *boundedness* as well as its complementary *unboundedness:*

> When a quantity is understood as **unbounded**, it is conceived as continuing on indefinitely with no necessary characteristic of finiteness intrinsic to it. When a quantity is understood as **bounded** it is conceived to be demarcated as an individuated unit entity. Entailed by the boundedness category, but conceptually isolable from it is the notion of **boundary**. In the prototypical conceptualization, a boundary touches or constitutes the outermost proportion of a bounded quantity, so that the boundary "encloses" the bounded quantity and the bounded quantity lies "within" the boundary. (Talmy 2000a: 50).

When a unit, or gestalt, is formed, a boundary is typically construed or perceived such that the gestalt is bounded and thus distinguishable from its environment. The notion of boundedness seems to me, to be an elaboration of the principle of closure. The principle of closure holds that perceptual organization is anchored in self-sufficient closed figures. The function of bounding is to create closed figures. Thus, bounding is arguably one of the processes, perhaps the primary process, that is involved in construing closed figures. In that sense, bounding can be seen as an elaboration on the closure principle.

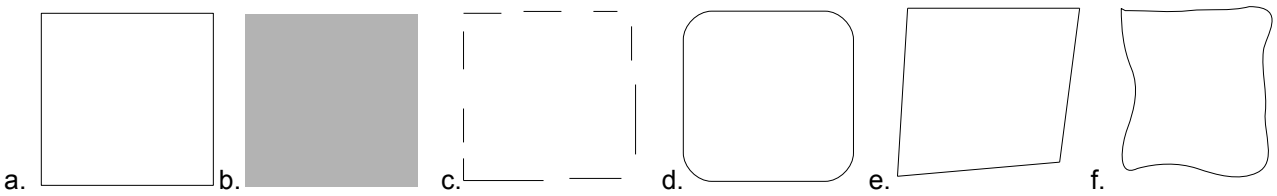
Lakoff (1977: 246) points out that "[g]estalts are at once holistic and analyzable. They have parts, but the wholes are not reducible to the parts" and "[t]hey have additional properties by virtue of being wholes, and the parts may take on additional significance by virtue of being within those wholes". Lakoffs statement is very much a precursor of sorts to the non-reductionist principles of CxG, also hinting at how complex unit-formation may be. Croft and Cruse (2004: 63-9) further argues for gestalthood involving a set of constitution and individuation construal operations, underlining that gestalts themselves are a matter of construal.

Lakoff (1977: 146) advocates a similar point of view, as he argues that "[g]estalts may be analyzable into parts in more than one way, depending on the point of view that one takes" and that "[t]here may be a unique analysis into parts, but there may also be more than just one correct analysis depending on viewpoint". A gestalt is not the perceived thing itself, but the viewer's construal of it. The constituency of a house, for instance, may be construed differently when seen from the inside than from the outside. From the inside, the parts might be defined in terms of rooms, floors, ceilings, and even furniture, while, from the outside, they might be defined in terms of roof, windows, bricks, porches and the likes. Some gestalts may indeed be seen as being universal, because we can assume that there are universals in the way that humans interact with and experience the surrounding world. The constituency of a gestalt is dependent on construal and on many other aspects of humans' mental processing of inputs from the surrounding world. This is the principle of orientation at work, and may be traced back not only to Lakoff (1977) but all the way back to Rubin (1915), Koffka (1935) and (Köhler 1947).

Part-part relations, or *interconnections* (Croft and Cruse 2004: 67), may also differ in terms of viewpoint. However, perspective of viewing is not the only factor, as Lakoff (ibid.) also points out, "part of what makes a gestalt is that the parts in it relate to each other in certain ways by virtue of being in the gestalt". Two entities relate differently to each other if they occur in different gestalts. For instance, two lines relate differently to each other when they constitute two sides of a triangle from when they constitute the two sides of a rectangle. The relational differences depend on the type of gestalt the parts occur in. It is contrasted with the atomic view that the relations between parts are pre-built into the individual parts, such that part A can enter into relation *x* with part B, because it is part of A's preprogramming, while it cannot enter into relation *z* with B, because it is not part of its preprogramming. The *x*<A,B> relationship, or combinatorial potential, is encoded in A, even when A occurs in isolation. Thus, A's combinatorial potential is a fixed, non-violatable, eternally true feature of A. In gestalt theory, combinatorial potential is not rejected. But instead of being an eternally true, non-violable feature, it is rather a prototypical feature. That is *x*<A,B> is the most typical combination that A occurs in. This does not mean that *z*<A,B> or *x*<A,C> cannot occur, or that, if they occur, one cannot process them at all.

Gestalts also involve protoypicality, as indicated by the idea of prägnanz, which Lakoff (1977: 247) also argues for. The reason why it is probably easier to identify a collection of units as having a recognizable shape is the existence of a schema. Any perceivable object that we encounter, which looks more or less like the schema, will be characterized as an instance of that schematic shape. Some instances might be better members of the category than others. Consider the figure below:

Figure 4.1: Shape and prototypicality



They may all be categorized as squares, because they look more or less like a square (or they look more like squares than like any other geometrical shape). The first and second squares have high prägnanz in squareness, and is thus a good member of the square category, while the other ones have lower prägnanz, but still enough to be classified as squares. The principle of shape and other prägnanz-based principles are instances of prototypicality principles.

4.2. Figure-ground organization

An important contribution by the gestaltists to cognitive science is the theory of figure-ground organization (Rubin 1915), which was briefly mentioned earlier. According to this theory, a salient entity (the *figure*) is perceived as standing out for some reason or another from its environment (the *ground*), which is then construed as a kind of 'grey mass' serving as background of the figure. In Rubin's own words (1915: 1): "Naar man betragter en Ting i Stuen eller en Figur paa et Stykke Papir, en Blækklat f. Eks., fremtræder Tingen resp. Figuren paa en synlig Baggrund eller Grund".[19] The figure is only a figure in relation to the ground and does not exist as a figure by itself. Figure-ground organization exhibits gestalt properties. The figure is construed as being bounded and often heterogeneous while the ground is unbounded and homogenous.

Due to its salience, one tends to focus on the structural details of the figure while ignoring the structure of the ground (including its boundary – provided that is has such).[20] One may also impose figure-ground upon a set of stimuli to place emphasis or focus on one stimulus in relation to the others.

4.3. Linguistic gestalts: non-reductionism in usage-based construction grammar

In gestalt psychology, the notions of atomic and primitive have long been seen as separate concepts, such that complex structures can be primitives and atomic structures can be derived from the complex ones but this idea is relatively new in linguistics. In Croft's (2001) radical construction grammar, it is argued that not only are semantic frames primitive, so are grammatical constructions. Grammatical non-reductionism presupposes that constructions are gestalts and that their parts are derived from them as wholes. This is based on a quite powerful argumentation grounded in the realities of discourse and language acquisition – namely, that the elements do not occur in isolation: "What occurs in natural discourse are constructions, that is, complex syntactic units; we do not hear individual words with category labels attached to them. Utterances are instances of constructions" (Croft 2001: 52). This also goes for children learning a language through exposure:

> A child is exposed to utterances in context – thus, a significant part of the meaning of the utterance is

19 "When one observes a thing in one's living room or a figure on a piece of pater, like an ink spot, for instance, the thing or the figure become salient in relation to a visible background or ground" (my translation).

20 This principle of organization seems to be such an integrated part of human psychological organization that even presented with a number of white entities with no recognizable shape on a black background (Rubin 1915: fig. 1), one would see the white entities as figures though they are meaningless: "Det, man sandsynligvis oplever er en hvid, meningsløs Figur på en sort Grund." ["What one will probably experience is a white meaningless figure on a black ground" – my translation].

> available to the child from the context of use. The child acquires constructions by categorizing utterances into their types, in terms of grammatical properties of the utterances that the child is able to perceive … Eventually, as the child becomes able to process all aspects of the input and is exposed to more and more varied instances of constructions, s/he gradually builds up a taxonomic network of constructions and their categories become equal to that processed by adult speakers of the language (ibid: 58)[21]

The learner/speaker of a language induces construction types and abstracts across constructions and generalizes and categorizes recurring patterns including phrasal and morphological structures, thus deriving the parts from the wholes, and creating phrasal and other subconstructional networks. Notice that this is the exact same process as Fillmore (1977: 57) refers to in relation to the acquisition of meaning.

Non-reductionism turns grammatical constructions into fully fledged gestalts. While some might object to this, we must keep in mind that a gestalt is a perceived whole. Constructions are also perceived when the language user is exposed to them in discourse. In the context of discourse and language acquisition, atomic units are not necessarily primitive; this should be reflected in a theory of language:

> 'Atomic' and 'primitive' are logically independent concepts. ATOMIC units are those that cannot be broken down into smaller parts in the theory. PRIMITIVE units are those whose structure and behavior cannot be defined in terms of other units in the theory. Primitive elements need not be atomic. The notions 'atomic' and 'primitive' can be dissociated. (Croft 2001: 47)

Non-reductionism is a consequence of the inductively based above-mentioned usage-based approach.

Another area where language, at least in the perspective of CxG, seems to abide the gestaltist principles is in relation to the notion of idiomatically combining expressions (Nunberg et al. 1994). Just like the parts of a gestalt get their functions and interrelations by being in the gestalt, the parts of an idiomatically combining expression, or construction, get their specific meanings by virtue of being in that particular construction. This points at constructions being functional wholes like gestalts.

5. Gestalt structure of the progressive construction

We are now in the position to discuss the formal structural aspects of the progressive predicator construction in a gestaltist and constructionist perspective.

21 See also Tomasello (2003) who argues quite convincingly, with reference to numerous experiments, for non-reductionism in language acquisition in the guise of what he calls blame assignment, which is the assignment of functions to the individual parts of a linguistic construction after the construction itself has been perceived as one single unit.

5.1. Gestalt aspects of the progressive construction

The construction formally consists of BE followed by a present participle and allows for the insertion of adverbials (and the subject in cases of inversion) between them, which is a description that one will come across in any reference grammar of English. However, that description is not enough, as there are many cases where a form of BE and a present participle co-occur in naturally occurring English which are not instances of the progressive predicator construction:

(5.1) a. Exercises that accomplish this *are swimming*, short-term jogging (about half an hour a day).
b. The main item on the agenda of our last meeting *was joyriding*.
c. Following this *are stringing* tables for 84 instruments for which fairly full evidence.
d. Of course, all this is doing is storing up trouble for the subsequent financial year.

In (5.1a-b) the participle form is, in principle, a gerundive noun appearing in the predicative position in a copula construction with BE as the copula main verb, while in (5.1c) the participle functions adjectivally, modifying 'table' which is the subject of 'is'. In (5.1d) 'storing up' is something in between a nominal and a verbal entitiy, as it takes up an intermediate propositional act function in between predicating and referring propositional act function plus it is part of a larger clefting type construction [*what* X *DO is* V]. When seeing these examples, one does not get the impression that BE and the present participle belong together. Lipka and Schmid (1994) operate with a *scale of idiomaticity* for strings of words, such that if that string of words displays medium or high idiomaticity, the words in the configuration that structures the string are more likely to form a unit than if the display no or low degree of idiomaticity. If we apply the notion of degree of idiomaticity to the above examples, we will see that none of them display idiomaticity and do not form expressive units. Compare these to 'is doing' in (5.1d), which is an instance of the progressive. In comparison to the non-idiomatized cases, 'is doing' does form a unit and it is idiomatic in the sense that BE does not express any meaning that is computable from its lexical nature.

The reason why 'is doing' diplays a higher degree of idiomaticity is that it is a gestalt, adhering to a number of gestalt principles. To begin with, the form of the progressive (as with all constructions) adheres to the principle of shape. The syntactic configuration is more or less the same in all instances of the progressive predicator construction with some variation in inflection of BE and lexical realization of the main verb and maybe patterns of (dis)continuity, just like all instances of a square share the basic recognizable shape but may display variation to differing degrees. Looking at progressives and perfectives as an example, we will see that the configurations

[OP:*BE* MV_{pcp1}] and [OP:*HAVE* MV_{pcp2}] are recognizable shapes. They are recognizable due to the principle of frequency/regency, which in effect is also the underlying principle of entrenchment. The language user has been, and still is, exposed to these patterns through discourse so frequently that they are entrenched in the mind. Such instances adhere to the principle of shape and display good shape, since they fit the already entrenched unit. Through goodness of shape, there is also a linkage between predicators and categorization. The reason why *'have eating', for example, is ungrammatical is because there is no entrenched type with a [OP:HAVE MV_{pcp1}] configuration to license it; *'have eating' is ungrammatical because it does not have a recognizable shape. This does not mean, however, that the potential for creating such configurations is non-existent. All it takes, in principle, is that a sufficiently big proportion of members of the speech community start using it for specific purposes sufficiently frequent for it to become entrenched in the common ground of the speech community.[22]

The gestalt principles of shape and regency (and the usage-based notion of entrenchment) are not the only gestalt principles that are applicable to the syntactic configuration of the progressive construction or syntactic configurations in general. The principles of proximity/contiguity, closure, and continuation are also involved.

A shape, like a triangle or a square – or the typical shape of a couch, a car, a bicycle, a human, a dog, and so on – is usually perceived as a closed structure with boundaries setting them apart from the environment. Likewise, the configurations of constructions are closed structures. Their elements co-occur so frequently in discourse in similar contexts that language users perceive them as forming a closed structure with gestalt-based interrelations among them. Language users have the ability to distinguish between them and the rest of the linguistic environment. This is what we witness in the above examples. BE and the present participle do not form a closed figure in any of the examples because they themselves are parts of different closed figures. 'Is doing' in (5.1d) on the other hand is clearly distinguishable from the syntactic context as it forms a closed figure, which also serves a specific function. The forming of the closed structure is determined by frequency of occurrence in the realm of discourse in which the same elements frequently occur and are assigned as specific communicative function. The closed linguistic structure is derived from the discourse, rather than from its parts.

Closely related to the principle of closure is the principle of proximity. An additional reason why predicators are conceived of as functional wholes may well also be that their parts are

22 'BE eaten' is of course not ungrammatical, but has a specific purpose – namely, indicating passive voice – because there is a schema that licenses it.

physically proximate. This principle does not necessarily apply to all constructions in all languages, but it does appear to be a decisive factor in grammaticalization within many Indo-European languages.[23] Part of the reason why the syntactic patterns of predicators become configurations is that their parts recur in discourse adjacently to each other in what can I call a *fixed succession* (which may also be a factor in the principle of closure) – namely, when elements of the construction recur in a more or less fixed sequence or positions.

The notion of fixed succession implies continuity. The configuration of a predicator construction is based on a fixed succession, which must necessarily be felt by the language user to be in a natural continuation. When predicator constructions are interrupted by negators and different kinds of adverbs the continuity is broken, but not the succession.

In accordance with the non-reductionism of gestaltism and usage-based CxG, elements of predicator constructions are defined in terms of their occurrences in the configurations. If we compare the progressive construction to the perfective one, this should be clear. HAVE's prototypical content is POSSESSION, while that of BE is RELATIONAL EXISTENCE, as in 'Who has a car?' and 'She is stingy'. However, in predicator constructions, they do not have those particular meanings, but serve the specific function of the operator, which primarily is to specify in patterns of profiling in the temporal frame. That is, they probably are not completely devoid of their original meanings, and it is possible that there are traces of their past meaning in present usage-patterns.

One compelling observation in favor of the holistic definition of parts is the grammaticalization process of *semantic bleaching*:[24]

> When a lexical item grammaticalizes, changes affect both its content and its form. There is no unanimity in the literature concerning the nature of the semantic changes that are involved in the grammaticalization. According to one popular view, grammaticalization essentially means **semantic bleaching**, that is, the semantic content of the item is partly or wholly lost. Another view emphasizes the role of semantic processes such as metaphor in grammaticalization. A possible synthesis of these might differentiate between the earlier stages of a grammaticalization process ..., which are in many respects rather like lexical semantic change in general, and where metaphor, metonymy and similar processes may play essential roles, and the later stages ..., for which terms like semantic bleaching may be more appropriate ... Semantic bleaching in general increases the domain of applicability of an item, and thus may lead to an increase in frequency. The same effect may also be the result of another process, namely that of **obligatorization**. The property of being obligatory in certain semantically or syntactically defined contexts is often mentioned as characteristic of grammatical elements. (Dahl 2000a: 8-9 – emphasis in original)

It is interesting to note that there is a parallel between semantic bleaching and obligatorization, on

23 I stated that the adjacency principle does not necessarily have to apply to all languages, but my guess is that it probably does.

24 Bleaching was originally introduced by Gabelentz (1891). See also Hopper and Traugott (2003: 94-8).

the one hand, and Fillmore et al.'s (1988) notion of substantivity on the other. It seems that grammatical items are semantically bleached in specific constructions in which they are also substantive elements. That is, semantic bleaching is not something that happens to the item in isolation, but in relation to the constructions that it occurs in frequently; otherwise, bleached forms would not coexist with non-bleached root forms. It is only in the context of the constructions they appear in that they are bleached and assigned a grammatical function. This way, the construction is an idiomatically combining expression (Nunberg et al. 1994; Croft 2001). There is reason to believe that bleaching, which appears late in the process of grammaticalization (Hopper and Traugott 2003: 98), is intertwined with the process of entrenchment of idiomatically combining constructions, and consequently also with frequency. These processes, in turn, may be governed by the principle of functional wholes, which Lakoff (1977: 249) argues for. Again, while obviously not expressing the full lexical meanings, and while having functions which are not derived from the fully lexical versions of the verbs, it is possible that there are traces of their past meanings in present usage. In fact, Bolinger (1971) suggests a number of present-day English facts that reflect that the progressive was once a locative construction. I will return to this *locative hypothesis* in section 5.2.2. Moreover, it is logical to assume that it is not a coincidence that those particular verbs are used as operators in predicator constructions. There must have been something in the functions back then which motivated their use in constructions which eventually developed into predicators.

This is what happened to operators in predicator constructions. A gestalt is a functional whole, that is, its parts are defined in terms of their functions in that whole. They might appear in other wholes, in which they take up other functions which may be very different or quite similar. HAVE in monotransitive constructions means POSSESSION, whereas in perfective predicator constructions, it functions as an operator and expresses tense, while BE in copula constructions and locative constructions relays RELATIONAL EXISTENCE and functions as an operator in predicator constructions like the progressive or the passive. By virtue of their functions as operators in predicators they are bleached and assigned temporal meaning. It is the functional roles in the predicator construction that express the respective meanings, and not the lexical instantiators. The progressive construction's operator, BE, is lexically fixed, having undergone processes of bleaching and obligatorization, and the main verb is morphologically fixed, appearing only as present participles. But the main verb is lexically open, allowing for the lexical item that fills it to provide the basic prepositional content, including actionality. It consists of three parts, the operator, the

functional slot for the main verb, and then the morphological instantiation of the main verb.

5.2. Grammaticalization, entrenchment, and holism

The usage-based approach to grammaticalization holds that a string of units is repeated in discourse with some variation, being used for the same communicative purpose, or a set of very similar purposes, so frequently that it becomes entrenched in the speech community as a semiotic unit serving that specific purpose or set of purposes via processes like bleaching. Normally, in such a process, those lexical units that are fixed parts of the string of words will undergo bleaching, and eventually the string's configuration will be entrenched as one semiotic unit, which may serve a specific function or a specific set of functions. Once such constellations have become grammaticalized, they often undergo an extension of functions. This is what has happened, and is still happening to the progressive construction.

5.2.1. A brief sketch of the history of the progressive

The progressive construction as we know it today is a relatively recent development, dating back to the era of Modern English (Baugh and Cable 1993; Fischer 1992; Denison 1998) though formally a combination of a copula-like verb with a present participle is attested in both Old English and Middle English, which appear to have had some aspects of function that are similar to the present-day progressive.

In Old English, the configuration [OP:*BEON*/*WESAN* MV_{pcp1}], with [V-*ende*] as the participle form, existed (Baugh and Cable 1993: 287, Mitchell and Robinson 1992: 110, Denison 1993: 371), but was apparently used quite infrequently and is typically found in translations of Latin periphrastic imperfective constructions. Some examples of the [OP:*BEON*/*WESAN* MV_{pcp1}] construction are presented below[25]:

(5.2) a. Þa *wæs* se cyning openlice *andettende* Þam bisceope.
then was the king openly confess.pcp1 def.sg.dat bishop
Then the king openly confessed to the bishop

b. ond hie Þa *feohtende wæron.*
and they then fight.pcp1 were
And then they kept on fighting

c. ða se apostol Þas lore *sprecende wæs.*
while the apostle this teaching talk.pcp1 was
while the apostle was explaining this teaching

d. he *wæs ehtende* cristenra monna.
he was persecute.pcp1 Christian men

25 (5.2a-c) are from Mitchell and Robinson (1992: 107-110), while (5.2d-e) are from Denison (1993: 272-3)

He was persecuting Christian men

e. Þa *wæron* simbel binnan Romebyrg *wuniende.*
Those were always within Rome dwell.pcp1
Those were always within Rome dwelling

This gradually changed in Middle English into a [OP:*BE* MV_{pcp1}] schema with [V-*ung*] as the participle form, and throughout the Middle English period the two forms were competing. Both are, thus, to be found in Middle English sources, as illustrated by these examples[26]:

(5.3) a. Polidenas broght hym full beinly to Þe bold Troiell Þat *was fightond*
Polidenas brought it very quickly to the bold Trolius who was fight.pcp1
on fote in Þe felle stoure.
on foot in the fierce battle
Polidenas brought it very quickly to the bold Troilus who was fighing on foot in the fierce battle

b. As Canacee *was pleyyng* in hir walk ther sat a faucon over hire heed
As Canacee was play.pcp1 in her walk they put a falcon over her head
ful hye.
very high
As Canacee was playing while walking, they place a falcon very high above her head

c. John, *be* thou here *abydand.*
John be.imp you here remain.pcp1
John, stay here

d. The tour *was joynynge* in the wal to a foreyne and it *was longynge*
The tower was join.pcp1 in the wall to a outer-pivy and it was belong.pcp1
to doughtern tweyne of Mynos.
to daughters two of Mynos
The wall of the tower adjoined the outer privy and it belonged to Mynos' two daughters

e. Ely sette hym at Þe temple dore yn a chayre and *was herkenyng* fro
Ely place him at the temple door in a chair and was listen-for.pcp1 from
the batayle sum tydyng.
the battle some news
Ely placed him in a chair at the door of the temple and was listening for some news from the battle

f. Þo Octa onderstod that they *coming* *were.*
then Octa understood that they come.pcp1 were
Then Octa understood that they were coming

g. whan the enemyes *weren* ferr *purcynge* the chace.
when the enemies were far pursue.pcp1 the chase
when the enemies were far pursuing the chase

h. The flod *is* into the grete see *rennende.*
the river is into the great sea run.pcp1
The river runs into the great sea

In the Modern English period, the [V-*ing*] pattern had taken over. This claim is supported by a query I conducted in the *KEMPE Corpus of Shakespearean English.*[27] A search for any form of BE

26 (5.3a-d, h) are from Fischer (1992: 254-6), while (5.3e-g) are from Denison (1993: 274-6).
27 The KEMPE corpus is available at (Bick et al. 1996).

followed by a present participle yielded 2,922 instances, while a search for BE followed by any verbal form ending in '-*end(e)*' yielded only 10 instances.

The Old and Middle English [OP:*BE* MV_{pcp1}] configurations had functions that were slightly different from those assigned to the present day progressive. Denison (1993: 381) points out that there is disagreement among scholars regarding the exact functions of the Old English pattern, but according to Fischer (1992: 254-6), the Old English and Middle English pattern share the following functions, some of which are quite different from the present-day progressive:

- ongoing activity: the present participle is typically a dynamic verb as in (5.2a-d) and (5.3a-b, e, g) to express ongoingness;
- frame situations: the patterns typically appear in certain types of subclause thus being semantically framed by other situations as in (5.2c) and (5.3a-b, g);
- timelessness/habituality: they could be used to express timeless or habitual dynamic states-of-affairs as in (5.3h);
- imperative: the patterns might appear in the imperative as in (5.3c);
- state: stative verbs were allowed in the progressive as in (5.2d) and (5.3d) to express stative relations.

Fischer (1992: 259) furthermore points out that the uses of the [OP:BE MV_{pcp1}] patterns in OE and ME were optional, other constructions being available. For instance, the morphological present form covered the functions of both the present-day present progressive and simple present, as is also pointed out by Mitchell and Robinson (1992: 107):

(5.4) hwæt Þis folc segeð (OE)
what these people say.3rd.pl.pres
What these people are saying

Conversely, the [OP:*BE* MV_{pcp1}] pattern could be used to express perfective meanings that are typically expressed by the present-day simple past tense. It also appears to encompass the function of excessive ongoingness, typically expressed by the catenative [OP:*KEEP (on)* MV_{pcp1}]-construction in present-day English.

It was not until the era of Early Modern English, that the configuration started acquiring the specialized functions that are assigned to the progressive today and started being used frequently enough to be functionally stabilized. Fischer (1992) points out that the construction only became truly frequent in the sixteenth century, and Denison (1998: 143) informs us that the use of the construction witnessed an "approximate doubling every century from 1500, though with a slowing-down in the eighteenth century and a spurt at the beginning of the nineteenth". Denison (ibid.) finds that its use was more or less restricted to subclauses – which indicated that the main use was

still in relation to the framing situations – until the nineteenth century when it was extended into other spheres of use.

5.2.2. Three possible grammaticalization paths

There is one factor that is missing out in the above outline – namely, the *grammaticalization path* of the progressive construction. Many linguists believe that there is an additional factor in the development of the progressive construction – namely, the OE [*BE* PREP $N_{(V)}$-*ing*]-construction, whose function was to express an agent being involved in an ongoing event:[28]

(5.5) ac gyrstendæg ic *wæs on hunting.*
but yesterday I was on hunt.ger
But yesterday I was hunting

This has caused some disagreement among linguists as to the source of the present-day progressive construction. Two theories are presented, which Ziegeler (1999) calls the *locative source explanation* and the *reanalysis explanation*.

The locative source account is exemplified by Bolinger (1971: 246), who argues, from a formal point of view, that "[i]t is well known that the progressive tenses represent, historically, a combination of *be* with a prepositional phrase: *He is working* < *He is on working*". Arguing that the (un)acceptability of the examples below, which belong to different varieties of English reflect this diachronic fact, he stresses that the main verbal element is in fact a nominal form:

(5.6)
a. He is *a-working*.
b. He is *after working*.
c. *On assuming* command he ordered a general amnesty.
d. He *was working* an hour ago and I guess he's still *at it*.
e. A: *What are* you *at* now?
B: I'*m getting* these reports ready.
f. I'*m writing* a book. *What are* you *at* these days.
g. *Is* it *studying* he'*s at* or making love?
h. *Is it studying he is or making love?

The motivation for using the locative construction to express imperfectivity is, according to Heine (1994) is the metaphorical extension of location in space into location in time. The path of development of the progressive construction is [*BE* PREP N(V)-*ing*]>[OP:*BE a*-V-*ing*]>[OP:*BE* V-*ing*], suggesting that the construction has changed from being an instance of an argument structure construction into a specialized predicator construction. Baugh and Cable (1993: 287) argue, much

28 The example is borrowed from (Denison 1993: 387).

along the lines of Bolinger (1971), that the locative construction was the chief source. This explanation also seems to be backed by the observation that the [OP:*BE* MV_{pcp1}] configuration has a very broad number of uses, while the [*BE* PREP MV_{pcp1}] configuration was more specialized in terms of a functionality that is very similar to that of the present-day progressive construction.

The locative-derived pattern is typically believed to be developed in middle English, as only very few instances are found in Old English texts, whilst frequent in Middle and Early Modern English ones. The locative source explanation is illustrated by the figure 5.1:

Figure 5.1: Locative source path

[*BE* PREP $N_{(V)}$-*ing*] ⟶ [OP:*BE a*-V-*ing*] ⟶ [OP:*BE* V-*ing*]

The alternative explanation presents the Old and Middle English [OP:BE MV_{pcp1}] patterns as the source of the present-day progressive construction, which is then derived by reanalysis: the process of "change in the semantic interpretation which is not affected by any modifications of surface structure" (Ziegeler 1999: 73). Mitchell and Robinson (1992: 110) point out that the present participle was originally more adjectival, thus serving as a subject complement, which is reflected in the following present-day English phenomenon:[29]

(5.7) a. the mystery is baffling
b. the baffling mystery

(5.8) a. the man is running
b. the running man

Thus the [BE] + [pcp1] sequence, in cases where it is dubious whether the participle expresses an attribute or an action, as in (5.8), is reanalysed from [P Cs] into [P]. Proponents of this explanation typically point out that this pattern is much older than the locative one, and that this pattern already had a specialized function in Old English, being used most frequently with intransitive verbs of durativity. The figure below illustrates the reanalysis explanation:

Figure 5.2: Reanalysis path

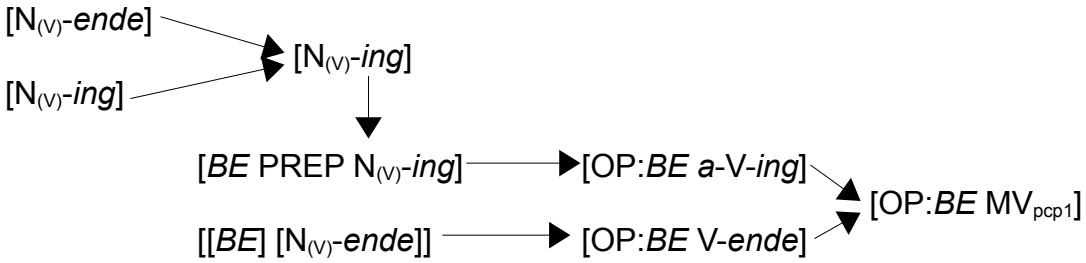
[[*BE*] [Cs_{pcp1}]] ⟶ [OP:*BE* MV_{pcp1}]

Finally, there is what could I wall call the *amalgamation explanation* (in lack of a better term), in which it is argued that the locative and adjectival patterns amalgamated into the present-day progressive configuration. This is often attributed to the many processes of phonological reduction

29 The examples in (5.7) are borrowed from Denison (1993: 372), while those (5.8) are artificial.

and amalgamation that Late Old and Early Middle English witnessed. For instance, Fischer (1992: 252) points out that the present participle (-*ende*), inflectional infinitive (-*en*, -*an* etc.) and deverbal nominalizing (-*ung*) markers were reduced and started merging, which caused deverbal nouns and adjectival participles to be used more verbally (for instance, they started being assigned argument structures). A further consequence of this was the amalgamation of the two patterns into one schema, facilitated by the reanalysis of the deverbal nouns and adjectival participles and the reanalysed [BE] + [-*ende*] sequence. The illustration below is an attempt at summing up the process proposed by the amalgamation explanation:

Figure 5.3: Amalgamation path



The diagram shows the possible assimilation of the -*ende* participle by the -*ing* participle, both of which are strictly speaking gerunds. The -*ing* participle becomes an element in the locative [*BE* PREP $N_{(V)}$-*ing*]-construction, while a parallel more predicator-like [[*BE*] [$N_{(V)}$-*ende*]]-construction is also used, which functionally overlaps considerably with the locative construction. Eventually, the locative construction is formally condensed to [OP:*BE a*-V-*ing*], and the more predicator-like one is reanalyzed to [OP:*BE* V-*ende*]. The two constructions are then, though various processes of grammaticalization, conflated into the form of the present-day progressive construction. While the patterns of reduction are a plausible factor in this explanation, another factor could be that the two constructions displayed so much overlap in meaning and function that their formal differences were leveled out, eventually causing their amalgamation.

5.2.3. Grammaticalization and holism

Regardless which one of the three possibilities applies, present-day English ended up with a [OP:*BE* MV_{pcp1}] syntactic template whose primary function is to express ongoingness as well as a number of related functions. All three possibilities involve processes of bleaching, and may thus be related to unit formation in the sense that while being grammaticalized, they are entrenched as idiomatically combining expressions, or functional wholes, in which some of the parts, such as the

verb that serves as the operator, are assigned special construction-specific grammatical functions.

Another typical feature of such grammaticaliztion processes is that the string of words becomes reduced in form, which Croft (2000: 158) calls the process of "condensation of larger syntactic units … into smaller syntactic units …". We have already seen this in the locative source explanation where 'on' was reduced to 'a' and eventually disappeared in standard English. This appears to be going on with semi-modal like [OP:*HAVE to* MV_{inf}] and [OP:*GOT to* MV_{inf}], and the future *going*-construction [OP:*BE going to* MV_{inf}] whose substantive parts are often contracted and reduced to 'hafta', 'gotta', and 'gonna' (Krug 2000). This formal reduction associated with grammaticalization actually supports the constructionist approach. While not all grammaticalized strings need get reduced in form, many are reduced as a consequence of entrenchment. An argument could be that automated routines normally require less effort than novel or non-automated ones. Therefore, their performance often becomes more laxed. Croft and Cruse (2004: 303-7; 318-26), with reference to Bybee (1985), argue that, of the three primary aspects of a sign semantics, the most important and that often formal change is based on semantics. This suggests that if the concepts associated with a syntactic template are co-activated in the semantic network frequently enough, a strong connection between them will eventually be formed, allowing them to constitute one semantic unit. The formal condensation could be a reflection of this semantic state. The notion of condensation is thus related to the principle of adjacency, being a type of iconicity effect.

The reduction patterns of predicator constructions such as [OP:*HAVE to* MV_{inf}]>[*hafta* MV_{inf}] and [OP:*GOT to* MV_{inf}]>[*gotta* Mv_{inf}], which might well also be the case of the progressive construction.

6. The verbal domain matrix

Let us now turn to the semantics of the progressive construction. In an integrated CxG, formal structures will have to be contextualized in relation to the cognitive and conceptual context, which CL provides the tools for.

The semantic domains primarily associated with predicators in English are tense, aspect, action, and modality as well as the state-of-affairs of the lexical unit functioning as main verb. In this chapter, I shall present a cognitively oriented approach to those semantic domains in which they are presented as ultimately forming what I call a *verbal domain matrix*, evoked holistically by the predicator in question.

Our assumption is that the verbal domain matrix and the construal operations involved are of an interactive and usage-based nature. The respective predicators have been used so frequently to express events and specific temporal, aspectual, and modal construals of them, or in more interactionalist terms to prompt listeners into making those specific construals of the communicated events, that the involved domains and construal operations form a matrix conventionally associated with predicator constructions.

6.1. Tense and the conceptualization of time

While tense is not a primary concern of this study, it is, however, part of the verbal domain matrix and undeniably considered a central verbal semantic category in English; moreover, as we shall see later, there are a number of aspects of the progressive construction where temporality is brought to the front as a defining feature.

Tense is generally viewed as the "grammaticalised expression of time" (Comrie 1985: 9), which means that tense is the linguistic encoding of temporal relations. Cross-culturally, there seem to be two main conceptualizations of time. One is the linear one, in which time is seen as progressing along a path. This conceptualization is reflected in our very perception of the development of a human life (a similar definition is offered by Bull (1971: 4)):

> we can readily express the different stages in the life of a human, i.e. that humans are first born, then grow to maturity, then age, then die. If one had no concept of time, then one would find just as natural a development where humans first appeared as dead, then came to life as old people, then grew gradually younger and eventually disappeared into their mother's womb. Equally, one would not be surprised to see a certain individual first as a grown man, then as a baby, then as a corpse, then as an adolescent. Needless to say, no human culture is known to have such a conceptualisation of time (Comrie 1985: 3-4).

It is interesting here to note that Comrie's characterization of the progression of life seems to indirectly involve a LIFE IS A JOURNEY metaphor (Lakoff and Turner 1989), in which LIFE is a journey along a linear path from BIRTH to DEATH (Özçaliskan 2003: 281-2):

The other conceptualization is the cyclical one, in which time is seen as moving in a recursive pattern: "all cultures necessarily have some concept of cyclicity in time, given such microscopic cycles as that of day and night, or that of the seasons of the year" (Comrie 1985: 4). Comrie (ibid.) argues that the primary of the two conceptializations is the linear one. Even temporal reference within the cyclical conceptualization of time seems also to involve the linear conceptualization. Bull also (1971: 5-6) stresses the unidirectionality of time as we experience it even when conceptualizing it cyclically:

> We do not experience duration bidirectionally anymore than we can live in two directions in time simultaneously. We can only grow older. Moreover, the hands of cosmic clock (and their mechanical substitutes) move only in one direction, from sunset towards sunrise, from spring to summer, from

> morning to night, in a constant serial and forward-moving repetition. … Time, as man experiences it, goes only in one direction – always forward

It is interesting that he characterizes the conception of time as a "forward-moving repetition", because this means that even though time is repetitive, it is still linear; it is forward-moving. Lakoff and Johnson's (1980: 42-4) TIME IS A MOVING OBJECT and TIME IS STATIONARY AND WE MOVE THROUGH IT metaphors both seem to support this general conception of there being something linear about time. In the first metaphor, time moves along a linear path, while in the second one moves along a linear path through time.

Operating primarily with the linear conception of time, Western cultures tend to conceptualize time in terms of past, present, and future. Jespersen (1966: 257) advocates such a division as his famous timeline shows. Though breaking away from the conservative Latin-based approach that had dominated English linguistics ever since the late 1800s (Crystal 2003: 192), Jespersen did not abandon the myth of the given, tense being an absolute, objective entity. This idea of a natural tense-time relationship is challenged by Comrie (1985) and Lyons (1968), who, with different motivations, argue that tense is essentially *deictic*.

> Time itself does not provide any landmarks in terms of which one can locate situations. If time had a beginning, we do not know where that beginning was, so we cannot locate anything else relative to that beginning (other that, trivially, by saying that the situation is posterior to that beginning). If time has an end, again we do not know its location, so again no non-trivial location is possible to that endpoint. Therefore it is necessary to establish some obligatory reference point with reference to which we can then locate situations in time. (Comrie 1985: 14)

Lyons (1968: 305; see also 1977: 677-90) points out that this reference point is the temporal locations of the utterance:

> The essential characteristic of the category of tense is that it relates the time of action, event or state of affairs referred to in the sentence to the time of the utterance (the time of the utterance being 'now'). Tense is therefore a deictic category, which … is simultaneously a property of the sentence and the utterance.

The co-ordinates of his reference point, or *deictic center*, are the present moment, the present spot, and the speaker and hearer (Comrie 1985: 14). Bache (1997: 250) argues that

> to fully understand the nature of the category [of tense] it is necessary to recognize it as a deictic category, i.e. a category comprising meanings which can only be identified in relation to the temporal and spatial location of the locutionary agent at the point of communication – the deictic zero point – of the utterance.

On this definition, the deictic center equals Bühler's (1999: 102-21) *Origo des Hier-Jetzt-Ich-Systems*, which is the perceptual zero-point of reference; a *vantage point*, which is the position "from which a scene is viewed" (Langacker 1987: 123). The encoding of time and other deictic relations has a *demonstration ad oculos* status. It has now long been commonly accepted that temporality is a matter of deixis.

In a cognitivist framework, construal-based deixis may be explained in terms of a cognitive

model of the conception of time, which may be called the *temporal frame*. It is a model based on temporal experiences, providing schemas for the concepts of past, present, and future, and their interrelations. This model would essentially be a gestalt. Ota (1963: 19) reaches this conclusion in his discussion of the nature of the now in relation to the past and future:

> "Now" is either the moment of speaking or any length of time including the moment of speaking and flanked by the past and the future. These two conditions are necessary to define "now"; if the timespan does not include the moment of speaking, it is not "now", and if it is not in contrast with the past and the future, it becomes timeless.

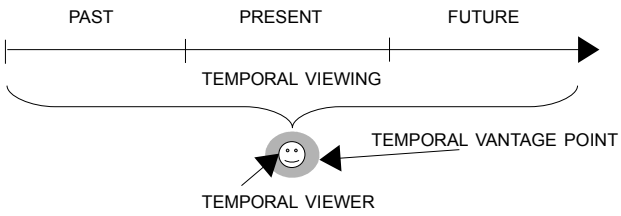
The temporal frame provides a deictic vantage point allowing for non-perceptional temporal construals as well, such as those in fiction and other instances of *deictic adjustment* (Dik 1997). In that sense, the temporal frame, in accordance with the embodiment theory, is anchored in the spatio-visual perception of the origo, but not inseperable from it.

As the LIFE IS A JOURNEY METAPHOR hints at, time appears to be mainly conceptualized in terms of space. Köhler (1947: 88-9) points out the relations between time and space in human experience:

> Experienced *time* has certain characteristics in common with experienced space, particularly with the spatial dimension which is indicated by the words "in front" and "behind". Words which refer to relations in this dimension are used as terms for temporal relations everywhere and in all languages. In English we may have something "before" or "behind" us both in the spatial and temporal meanings; we look "forward" in space and in time; and death approaches us in time as somebody approaches us in space.

The terms 'looking', 'back' and 'forward' invoke the metaphorical spatiality of temporality and also the centrality of perspective. The cognitive model underlying the tense system of English and many other languages, consists of the components PAST, PRESENT, and FUTURE. The PRESENT overlaps with the vantage point (cp. Comrie 1985: 5, Davidsen-Nielsen 1990: 54; Langacker 1991: 244):

Figure 6.1: The temporal frame

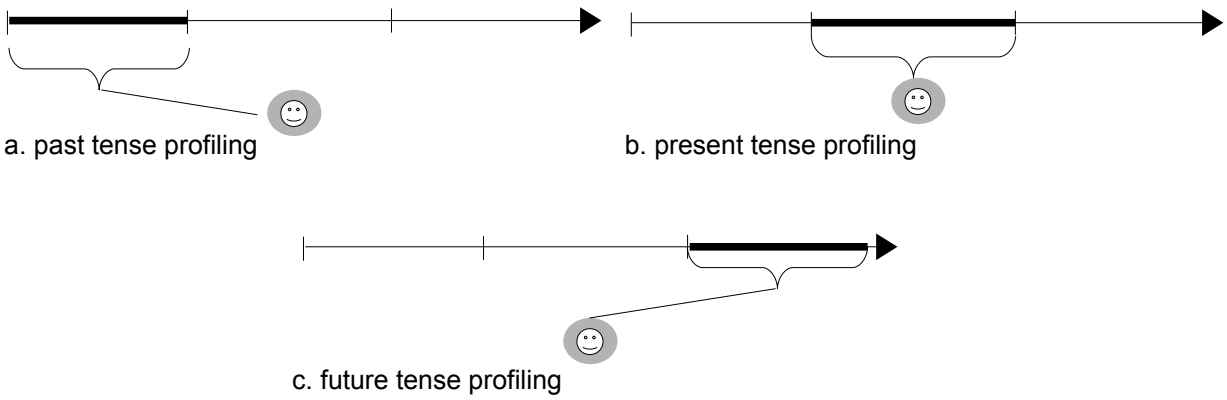


Since past, present, and future are holistically defined, they do not make any sense if isolated from the gestaltic temporal frame model.

The temporal frame is evoked whenever a finite predicator construction, such as the basic progressive construction, is encountered in discourse (it is also evoked in non-verbal situations that call for temporal construals). The specification of which component of the temporal frame functions as denotative content is a matter of profiling one of those components in a *temporal*

profile.[30] Present tense is the profiling of the PRESENT component, while past tense is the profiling of the PAST component.

Figure 6.2: Temporal profiling



Future tense is the profiling of the FUTURE component. We will dwell more on future tense, since it is relevant to certain aspects of the progressive construction. The future is by far the most problematic of the English tenses, as there is no agreement as to whether it is a tense or not, and as to whether it really has to do with time or not:

> Great controversy has surrounded the question whether the future .. should be given a single characterisation that captures both its temporal and its modal uses; or whether it should be considered basically a tense with secondary modal uses, or basically a mood with secondary temporal uses; or whether it should simply be said to have two sets of meanings, temporal and modal, with neither being dominant. (Comrie 1985: 21)

Lyons (1968: 306, 309-11), for instance, argues that future tense is more a question of mood and modality than of tense, pointing to the tenseless uses of modal verbs the do not express futurity (e.g. 'That will be the postman' and 'He will/must be a big boy by now'), while Davidsen-Nielsen (1988: 6), rejects the claim that futurity is necessarily always tenseless and argues that future reference may be made within a world of objective facts ('I know that it will rain tomorrow'). Most linguists regardless of their position in this debate seem to agree that future time is different from the past and the present:

> From an epistemological point of view, the future has a rather different status from both the present and the past. We cannot perceive or remember the future states of affairs, and it has been disputed whether statements about the future can be said to have a determinate truth value. Still, we do talk about the future, and there may be different grounds for our doing so (Dahl 2000b: 310)

As Dahl's statement indicates, languages have devices to communicate the future despite its uncertainty. This is also reflected in Comrie's (1985: 43) definition:

> the future is presented as being essentially the same as the past, only in the opposite temporal direction.

30 Langacker (1987: 244) uses the same term quite differently in connection with the internal progression of the referent situation.

> However, there is a sense in which the future is clearly different from the past. The past subsumes what may already have taken place and, barring science fiction, is immutable, beyond the control of our present actions. The future, however, is more speculative, in that any prediction we make about the future might be changed by intervening events, including our own conscious interventions. (Comrie 1985: 43)

McCawley (1971: 112) argues that this difference is reflected in form: "the future tense in English differs mainly morphologically from the present and past: its marker is morphologically a modal verb rather than an affix", but does not deny its temporality. Likewise, Lyons (1977: 677) says:

> It is often implied, if not actually asserted, that the distinction of past, present and future is essential to the notion of tense and that the future is like the past, except that is follows rather than precedes, the present in the infinitely extensible unidimensional continuum of time. But the future is not like the past from the point of view of our experience and conceptualization of time. Futurity is never a purely temporal concept; it necessarily includes an element of prediction or some related modal notion … This does not mean of course that languages could not, in principle, treat predictions as being grammatically parallel with statements about the past or present.

Dahl (2000a: 310-3) argues that there are four modes of future time reference (in effect, it is not reference but predication) all of which involve some degree of modality: *intention*, *prediction*, *scheduling*, and *preparation*. Intention-based reference is reference to future events is reference to parts of the future that are thought of as being within the scope of the language users' or somebody else's control. Prediction-based reference is reference to parts of the future that are not within the scope of the language user's control specifically, or human control generally. Scheduling-based reference is reference to parts of the future that are predictable because they are scheduled. Perception-based reference is reference to parts of the future that are almost certain to happen, because they are either the natural causes of a wider perspective or because they have been planned. Dahl thus implies that the concept of future intertwines with that of modality (see also Bache 1997: 255-6), which seems to be supported by the Aymara tense system in which the future is conceptualized as being situated behind the language user and the past before the language user. The reason is that one knows what happened in the past, but cannot see the future (Nuñez and Sweetser fc). In Aymara, the semantics of futurity is primarily conceptualized in terms of modality, which in turn is embodied in visual perception. This is not overtly the case of English, but this does not mean that the semantics of futurity cannot be influenced by modality. In fact, it may not be a coincidence that the WILL-future has the same formal template as modal constructions – namely, [OP:MOD MV_{inf}].

On the other, hand, while it is true that the "future differs epistemologically – and maybe also ontologically – from the present and past" (Dahl 1985: 103), I fail to see why it should not also have temporal semantics. It should be possible to express both temporality and modality. It is admittedly tempting to blame the general unwillingness of many linguists to accept the both-and

nature that does seem to be characteristic of many linguistic phenomena on the Aristolian and structuralist past of linguistics with its notion of binary features and mutual exclusivity.

English has a number of morphosyntactic means of construing futurity of events, some of which are predicators. The most widely recognized future predicator constructions are [OP:{*WILL*/*SHALL*} MV_{inf}], [OP:*BE going to* MV_{inf}], [OP:*BE to* MV_{inf}] as well as hybrid constructions combining two or more of the basic predicator types (Bache and Davidsen-Nielsen 1997). The progressive construction may also be used for construing future events, involving primarily prediction-based, perception-based, and scheduling-based references.

6.2. Aspect and the conceptualization of internal time

While tense may play only a marginal role in the progressive construction, aspect is a very central and salient part of it.

Throughout the entire history of grammar as a scientific discipline, aspect has been a battleground where many a scholarly war has taken place. As Mitchell (1979: 159) puts it, "no two linguists agree on the subject". Aspect has often been caught between tense and action, and linguists do not really agree on whether aspect is an independent category, a category to be subsumed under tense, or a category to be subsumed under action, or whether action should be subsumed under aspect.

Despite the lack of agreement, one common assumption is that aspect, like tense, has to do with the speaker's viewing of the situation talked about. However, while tense has to do with the construal of situations as viewed from a temporal vantage point that is essentially external to the situation, locating it in time, aspect has to do with the viewing of the inner progression of the event. This is also pointed out by Comrie (1976: 1-6), who states that "aspects are different ways of viewing the internal temporal constituency of a situation" (Comrie 1976: 3) and states the difference "as one between situation-internal time (aspect) and situation-external time (tense)", which is also pointed out by Bhat (1999: 43). Lyons (1977: 689) refers to aspect as being "non-deictic". Two types of aspect are generally recognized: *perfectivity* and *imperfectivity*. According to Comrie (1976: 4), one

> way of explaining the difference between perfective and imperfective meaning is to say that the perfective looks at the situation from outside, without necessarily distinguishing any of the internal structure of the situation, whereas the imperfective looks at the situation from inside, and as such is crucially concerned with the internal structure of the situation, since it can look backwards towards the start of the situation, and look forward to the end of the situation, and indeed is equally appropriate if the situation is one that lasts through all time, without any beginning and without any end.

Bertinetto and Delfitto (2000: 190), who also advocate a perspectival approach to aspect, write that

aspect is the "specific perspective adopted by the speaker/writer" and "[t]ypically, the event may be considered from a 'global' or a 'partial' point of view". This is the basis for the fundamental distinction between perfective and imperfective aspects. The difference between tense and aspect is, as Comrie (1976: 5) points out, that aspect does not relate the situation to any external time. Michaelis (1998: 2) offers a pancake-analogy to illustrate the difference between tense and aspect:

> It is evident … that the definitions of tense and aspect rely upon a spatial analogy in which "temporal location" is described in terms of location in space. If we embroider this analogy somewhat, we can further clarify the distinction between tense and aspect. Let us say that the designated situation is an object (say, a pancake), and the reference interval is a region in space (say, a dish). Tense specification is akin to locating the dish which hosts the pancake at a point some distance from the speaker. Here, the location of the speaker is analogous to the time of the utterance event. Aspectual specification is akin to providing information of the following type: is the pancake on the rim of the dish, is it in the middle of the dish, or does it cover (and perhaps overflow) the surface of the dish. Thus, for example, we commonly speak of an episode (i.e., an event) as a situation whose boundaries are contained within the reference interval.

Aspect is the relation of the event or some part of it to its own internal temporal progression, while tense is its relation to the temporal environment in and around the discourse. Bache (1997: 208) suggests a metacategory called *aspectuality*, referring to the universal conceptual semantics of aspect.

Mitchell (1979: 184) argues that "continuity and change are at the heart of the matter of aspect", a view that is also taken up by Langacker (1987: 254), who argues for the relation of perfectivity and imperfectivity to predications of processes:

> A process is a relationship scanned sequentially during its evolution through conceived time. This type of predication is ideally suited to the description of change. Most verbs do in fact predicate a change of some kind, but we must nevertheless recognize a substantial class that do not. Processes that involve a change through time will be called **perfective** …: other processes will be called **imperfective**.

Langacker thus sees aspect as a construal inherent to the situation. This way, we could operate with perfective and imperfective situations or processes. Bhat (1999: 43-4) expresses a similar point of view, when he states that aspect relates to the temporal structure of events in terms of its internal temporal mechanics, arguing the

> [t]he temporal (aspectual) structure of an event can show several other types of distinctions such as, for example, that the action may be momentary or durative, involving change (active) or not involving change (stative), occurring once (semelfactive) or occurring several times (iterative), occurring on a specific occasion or occurring habitually and so on.

This also appears to be Ota's (1963: 2) definition, when he states that aspect "means the signaling of the mode of action by some grammatical device". I agree that certain processes may be construed in such a way that they license or block perfective or imperfective readings on the basis of what Bhat and Ota describe. However, I would argue that construals of this kind belong to the actionality of a situation, as they are construals of their internal mechanics itself and not just

perspective. Following a more recent paper by Langacker (2001), I argue that aspect is a matter of profiling parts of the situation in terms of its inner temporal progression against the situation of process itself as a generalized event-frame. This is also in agreement with Comrie's (1976: 4) argument that

> the difference between perfectivity and imperfectivity is not necessarily an objective difference between situations, nor is it necessarily a difference that is presented by the speaker as being objective. It is quite possible for the same speaker to refer to the same situation once with a perfective form, then with an imperfective, without in any way being self-contradictory.

In other words, aspect is a matter of construal and understanding, not a matter of objectivity and truth. Bhat (1999: 49) writes

> An event may have a beginning and an end, a middle portion (continuing or changing), and also a result or an altered state. These are considered to be the various "phases" of an event. A speaker may talk about an event from the point of view of any of these individual phases, and his language may have inflectional (or other type of) markers for representing these distinctions. Since such markers indicate distinctions in the temporal *structure* of an event, we may regard them as belonging to the category of aspect.

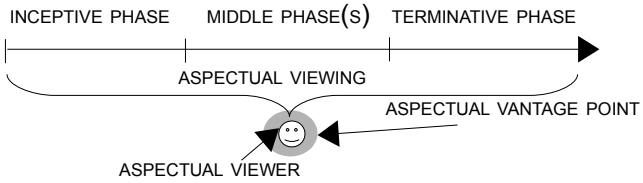
I agree with Bhat on certain points here. Events generally have the internal temporal structure of beginning, middle, and end, and that these are seen as phases in accordance with the experiential basis of cognitive linguistics that this structure is an abstraction based on our experiences in the world. Thus, the phasal structure is likely to be based on a schematized cognitive model. I disagree with Bhat when he claims that the result is part of the event in terms of its internal progression. The result of an event depends not on its internal temporal structure, but on its internal temporal mechanics. That is the mechanics that are involved in a specific type of situation and thus involve force dynamic relations and so on. Thus results are too specific to be included under a general schema of internal temporal progression. It is rather a question of the type of action that is involved in the event, and therefore a question of a classification of events in terms of actionality. Following Michaelis (1998: 1), I see aspect as

> the disposition of the location through time: aspectual marking locates the situation denoted within a reference interval, which can but need not be identified with the time of speaking, aspectual marking indicates whether the situation obtains throughout the reference interval, culminates within that time, or begins at that time.

I take this definition to overlap with Bache's (1997: 258) notion of *situational focus*. Bache restricts, drawing on Comrie (1976), the aspectual focus to the looking at a situation from outside (i.e. looking at the entire situation) or from inside (i.e. looking at the progression of the situation), but these are not the only two ways of viewing situations aspectually; one can also focus on its beginning and its ending. I define aspect or situational focus as the viewing of a part of an event or the entire event. Aspect is thus the profiling of parts of a schematized cognitive structure based on our experience of the progression of events and situations. This model is the *aspectual frame* (cp.

Bache 1997: 266; Michaelis 1998).

Figure 6.3: Aspectual frame



Situational profiling is a construal external to the inner mechanics of events. Viewing aspect in terms of phasal profiling (Dik 1989; Michaelis 1998; Bhat 1999: 49-52) allows us to bring into the picture other types of aspect without having to 'import' them from the field of actionality. Aspect differs from tense in that the vantage point is not deictic. The aspectual vantage point is relative to the event only and not to its location in time.

The aspectual frame is interesting in the perspective of embodied realism. Janda (2003) argues that aspectual viewing is rooted in our experiences of the properties of matter such as solidity and fluidity; according to her, perfectivity is metaphorically based on solidity and imperfectivity on fluidity, thus grounding aspect in the TIME IS SPACE metaphor. Both types of aspect relate to gestalts in different ways, perfectivity most obviously so because it construes the event as a temporally delimited unit. The entire event may be seen as a figure against its environment as ground. Imperfectivity is less straightforward. Profiling only the MIDDLE PHASE of the process, imperfectivity may be compared to the visual zooming in on a part of a gestalt characterized by *vagueness*[31] (say, the foot of a mountain or the knee of a leg). When zooming in on such a part, one profiles the part and gaps the rest of the gestalt that it belongs to. Thus the gestalt is the ground and the part is the figure. What is interesting here is that profiling such a part without clearly defined boundaries creates a figure that is homogenous and continuous while the ground is heterogeneous.

This relates to the cognitive processes of bounding/unbounding (Talmy 2000a: 50-55, 61-2). In a gestalt perspective, unbounded entities are typically constituents of uniform masses and what is called *open figures*. Such masses often appear in grounds in figure-ground alignments, while bounding involves the forming of a closed figure, *closed figures* often appearing as figures in figure-ground alignments.

This difference between boundedness and unboundedness is reflected in language in many different ways. One of the most discussed areas of language, where boundedness and

31 I am here operating with the notion of vagueness proposed by Ungerer and Schmid (1996), which applies to the transition zone constituting the boundary of an entity, and is contrasted with fuzziness, which applies to the transition zone between categories.

unboundedness is relevant, is mass nouns and count nouns. The referents of mass nouns, such as 'water', 'beer', 'salt', 'sand', 'grass', and 'hair' are typically phenomena that are construed as masses which are either totally uniform, not having any sort of internal make-up at all, or consist of components that are all identical and too small to be distinguished from one another thus consisting of unbounded parts. Boundedness also relates to vagueness in that vague figures that are unbounded. It is very difficult to tell exactly where a mountain foot or a knee begins and ends, so when these are profiled, they are profiled without boundaries. Boundedness is very often a question of construal, as a) the same entity may be construed as bounded and unbounded at different times, b) a typically bounded entity may be construed as unbounded, c) a typically unbounded entity may be construed as bounded, or d) an unbounded entity may be construed as a collection of bounded entities.

But it is not only physical and tangible objects and phenomena that may be subject to construal. Also less tangible ones, such as processes may be subject to construals of boundedness and unboundedness. One such area is aspect. Perfectivity implies the profiling of the INCEPTIVE and TERMINAL PHASES of the aspectual frame along with its MIDDLE PHASES, thus including the boundaries of the process within the scope of attention. This way that process becomes bounded. Imperfectivity, on the other hand, implies the gapping of the INCEPTIVE and TERMINAL PHASES, thus unbounding the process. It is unboundedness that gives the impression of the progressive construction referring to processes that are still going on and have not reached their point of completion yet. The following examples should illustrate this clearly:

(6.1) a. My mother *was climbing* into her car.
b. My mother *climbed* into her car.
c. My mother *had climbed* into the car.

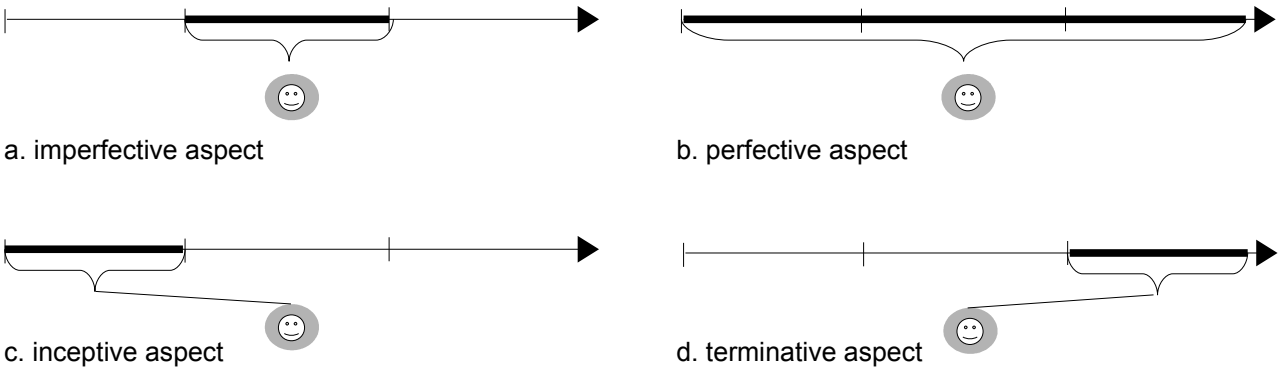
When reading (6.1b-c), one gets the impression that the mother's climb into the car is successfully completed. completed. The difference between them is that (6.1b) lays out the entire situation sequentially, while (6.1c) mainly concentrates on the state of the process having been completed. In both cases the process is delimited by, at least, the terminal phase. The version in (6.1a) gives the impression of the mother still climbing into the car. This is because, the terminal phase – the endpoint of the process – is left out of the scope of attention, thus unbounding the event.

Bergen and Wheeler (2006) present experimental results suggesting that aspect involves mental simulation. They found that imperfective aspect expressed by the progressive construction facilitates mental simulation of the event referred to by the main verb, while the perfective blocks

or thwarts mental simulation of the event. Bergen and Wheeler argue that it is the unboundedness associated with imperfectivity which prompts the subjects to contrue the event as still going on, making it easier to simulate the event itself, while the boundedness of perfectivity prompts the subjects to construe the event as complete, making it difficult to simulate it. This futher underlines that aspect is very much based on construal.

Imperfectivity, which is the primary actional construal associated with the progressive construction, is a profiling of the MIDDLE PHASE of the situation, gapping the INCEPTIVE and TERMINAL ones. So, in that sense imperfectivity is a matter of profiling a vague unbounded figure against the aspectual frame. The perfective predicator construction profiles all phases, while the inceptive and terminal constructions profile the inceptive and terminal phases respectively (Michaelis 1998):[32]

Figure 6.4: Aspectual profiling



In the interactional or instructional perspective, the different aspectual predicator constructions prompts the listener to evoke the aspectual frame and specify the type of aspect by profiling the

32 There are some interesting things about the two last types of aspect which, unfortunately, cannot be treated here in detail. It cannot be denied the possibility of profiling the inceptive and terminative phases, and there may be communicative reasons for doing so. In fact, English, along with a number of other languages, has both lexical and periphrastic ways of doing this, using verbs like BEGIN or START and STOP or FINISH, among others, respectively, or constructions containing those verbs such as [*BEGIN to* MV_{inf}] or [*START to* MV_{inf}] and [*STOP* MV_{pcp1}] or [*FINISH* MV_{pcp1}]. The constructions are based on the lexical items, obviously having a lower degree of idiomaticity than the progressive and perfective constructions. In a CxG framework one can assume that there might be some differences between the lexical units in themselves and the lexical units when appearing in the constructions. It would be interesting to see whether such differences exist and what they would entail. One possible difference may be the scope of the event. While the lexical units in themselves expresses the inception or termination as entire events, they only construe them as phases within an event in the constructions. There may also be a difference in actionality (we will discuss actionality in more detail in the next section). It is possible the the constructions conventionally construe the inceptive phase as a durative one, which may not necessarily always be the case of the lexical units in themselves. Finally, there may also be some interesting interplay between the inception or termination verbs and the unit serving as the main verb in the constructions. It seems that the inceptive and terminative constructions are slightly more blurry than the progressive and perfective ones. A thourough empirical investigation would probably unearth some of the differences between the inceptive/terminative constructions and the progressive/perfeictive constructions, and between the inceptive/terminative constructions and the lexical units in themselves.

relevant phase.

6.3. Action

While tense has to do with the construal of an event in relation to a temporal point of reference and aspect with the construal of the internal progression of an event seen from a vantage point relative to the event and not its location in time, action has to do with the construal of the inner mechanics of the event.

Action is perhaps better known as *Aktionsart*. As the term indicates, the term was meant to deal with *Arten der Aktionen*, or types of actions. However, Aktionsart is often been conflated with aspect (Bache 1985, 1997), and today, many linguists continue to conflate aspect and action under a supercategory referred to as aspect, such as Comrie (1976, 1985), Lyons (1968, 1977), Langacker (1987, 1991), Dik (1989), Michaelis (1998), Bhat (1999), and Croft (MS); Bhat (1999), for example, operates with different types of aspect such as phasal aspect, quantificational aspect, and situational aspect, and viewpoint aspect. Quantificational aspect has to do with the duration, iterativity, habituality and so on of the situation, while situational aspect has to do with its (a)telicity and its resultant states, and viewpoint aspect deals with the perfective-imperfective distinction.

Comrie (1976: 25-40) advocates a distinction of aspects that is based on criteria of action as he argues for the division of the imperfective into a habitual aspect and a continuous aspect, which is again divided into non-progressive and progressive. Continuity is non-habitually extended imperfectivity. Progressive combines continuity with non-stativity, while non-progressivity is static continuity. This division is based on notions such as habituality and stativity, which both stem from the realm of action. According to Comrie (1976: 52) the perfective "indicates the continuing present relevance of a past situation … expresses a relation between two time points, on the one hand the time of the state resulting from a prior situation, and on the other the time of that prior situation", and thus involves criteria both from tense and action. This is even more visible in his subtypes of perfects. The *perfective of result* implies that the present state is result of past situation. The *experiential perfective* implies that the situation has held during some time in the past leading up to the present. The *perfective of recent past* implies the present relevance of past situation being one of temporal closeness (this may be compared to McCawley's (1971: 104) analysis of the present perfective). Comrie (1976) bases his aspectual division on the following notions. Durativity, which "simply refers to the fact that a given situation lasts for a certain period of time

(or at least, is conceived of as lasting for a certain period of time)" (Comrie 1976: 41), and punctuality, which "means that the quality of the situation that does not last in time (is not conceived of as lasting in time), one that takes place momentarily" (Comrie 1976: 42), constitute an important dichotomy. So do telicity, which involves events that have natural endpoints and cannot be conceived of as complete before this point is reached but can be broken or interrupted, and atelicity, involving ones do not have endpoints but can be interrupted or broken (Comrie 1976: 45-8)[33]. A third major dichotomy is that between stativity, involving no change, and dynamicity, involving change (Comrie 1976: 48-51).

As the reader will have noticed, Bhat's (1999) quantificational and situational aspects and many of Comrie's (1976) dimensions refer to some inherent features of the situation, while Bhat's (1999) phasal and viewpoint aspects have to do with the viewing of the situation. Some linguists, like Lyons (1977: 687), claim that action is primarily a question of aspect, pointing at the interrelation between imperfectivity and duration. Being inherent features of the situation, the quantificational and situational aspects must relate to the type of action in question rather than primarily to the viewing of the action. That means that it must necessarily have to do with our categorization of events into cognitive categories (see also Bertinetto and Delfitto 2000: 190). Thus, action is partly a question of lexical meaning of verbs. There are some empirical problems attached to this definition:[34]

> The number of Aktionsarten is a rather more controversial matter than the number of aspects. From an isolated semantic (lexical) point of view, an indefinitely large number of Aktionsarten is present in all languages. This, however, does not mean that Aktionsart is equivalent to the actual meaning of verbs. Judging from the literature dealing with Aktionsart, Aktionsart is not directly concerned with the lexical difference between, for instance, 'run' and 'swim', but rather with differences in *type* of action or situation. (Bache 1985: 11)

Instead Bache (1997: 221) argues that verbs have *actional potential* lexically built into them. In a cognitivist perspective, this actional potential is thus to be seen as the idealized actional meaning of the verb in its semiotic ICM, which may be 're-construed', as it were, in accordance with contextual construals.

Bache (1985: 13) mentions six oppositions of verbal actionality: punctual vs. durative verbs, dynamic vs. stative verbs, telic vs. atelic verbs, ingressive vs. terminal verbs, semelfactive vs. iterative verbs, and habitual vs. non-habitual verbs.[35] There is one reservation here, which

33 Comrie (1976: 45-8) indirectly says that telicity is not an inherent feature of the verb but something assigned to the verb by virtue of its being in the construction.

34 See also Bache (1997: 219-22) on the relation between lexical and predicator meaning.

35 In Bache (1997: 231-43), the distinctions are actional vs. nonactional, simplex vs. complex, punctual vs. durative, telic vs. atelic, and directed vs. self-contained.

Bache himself also points out – namely, that action is not primarily a question of verbal semantics, but of predicator semantics. That is, the type of action described by the main verb may depend on the way that it is viewed. Consider the verb BREAK which schematically denotes CAUSING AN ARTIFACT TO CHANGE FROM BEING INTACT TO BEING BROKEN.[36]

The specification of the type of breaking depends among other things on the material of the ARTIFACT. Syntactically speaking, the specification of the type of breaking is determined by virtue of syntactic accommodation between the verb and the object, as may be illustrated by these examples:

(6.2) a. BREAK a window
b. BREAK a plastic bag
c. BREAK a redundant executive

In (6.2a), the type of breaking involved would normally be perceived of a short, punctual kind, as windows are typically made of glass which easily breaks at an instant, whereas in (6.2b), it probably is of a more durative kind, as it involves the stretching of the plastic bag until it bursts. Finally, in (6.2c), we are dealing with a metaphorical type of breaking based on Lakoff and Johnson's (1980: 28) THE MIND IS A BRITTLE OBJECT metaphor.[37] Here, the breaking refers to the disordering of the executive's mental and emotional states.

As we have seen, accommodation between the main verb and the syntactic arguments is important in the exact construal of actionality. But accommodation within the predicator is also involved in the form of actional coercion:

(6.3) a. They broke the window.
b. They were breaking the window.

In (6.3a), the actional construal of the situation is that which we assigned to (6.2a) above. However, in (6.3b), where the predicator specifies imperfective aspect, the actional construal now involves some kind of durativity. This has to do with the inner mechanics of the situation. Short punctual events are typically conceived of as having no internal structure. Their temporal extent is so limited that their internal phases cannot, without the aid of technological equipment, be identified; therefore punctual events can only be viewed perfectively. Accordingly, the choice of an imperfective reading must necessarily imply a durative kind of situation. Suzuki (1996: 265) points out that "English progressive sentence can be used only to describe process" (which while true of most instances of the progressive, is not exclusively always the case). This type of coercion is

36 Of course this is only one of its possible senses; another main sense is STOPPING AN ONGOING ACTION OR STATE, as in 'BREAK the silence'.
37 In fact, Lakoff (1990: 57-61) argues for the metaphorical understanding of event structures in general.

sometimes called *categorial interplay* (Bache 1985, 1997). The predicator can be said to override, or determine, the meaning of the main verb. This is in accordance with the coercion and gestalt theories. Croft (MS: §1.1) points out that the combination of a lexical verb and a verb phrase construction often results in a reconceptualization of the actionality of the verb.

Bache (1997: 203) argues for the treatment of action types under a linguistic metagategory called actionality, which refers primarily to the conceptual semantic and universal properties of action. My definition of action follows that which is implied by "Aktionsart" – namely, types of action. I consider action to primarily be a question of the co-operation between the lexical and constructional semantics of the predicator elements and the relation of coercion between the predicator and the other syntactic arguments. Thus, we can apply Bache's (1997: 219) definition with a conceptual twist (which in fact is already implicit in his own work). Action, thus, has to do with the classification of situations according to the way that their procedural characteristics, or inner mechanics, are construed into categories in a cognitive structure. Action types are a matter of experientialism in the embodiment theoretical sense (cp. Lakoff and Johnson 1980; Lakoff 1987, 1990; Johnson 1987). That is, they are categorizations of our experiences of situations and events into conceptually schematic classes. Bache and Davidsen-Nielsen (1997: 191-6) offer a classification of situations. As they point out

> Language allows us to talk about all the goings-on, dealings, emotions, perceptions, attitudes, etc. that are part of everyday human lives. With language, we also identify things, and we classify, characterize and relate them… As human beings we conceive of the world and of all the situations taking place or existing in the world in terms of *differences* and *similarities*. (Bache and Davidsen-Nielsen 1997: 191)

Bache and Davidsen-Nielsen (1997: 191-5) also warn us that

> the typology of situations offered [should not] be confused with a typology of *verbs*… To fully understand the nature of [action], it is essential to make a distinction between 'the real world' and 'the world as conceived by the speaker', i.e. between objective facts and the subjective way we think about these objective facts or choose to think of them in a particular context…

They also remind us that only rarely is there a one-to-one relationship between a lexical verb and the situation expressed. Their classification can be said to be based on conceptualization and symbolization though they do not adhere directly to a cognitive linguistic framework. The primary dimension of their distinction is between dynamic and stative situations:

> A dynamic situation requires a continual input of energy and typically involves change while a stative situation requires no input of energy and remains the same. A dynamic situation *happens* or *takes place* while a state *exists* or is *true* of something (ibid. – emphasis in original).

Below is their classification:

- **Dynamic situations:**
    - *Punctual*: not temporally extended thus having no, little, or unperceivable internal structure;
    - *Telic*: temporally extended and progressing towards a natural terminal point;
    - *Directed*: temporally extended and progressing towards a terminal point which is outside the event;
    - *Self-contained*: temporally extended and not progressing towards a terminal point;
    - *Iterative*: a series of repeated identical or similar actions.
- **Stative situations:**
    - *Intensive relation*: involving the identification of a concept in terms of another or the characterization of a property of the concept;
    - *Extensive relation*: involving the physical state of the concept, including location, position, and possession;
    - *Attitude*: involving the psychological state of an (animate) entity in relation to a concept
    - *Perception*: involving sense relations;
    - *Habit*: involving a stative or dynamic situation that occurs frequently enough to be considered an inherent feature of a concept.

This typology involves many conceptual factors. Note that all of the dynamic situations involve the conceptualization of time as a factor. However, they differ from the temporal conceptions of aspect and tense. Here, time is part of the inner nature of the situation, because it is classified in terms of the temporal extent of its internal mechanics. Note also that all the stative situations involve relations of concepts or entities in terms of other concepts or entities.

While this typology involves important factors in the categorization of situations and states, such as temporal extension (which we will call *duration*), energy flow, and stativity, it lacks an important factor. Apart from the inclusion and exclusion of terminal points, this typology does not take *initial* and *final states* into account in the sense proposed by Suzuki (1996: 267). I would argue that, in order to understand the notion of change, which is important in relation to both dynamic and stative situations both being defined in terms of the presence and absence of change, inceptive and resultant states should be taken into account. I would argue that that an event type is a gestalt, as is also pointed out by Suzuki (ibid.). The change or lack of it can only be considered in relation to the initial and final states, which may in turn only be considered in relation to each other.

Croft's (MS: §1.2) typology, which is based on Vendler (1967)[38], is more openly conceptual and it also accounts for the initial and final states. As with Bache and Davidsen-Nielsen (1997), we find here that the first level distinction is between dynamic and non-dynamic events, which are here called *states* and *processes* (Croft MS: §1.2.2), the main difference being "that states do not involve any sort of change while processes do". This definition lies somewhere in between Bache and Davidsen-Nielsen's (1997) of dynamic and stative situations and Langacker's (1987) perfective

38 Vendler (1967) assigns the actional features primarily to the lexical verb.

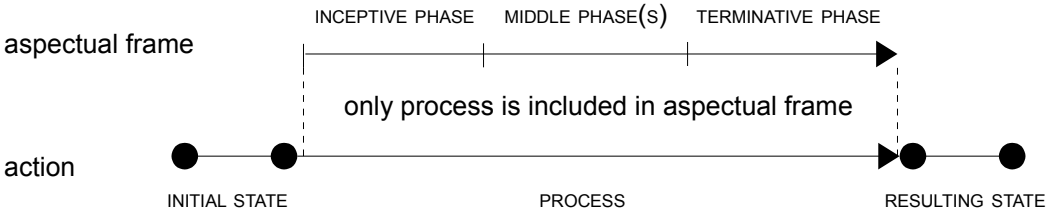
and imperfective situations. Here is Croft's (MS: §1.2 typology):

- **States**:
    - *Point state*: lasting only for a short period;
    - *Inherent state*: permanent and construed as an inherent feature of an entity;
    - *Transitory state*: extending over time but not permanent;
- **Processes**:
    - *Activities*: involving changes that do not lead to new final states:
        - *Undirected*: involving change that is not directed towards a terminal point;
        - *Directed*: involving change that is directed towards a terminal point;
    - *Achievements*: punctual and involving changes that lead to new final states:
        - *Reversible:* resulting in a transitory state;
        - *Irreversible:* resulting in an inherent state;
        - *Cyclic:* involving repetition of semelfactive action;
    - *Accomplishments*: durative and involving changes that lead to new final states:
        - *Reversible:* resulting in transitory state;
        - *Irreversible:* resulting in inherent state.

This typology involves the initial and final states, the initial states somewhat indirectly, but the mere fact the final states are mentioned means that initial states must also necessarily be involved in accordance with Suzuki's (1996) observation regarding the gestalt nature of events. However, it lacks Bache and Davidsen-Nielsen's (1997) consideration of relational states as well as habituality.

A descriptively even more effective typology of actions for the purpose of this study would be one that combines Bache and Davidsen-Nielsen's (1997) with Croft's (MS) classifications, and also draws on elements from Comrie's (1976) set of terms. The reader will notice that it is rather simple compared to any of the source classifications. The reason is that I have only included basic level actional categories, since subordinate level specifications have no relevance as such in relation to the progressive construction. There is no isomorphic correspondence between actional models and the aspectual frame. The aspectual frame relates to the viewing of the change itself and does not involve the initial and final states. The inceptive phase is that point or stretch of time that constitutes the beginning of the change, while the terminal phase is that point or stretch of time that constitutes the ending of the change.

Figure 6.5: Aspectual frame and action structure compared



The first distinction is between state and process, and it follows Comrie's (1976), Bache and Davidsen-Nielsen's (1997) and Croft's (MS) change-based distinction. It further implies the assumption that processes involve an initial state, a change, and a final state, which may or may not be identical to the initial state, and that this organization is a gestalt (cp. Suzuki 1996).

There are a number of different subordinate level states, some of which may be plotted onto a continuum of temporal extent ranging from point states over temporary states to permanent states, which may or may not be inherent. Furthermore, while point and temporary states, as well as many non-inherent ones, are reversible, permanent inherent states are irreversible. While point states and permanent states are not really relevant to the progressive construction in terms of subordinate types, there are a number of temporal states that are central to some uses of the progressive – namely, mental states, behavioral states, a number of non-behavioral states, and modal states, which will all be described later.

The primary distinction within the realm of processes, when it comes to the progressive construction, is between durative and punctual processes, notions such as telicity and atelicity having little influence on the uses of the progressive construction involving durative processes. It does, along with reversibility and irreversibility, become relevant in relation to punctual processes in that telic reversible and telic irreversible punctual processes enter into different coercion patterns. In relation to durative processes, the primary element appears to be the substance of the process and whether it displays continuity or iterativity, iterativity also being relevant to certain coercion patterns.

Even though telicity and atelicity have generally little influence on the progressive construction, I would like to take the opportunity to discuss two topics relating to telicity – namely, *completion* and *termination*, which in conjunction with reversibility and irreversibility are of some important to some of the more specific subconstructions of the progressive construction. These two semantic concepts are often not separated from each other in the literature by linguists. However, it is useful to make a distinction between the two. Completion applies only to telic processes, because they progress towards a natural endpoint. The completion of a process is the point at which the primary undergoer of the process enters the resulting state that the process has been progressing towards, and the process, which is essentially inchoative, may be said to be complete. Termination on the other hand does not imply the reaching of a natural endpoint, but simply stopping any type of process. Termination thus applies to the endpoint of an atelic process and to the endpoint of a telic process, if the telic process is stopped at any point that is not the completion point. Such a

separation of the two concepts is quite useful and essential in the distinction between telic and atelic processes.

Finally, there is the notion of *habit*. Comrie (1976: 26-32) argues that habituality is not the same as iterativity, but describes an event or situation that is temporally extended that it is seen as a characteristic of the relevant stretch of time. Thus, a habit is a process that is repeated frequently enough to be considered an inherent feature of a concept which is often one of the participants in the event. Thus, it inherits some features from the relational state category and from the cyclic process category. Habit itself subsumes a number of subtypes, which will be described later.

6.4. Modality

The final domain that we will discuss here is modality. Modality is not normally associated with the progressive because the progressive construction does not contain any of the formal elements that are traditionally associated with modality in English, which count modal verbs (e.g. MAY, WILL, MUST, and CAN) quasi-modals (e.g. HAVE TO, GOT TO, and OUGHT TO)[39], as well as certain adverbs.[40]

Modality is a very complex phenomenon, especially when approached purely semasiologically. Most modals are polysemous, each expressing an abundance of modal meanings. Collins (1991: 145) warns us that "[t]he complexity of the meanings expressed by the modals has presented a challenge to both semantic theory … and descriptive grammar …" because of the polysemy of modal verbs. Likewise, Leech (1971: 66-7) underlines the difficulty of dealing with modal verbs in English:

> Many pages, chapters, even books, have been written about the modal auxiliary verbs in English. What makes it so difficult to account for the use of these words … is that their meaning has both a logical and a practical (or pragmatic) element. We can talk about them in terms of such logical notions as 'permission' and 'necessity', but this done, we still have to consider ways in which these notions become remoulded by the psychological pressures which influence everyday communication between human beings: factors such as condescension, politeness, tact, and irony

However, in an integrated grammar framework, striving to incorporate as many relevant contextual factors as possible into the grammar and which makes use of both onomasiology and semasiology, the factors that Leech complains about should constitute a source of valuable knowledge rather than just being a nuisance, as they are incorporated into the grammar. Another advantage to including onomasiological perspectives is that it allows us to investigate other modal phenomena than just the modals and semi-modals. There are many other phenomena in English that include

39 See Krug (2000) for an important diachronic study of the grammaticalization of modal semi-auxiliaries.
40 See Hoye (1997) for more on adverbs and modality.

modality in one way or another, such as what is traditionally considered mood, as well as certain extensions of the progressive construction.

Linguistics has borrowed much of ther terminology of modality from the realm of logic, and while possibility and necessity are at the heart of the matter, not even logicians seem to agree on the details, as McCawley (1981: 273; see also Lyons 1977: 787) points out:

> The term 'modal logic' is often used rather vaguely. It takes in the logic notions of 'necessity' and 'possibility', but there is no real consensus on what else it takes in; it is sometimes used so broadly as to take in the whole of logic that is not taken in by predicate logic and sometimes so narrowly that it takes in nothing more than 'necessity' and 'possibility' (in combination with the expressive material of propositional logic and predicate logic).

Blackburn (1994: 246) offers the philosopher's definition of modality:

> The modality of a proposition is the way it is true of false. The most popular division is between propositions true of necessity, and those true as things are: necessary as opposed to contingent propositions. (Blackburn 1994: 2469)

Many linguists have adopted this view. However, it has one flaw. It presents the factuality as an inherent feature of the proposition. Modality is not so much an inherent feature of a proposition as it is an expression of the language user's evaluation of the proposition, which is also pointed out by Givón's (1993a: 169; 2003: 300) definition of modality:

> The propositional modality associated with a clause may be likened to a shell that encases it but does not tamper with the kernel inside. The **propositional frame** of clauses – participant roles, verb type, transitivity – as well as the actual lexical items that fill the various slots in the frame, remain largely unaffected by the modality wrapped around it. Rather, the modality codes the **speaker's attitude** toward the proposition. (emphasis in original)

This concurs with Taylor's (2002: 406) view that "[s]emantically, the modals offer a special perspective on a situation" and that they "assess a situation with respect to its likelihood". Bhat (1999: 63) also underlines the subjective basis of modality, writing that

> [j]udgements can be of different types depending upon the confidence that the speaker has in asserting the occurrence of an event. He may consider the event to be real or unreal (imaginary or hypothetical) and further, he may be sure or unsure about his own judgement in this regard

This assessment is ultimately a product of the subjective judgment by the language user, as is also pointed out by Chalker and Weiner's (1994: 243) and Crystal's (1999: 222) definitions of modality, and in Bache and Davidsen-Nielsen's (1997: 324) following definition:

> By modality we understand a *qualification* of an utterance whereby the speaker operates with alternatives to the actual world … Human beings often think as if things might be other than in point of fact they are, and for the expression of such conceptions they use *modal* rather than *categorical* utterances.

Modality has to do with the fact that humans have the ability to think about existing things as if they were different and non-existing things as if they existed and so on, as Davidsen-Nielsen (1990: 43) points out in his definition of modal concepts:

> By modal concepts are understood concepts of what is possible, what is necessary, what is probable, what

> is conceivable, and the like. The idea of modality is an old one, going back to classical Greek philosophy. Aristotle attaches particular importance to the notions of possibility and necessity. The emergence of such notions seems to be due to the fact that human beings frequently think and behave as if things might be other than in point of fact they are.

In a way, modality is a product of human imagination, which is also one of the basic ideas, if not the fundamental one, of Fauconnier's (1994) original mental space theory. Thus, modality is a matter of construing propositions in terms of possibility and necessity of occurrence. In that sense, modality is quite subjective, and is a result of one of the most characteristic human cognitive capacities – namely, imagination. Due to imagination, modality "centrally involves non-factuality and concerns either degree of *probability* (logical possibility and necessity, hypothetical meaning, beliefs and predictability) or *desirability* (permission, obligation, volition)" (Bache and Davidsen-Nielsen 1997: 316). Note that this definition is in agreement with the tenets of cognitive linguistics, including Fauconnier's (1994) original mental space theory, as well as the definitions proposed by Givón (1993a; 2003a), Chalker and Weiner (1994), Crystal (1999), and Bache and Davisen-Nielsen (1997).

Not only is modality a matter of subjective judgment in terms of possibility or necessity, it is also a matter of degree, or different types, of possibility and necessity. Lyons (1968) points out the scalar nature of modality, referring to three scales that he thinks are basic to modality markers across languages:

> we find a large variety of ways in which the 'attitude' of the speaker is grammatically marked in different languages. At least three 'scales' of modality may be relevant. The first is the scale of 'wish' and 'intention' … The second scale is that of 'necessity' and 'obligation' … The third is that of 'certainty' and 'possibility' … I have used the term 'scale' for these different modalities, because they may be categorised into a larger or smaller number of subdistinctions (e.g. 'certainty', 'probability', 'possibility', or 'stronger' and 'weaker', or different kinds of, 'obligation' and 'necessity'; and so on).

This statement should appeal to functionalists and cognitivists for several reasons. Firstly, it involves the function of modal markers to express the 'attitude' or judgment of the speaker, which we have discussed above. Secondly, it involves what would later be known as the basic image schema of SCALE (e.g. Lakoff and Johnson 1980). Thirdly, there seems to be some overlap between this scalar definition and the maximal-minimal force continuum from certain force dynamics based approaches to modality (Talmy 2000a, Boye 2002), in which modal-related notions such as probability, necessity, desire etc. are explained in terms of forces allowing the modalized propositions to happen, forcing them to happen, or preventing them from hapening.

Turning now from the scalar nature of modality to the different types of modality posed in the literature, we can start with Bhat (1999: 63) who points out that the degree or type of possibility or necessity is cross-linguistically dependent on three contextual factors:

(i) a speaker's opinion or judgement regarding the actuality of an event,
(ii) kind of evidence that is available for the speaker to form this judgement, and
(iii) kind of need or requirement which forces the speaker (or someone else) to get involved in an event (or to carry out an action)

Points (i) and (ii) thus relate to our encyclopaedic knowledge of the world and what is and what is not possible (iii) is based on what is socially possible in the sense that social factors make something possible or necessary. Social knowledge is basically not different from encyclopaedic knowledge as it is subject to the same construal operations. We can draw parallels between these factors and Davidsen-Nielsen's (1990: 44) three basic kinds of modality:

1) A modality which is concerned with *rational laws* of inference and deduction.
2) A modality which is concerned with *social* or institutional *laws*.
3) A modality which is concerned with the relationship between empirical circumstances and the states of affairs which follow from them, that is, with *natural laws*.

Despite some minor differences in definition, point 1 corresponds to Bhat's point (i), while point 2 corresponds to point (iii), and point 3 parallels (iii) in certain senses. There are many such classifications in the literature on modality in language. All the types of modality proposed may be boiled down to four generally basic types of modality.

Epistemic modality is based on our knowledge of the world and thus comprises Bhat's (1999) points (i) and (ii) and Davidsen-Nielsen's point 1. It is "concerned with the likelihood or degree of certainty of something" (Chalker and Weiner 1994: 137) and "indicates a kind of opinion (or knowledge) that a speaker has regarding the actuality of an event (or the basis for such an opinion or knowledge)" (Bhat 1999: 75). In other words "a judgment of the speaker: a proposition is judged to be uncertain or probable relative to some judgments" (Auwera and Plungian 1998: 81). It is important to underline that the degree of possibility or necessity, as well as the choice between the two, depends on the speaker's judgment according to his encyclopaedic knowledge:

> By modalizing an utterance epistemically the speaker indicates that he is not presenting what he says as a fact but rather, for example, that he is speculating about it, presenting it as a deduction, or that he has been told about it … While in the case of epistemic necessity he expresses a high degree of confidence in the truth of what he is saying on the basis of deduction from facts, he indicates no more than that a certain state of affairs is conceivably real in the case of epistemic modality (Davidsen-Nielsen 1990: 73)

Since the factors involved in epistemic modality are related to knowledge of the outer world, epistemic modality is often referred to as 'extrinsic' in the traditional reference grammars of English.

Deontic modality has to do with knowledge of inner factors, such as volitional and social possibilities and necessities. It is thus seen as "the enabling or compelling circumstances external to the participant as some person(s), often the speaker, and/or as some social or ethical norm(s) permitting or obliging the participant to engage in the state of affairs". (Auwera and Plungian 1998:

81), and is defined as being

> [o]f or relating to duty and obligation as ethical concepts … The term is applied to those uses and meanings of modal verbs that are intended to impose an obligation or grant permission or otherwise influence behaviour … In a sense deontic modals actually do something (e.g. they order, advise, permit, etc), and can be regarded as a special type of PERFORMATIVE. (Chalker and Weiner 1994: 109)

Or as Bhat (1999: 75) puts it, deonticity

> indicates the kind of compulsion which makes it possible or necessary for an event to take place. This compulsion may be internal to one or more of the participants of the event, or external to them; that is, internal notions like ability, willingness and desire and external notions like necessity, request and order can be brought under the deontic.

Deontic modality can be compared to Davidsen-Nielsen's (1990) point 2 and Bhat's (1999) point (iii). Since deonticity relates to such inner factors, it is sometimes called 'intrinsic' in traditional reference grammars of English. Another term is root modality, because the epistemic usage of modal verbs is grammaticalized from the deontic ones. However, I shall use 'deontic', recognizing that modality, though primarily expressed by modal verbs in English, may be expressed in other ways too, and in other primary ways in other languages, giving the term a more onomasiologial twist. Moreover, as Hoye (1997: 44) points out "[r]oot is an unfortunate term for it implies that this type of modality is the more basic".[41] One type of deontic modality which is relevant to the progressive construction is what Nuyts (2006) calls *directive* modality. Directive modality is related to social necessity and obligation. The speaker uses it to prompt the modalized proposition to happen by directing or ordering the hearer 1) to perform the action or 2) enter the state that is expressed either by the proposition, or with reference to an order given to an entity X by an entity Y. Some examples from English are SHOULD in an utterance like "You should go home now" where SHOULD implicitly is an order rather than a suggestion, and the [X *WANT* Y *to* V_{inf}] as in "I want you to stop talking and start working" or "They want us to kill innocent people". Thus, directive modality overlaps considerably with imperative mood, and it is also closely related to obligation and permission. In English, directive modality typically involved modal markers ssuch as modal verbs and constructions to impose authority and to make others perform desired actions, or to make reference to such a relation. This type of modality thus involves the factors in Davidsen-Nielsen's (1990) point 2, since it ultimately involves relations of authority and power. The more authority the speaker has, the more likely it is that the order will actually be carried out. Directive modality also involves Bhat's (1999) point (iii) to some extent, the need or requirement being the

41 In addition, some linguists operate with *dynamic modality* which has to do with factuality and intrinsic abilities (Davidsen-Nielsen 1990: 74; Chalker and Weiner 1994: 128; Auwera and Plungian (1998: 80). See Vihla (2000: 210) for a discussion of the differences between dynamic and deontic modality. A fourth type of modality is *alethic modality* which has to do with logical likelihood rather than subjective jugdments (Chalker and Weiner 1994: 19)

authority of the one giving the order and the order itself.

In cognitive terms, either type of modality may be seen as forming a domain. Either domain subsumes a number of subdomains, each of which pertains to a submode of modality. For instance, the epistemic domain would subsume subdomains of POSSIBILITY, PROBABILITY, LOGICAL NECESSITY and so on, while the deontic domain would subsume subdomains for WISH, DESIRE, OBLIGATION and so on. In this perspective, they are not just domains but also categories.

Epistemic modality is knowledge-based. One linguistic implication is that modality applies not only to future events or past and present event whose ontology the language user is not certain of – it also applies to past and present events that certainly will happen or are happening, as these are judged in terms of high certainty. Deonticity is part of the same cognitive system as epistemicity, because it is subject to the same construal operations. It is also epistemic in that sense. Still it is different, not in terms of its basic cognitive status, but because it involves social knowledge and social factors (which are then ultimately also encyclopaedic and epistemic).

Givón (2003a: 301-2) suggests four communicatively defined epistemic types of modality which apply to the more ontological aspects of modality such as possibility, probability, logical necessity, and all the other epistemic subtypes of modality:

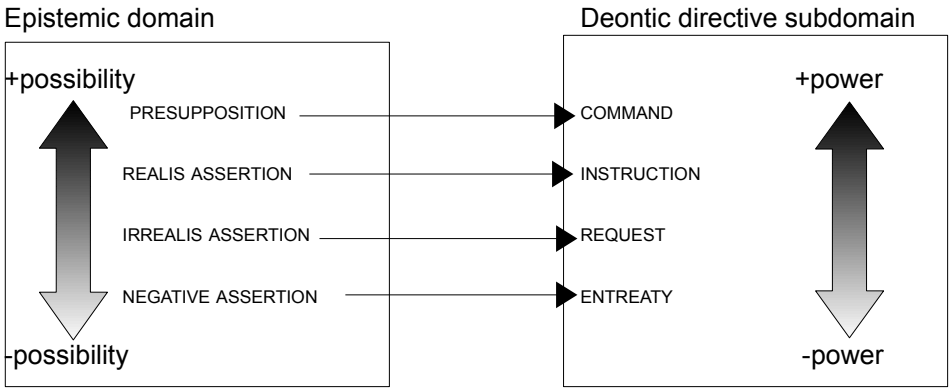
- **Presupposition**: The presupposition is *taken for granted* to be true, either by definition, prior agreement, generic culturally-shared convention, by being obvious to all present at the speech situation, or by having been uttered by the speaker and left unchallenged by the hearer.
- **Realis assertion:** The proposition is *strongly asserted* to be true. But challenge from the hearer is deemed appropriate, although the speaker has *evidence* or other strong grounds for defending their strong belief.
- **Irrealis assertion**: The proposition is *weakly asserted* to be either possible, likely or uncertain (epistemic sub-modes), or necessary, desired or undesired (evaluative deontic sub-modes). But the speaker is *not* ready to back up the assertion with evidence or other strong grounds; and challenge from the hearer is readily entertained, expected or even solicited.
- **Negative assertion:** The proposition is *strongly asserted* to be false, most commonly in contradiction to the hearer's explicit or assumed beliefs. A challenge from the hearer is anticipated, and the speaker has evidence or other strong grounds for backing up their strong belief.

Rather than being four discrete types of modality, I think these four types of modality are focal points on a continuum ranging from judgments of the proposition to be completely true – and thus with a maximum of possibility – to judgments of the proposition to be completely untrue and – thus with a minimum of possibility. As indicated under the irrealis assertion type, these types of modality may also be expanded into the domain of deonticity. Note that there are parallels between Dahl's (2000a) above-mentioned perception-, schedule-, and intention-based modes of future reference and Givon's (2003a) notions of presupposition and realis statements. I think the scalar nature of the four types proposed by Givón (2003a) are applicable to all subtypes of epistemic

modality, such that it is a general structure of the epistemic domain, which all the epistemic subtypes inherit and elaborate upon, which is hinted upon by Givón himself.

If epistemicity is the basic type of modality, then deonticity must be an extension of it. That is, the scalar structure of the epistemic domain is mapped onto the deontic domain and its subtypes. For instance, mapped onto the deontic subdomain of directive modality, the deontic correspondent to presupposition is a deontic judgment of a proposition made on the grounds of the speaker's strong authority over the hearer or over the content itself of the proposition, while the deontic version of the realis assertion is based on authority, which is not strong. The directive extension of irrealis assertion is a deontic judgment made by a speaker with weak authority, while the directive version of negative assertion is a deontic judgment made on no authoritative grounds. These could be called *command, instruction, request*, and *entreaty* respectively. The directive domain is primarily related to dimensions of social power relations and authority which may be said to also be the case of many other deontic types. The extension from the epistemic domain into the deontic directive domain is illustrated below:

Figure 6.6: Extension into the deontic domain



The directive subdomain is also structured like a continuum ranging from strong authority to no authority. I stated earlier, following observations by Nuyts (2006), that directive modality overlaps with imperative mood. It also relates to speech act in that directive modal constructions *per se* have speech act functions as various types of directive speech acts, which I have deliberately aimed at implying in my suggested terms for them.

Givón's (2003a) treatment of modality is interesting in a communicative and interactional perspective in that it underlines the interpersonal aspect of modality. Modality is not just a matter of the speaker judging the content of the expression, but also of the speaker intending to make the listener make the same judgment.

Unlike what may be expected, modality appears to be quite relevant to the progressive construction, as many instances of it have specific modal functions. Since these functions are rather specific and limited, and given that all the different types of modality may be boiled down to two basic types which are based on the same conceptual system, I will not operate with a plethora of modalities, but only with epistemic and deontic modality. This does not mean that I do not acknowledge that there are several subtypes and degrees of modality, but it is simply because establishing all of these would be way beyond the scope of this dissertation. The types of modalities I will operate with are also based on the empirical investigation and should thus not be taken as language universals, but more tentatively as language specific types.

6.5. Basic symbolic relations of the progressive construction

The verbal domain matrix is evoked by predicator constructions and other similar constructions as well as any other stimuli calling for construals of events. The temporal and aspectual frames as well as any force dynamic or other type of frame associated with the main verb item and the argument structure construction the predicator co-occurs with form the domain matrix. Included in the domain matrix is also the actionality categorization, as well as modality judgments and the host of frame they may bring along.

The verbal domain matrix is expressed by the entire predicator configuration and not just its elements. It is only when the entire configuration appears in discourse or elsewhere that nodes and node patterns representing the frames and specific profiling patterns relating to the matrix are activated.

Constructions are idiomatically combining expressions which means that their individual elements may profile individual components of the frames evoked. This also applies to the progressive construction (some of its symbolic features are shared with other central predicator constructions). The operator BE allows for tense inflections and thus profiles components of the temporal frame, either the PAST or the PRESENT, depending on the form of BE.

Aspectual frames are already specified in terms of profiling and gapping, and thus come prefabricated, so to speak, with the syntactic configuration. The actionality is provided by the main verb slot in conjunction with the argument structure construction but may be subject to coercion. Thus, the compositional symbolic links are assigned to the positions in the configuration rather than to the lexical elements. The entire configuration itself instructs the language user to activate the verbal domain matrix. If the speaker utters 'I am eating' then the hearer evokes the domain

matrix because of the [OP:*BE* MV_{pcp1}] configuration, but if the speaker utters *'I have eating', then the hearer does not evoke any of the frames in the matrix (without making an active effort to understand the utterance), because there is no *[OP:*HAVE* MV_{pcp1}] schema and thus no frame matrix to be evoked by it.

While the entire configuration instructs the hearer to evoke the frame matrix, each functional element in the construction symbolically links up with and profiles parts of the frames in the matrix. The operator allows for inflectional paradigmatic variation in order for it to specify the profiling construal of the temporal frame. The main verb slot evokes the propositional frame of the lexical instantiator. It also provides the actionality, but, as we will see, the actionality of the main verb is often overridden by the construction itself.

The main verb position also evokes the aspectual frame and profiles the relevant part of it. It is not the lexical instantiation, but the morphologically fixed realization of any item appearing in the main verb position, that profiles the aspectual part. In the progressive, it is the present participle form that specifies the imperfective construal of the aspectual frame. This could be perceived as an argument for present participles generally expressing imperfectivity. There are many other constructions in English, where present participles express, if not imperfectivity, then other types of unbounded construals. Here are some examples:

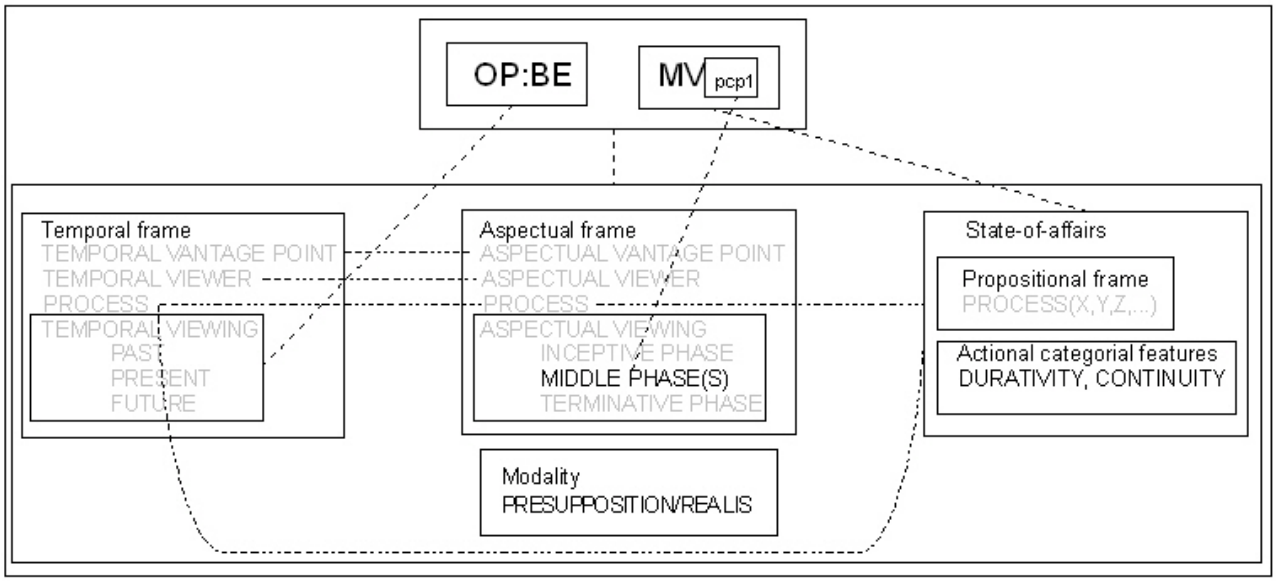
(6.4)
a. The Germans, *panting for breath*, sank back against the ice.
b. Uganda is a *developing country* with neither the wealth nor the health service infrastructure.
c. *Raising money for your favourite charity* can be fun.
d. Nurse Kay Hopps will have responsibility for *the running of the office*.
e. I just *kept walking*.

(6.4a) is an instance of what could be called the *event-relating present participle construction* with the formal configuration of a present participial clue attached to a finite main clause, in which the adverbial clause may be inserted in any adverbial locations (Bache and Davidsen-Nielsen 1997: 134-47). Semantically, the adverbial clause expressing an event that takes place simultaneously with the one in the matrix clause, serves as a kind of backdrop. Thus, in this construction, the event is imperfective in relation to event expressed by the main clause. In (6.4b), which is an instance of the *adjectival present-participle construction*, it may either construe the event as something the referent of the noun is engaged in or it may construe it as a general attribute of the referent of the noun, which is the case here. In both cases the event is unbounded. In the former it is imperfective while in the latter it is abstract and generalized into a type of state-of-affairs. It is also the construal

that is typically expressed by the indefinite nominalized present participle construction (6.4c) while the definite nominalized present participle construction (6.4d) construes a specific event as unbounded. In the construction in (6.4e), the participle also expresses an imperfective construal, the difference between it and the progressive construction being the prominence of unboundedness.

While one might theorize that all instances of the present participle in (6.4) are unbounded, the nature of the unboundedness varies from construction to construction. My guess is that the present participle itself is a construction that expresses an abstract unbounded event, which is to be specified by the more complex constructions it appears in. Langacker (1991), for instance, attributes a process-in-ternal view to the participle. When nominalized, the present participles' primary propositional act function is reference while its propositional act function is predication when functioning more verbally. Finally, the propositional act function is that of modification when functioning adjectivally. This, again, points towards the specifics of the participle being associated with its contexts of use, such as the progressive predicator construction and those we have just discussed. The unbounded construals are not to be lexically attributed to the verbs, though some verbs have more actional potential to be imperfectively construed than others. Rather than being strictly compositionally derived, it would make more sense to argue that the progressive is a hybrid construction, one of whose parents is [[V_{pcp1}]/[UNBOUNDED EVENT]]. The problem is that it would be impossible to identify other parents. It is more likely that the progressive construction is one complex construction with its own specific content. This does not, of course, prohibit it from inheriting some of the meaning of the present participle construction and elaborating on it. This seems to be the analysis applied to present participles by Smith and Escobedo (2001: 559) to present participles in complex clause structures in which it serves as a complement. They argue that the basic unboundedness is elaborated on in those types of constructions so as to construe types of overlaps between the process of the participle and the process of the main verb in the matrix clause. In a way, the semantic content of OVERLAPPING PROCESS is assigned to the present participle via idiomatic combination such that the participle has that function by virtue of appearing in that type of construction. Likewise, that unboundedness as a proper imperfective aspect is assigned to the participle in the progressive construction through idiomatic combination, which in effect is the gestalt principle posed by Lakoff (1977) that parts are assigned additional significance within wholes. It is also possible that it works the other way round, such that the content of the present participle is a generalization based on the history of ways that it is used in. The progressive construction would then have symbolic structure illustrated below:

Figure 6.7: Hypothesized semantic structure of the progressive construction[42]



This is of course highly schematic, as each component is a frame in its own right consisting of further subcomponents to be profiled and gapped. The entire [OP:BE MVpcp1] configuration establishes a symbolic link with the entire verbal domain matrix, since it, like most other finite predicators, evoke the verbal domain matrix. OP:BE evokes the temporal frame, being the operator and, thus, the finite element, and profiles either the PAST or the PRESENT component in the TEMPORAL VIEWING, depending on its tense form. The MV_{pcp1} slot links up with what I call *state-of-affairs*, which refers to the process itself and its truth-semantic aspects, such as the *propositional frame* (or force dynamics structure) it involves and the *actional categorial features* of the relevant actional category. The primary actional features of DURATIVITY and CONTINUITY are already specified in accodarnce with the embodied constraints perception and cognition imposes upon the semantics of the progressive construction. The present participial form of the main verb is here presented as linking up symbolically with the MIDDLE PHASE(S) thus gapping the rest of the aspectual frame, providing the imperfective construal of the process. Given that present participles typically atemporally scans processes and make reference to them rather than scanning them temporally, it makes sense to assume this symbolic relation. However, a plausible alternative would be to have the entire [OP:BE MV_{pcp1}] configuration entering into the symbolic link with the MIDDLE PHASE(S), since it is only in the progressive construction that the unboundedness of the participle is construed

42 Simplified variations on this figure will be used henceforth, in which only the names of the construals are given rather than the entire structure of the frames. For instance, the profiling of the MIDDLE PHASE(S) will simply be labelled IMPERFECTIVITY, and the profiling of the PAST component in the temporal frame will simply be called PAST. The propositional frame is simply called PROPOSITION, and the actional frame will be specified in terms of the type of actionality involved. When required, the information in the boxes will be more detailed.

specifically as imperfectivity. Still, this is implied in the linking up of the present participial form with the MIDDLE PHASE(S), because the progressive construction, like many other constructions, is considered an idiomatically combining expression (Nunberg et al. 1994) which, according to the non-reductionism of gestaltism assigns the specific imperfective construal to it. While not overtly marked, modality is part of the verbal matrix. The lack of overtly modal marking of many finite predicators has misled many grammarians of English to conclude that the progressive, like most other finite predicators, is modality-free. However, modality may conceptually be an integrated, though not overtly marked in English, part of imperfectivity and ongoingness in that a process that is ongoing is probably more likely to led itself to modality judgments of high probablity, because it is already happening. Since construction grammar does not necessarily require bi-unique mapping, and modality may be a component of the construction that is synergetically expressed by the construction as a whole. Finally, one can assume that there are bindings between the TEMPORAL and ASPECTUAL VANTAGE POINT, the ASPECTUAL and TEMPORAL VIEWER, and the PROCESS in either frame respectively, and between these and the entire state-of-affairs structure. We will return to this in section 8.2, where cross-domain mapping in relation to cases where the progressive is used to express future processes is discussed.

While it is possible to pinpoint some compositional symbolic units among elements and components, these units are primarily associated with slots in the construction rather than the lexemes that fill the slots. It is possible, often required, for lexemes in certain slots to contribute semantically, but the interrelations among the components are specified by the construction as is the exact semantics associated with the elements. As seen, strict compositionality is not allowed in CxG, but this does not block compositionality completely, but allows for the construction to be treated as an idiomatically combining expression (Nunberg et al. 1994; Croft 2001). The more procedural aspects of meaning construction are more difficult to map out in symbolic units. Nonetheless, these less palpaple aspects of meaning construction are related to the symbolic structure of constructions. In an interactional perspective along the lines of those taken by Harder (1996) or Verhagen (2004), the communicative parts of linguistic signs that make listeners make the intended construals may be said to have symbolic functions. By prompting the listener to construct a certain meaning, the speaker also prompts the listener to associate parts of the meaning with parts of the form, and construct the symbolic units within the construction.

One might also argue, on the basis of Givón's (2003a: 281) iconicity principle called the *adjacency principle* (which states that "[i]tems that are closer functionally or cognitively tend to be

placed closer in the linguistic code"), that the reason why the form of a predicator construction is to be perceived as a gestalt is the semantic and conceptual adjacency of the components of the verbal domain matrix, all of whose frames relate to processes and the viewing of them.

7. Data and method

I have argued for a usage-based integrated grammar approach in CxG, embedding grammatical structure in the contexts of semantics, pragmatics, society, discourse, and cognition. Until now I have mainly discussed the conceptual semantic context of the progressive predicator construction in the form of the verbal domain matrix. I have also briefly touched upon usage-based aspects in relation to its possible grammaticalization paths. The next step is to focus on the patterns of usage of this construction. One way of getting such an insight is by investigating *naturally occurring language* data, which is what I have done. I analyzed a number of instances of the progressive predicator construction retrieved in a *corpus* of English to identify some patterns of usage of the progressive construction.

7.1. Corpus linguistics

Usage-based investigations should *per se* be based on naturally discourse data, taking into account frequency of occurrence and other patterns of language usage. To many linguists, however, "[i]t might seem that discourse data are simply an extension of the data from intuition, differing only or primarily in quantity but otherwise consistent in structure with forms retrieved through introspection" (Bybee and Hopper 2001: 4). Valuable though it is, purely introspective model-building is a problem if one is interested in grammar in a usage-based perspective, since "there is a serious mismatch between the results of quantitative studies and grammatical accounts – both descriptive and prescriptive – that rely exclusively on imaginary data" (Bybee and Hopper 2001: 4). Moreover, "[i]n many cases, humans tend to notice unusual occurrences more than typical occurrences, and therefore conclusions based on intuition can be unreliable" (Biber et al. 1998: 3). Whereas Biber et al. (ibid.) argue that unusual occurrences risk being ignored in introspective studies (mainly because they are infrequent and thus not entrenched in the researcher's knowledge of the language under inspection), Sinclair (1992) argues that "[s]ome very common usages are often not featured in descriptions because they are so humdrum and routine", but naturally occurring data forces the researcher to take into account all usage-events that have been collected, thereby covering both frequent and infrequent uses. Empirical studies are also said to facilitate

more objective theories than introspective ones, not vice versa (Leech 1992: 111).[43]

However, one should not overdo the blessings of objectivism in empirical studies of language, because, even though empiricism does allow for much more objectivism than, say, introspection, there still is some amount of "philological hermeneutics" to be found, as the data themselves will have to be interpreted.

There are several empirical frameworks for the study of language and communication, one such methodology is *corpus linguistics*. Corpus linguistics is based on large principled collections of naturally occurring data referred to as *corpora* (Biber et al. 1998: 4; Biber 2000: 288). Corpora have been around for centuries within the language sciences as a research tool, but only in the early 1990s with the explosion of computer technology did corpus linguistics as such develop simply because computers facilitate the investigation of corpora considerably. Today, almost all corpora are so-called *hypercorpora* or *computer-corpora*, which simply are "helluva lot of text stored on a computer" (Leech 1992: 106).[44] McEnery and Wilson (2001: 75) sketch out the scientific status of a corpus: "A corpus, considered to be a maximally representative finite sample, enables results to be quantified and compared to other results in the same way as any other scientific investigation which is based on a data sample." Corpora are considered representative samples of a language; in statistical terminology, the corpus is a sample of a *population* (McEnery and Wilson 2001: 78; Petersen 2001), but they are finite, which means that there is always the chance of some aspects of the language or sign under investigation will not be taken into account because they have not been captured in the corpus. Many opponents of corpus linguistics point this out in their criticisms (e.g. Newmeyer 2003).[45] While such critique should certainly be made, empirically oriented linguists point out that naturally occurring data on their natural context still are very valuable in research:

> it is important to study actual discourse. Thoughts about decontextualized language, although useful for certain purposes and sometimes even indispensible, can never provide evidence for the factors that shaped the present day system, simply because these factors have been historically real (Verhagen 2004: 169).

Naturally occurring language studies can capture these factors, because they are documented or captured, so to speak, in the data that is used for the empirical investigation. Often the dicursive contextual factors of the phenomenon that serves as object of the investigation are also captured

43 Moreover, researchers of a language who are not its native speakers are severely disadvantaged by introspection, since they most often will not have the same intuitions as native speakers do. Corpora enable such researchers to get a more 'objective' insight into how native speakers use language.

44 The terms 'hypercorpus' and 'computer-corpus' are, in fact, not synonymous. A hypercorpus is a corpus that contains more than a million tokens. A computer corpus is a corpus that is electronically stored. However, most present-day corpora exceed a million tokens and most of them are electronically stored.

45 See McEnery and Wilson (2001: 5-13) for a further discussion of empirical and corpus linguistics versus rational and introspective linguistics.

since language databases often consist of long stretches of text or speech rather than just isolated utterances. In some cases, like hypercorpora, further contextual patterns such as socio- and geolinguistic factors are included, and many studies into conversation structure also take into account recorded images of the conversation so physical and visual aspects of communication such as gestures may also be taken into account. As it happens, the argument of such naturally occurring data may prompt another type of criticism. Since corpora are like historical records, corpus linguistics is strictly speaking a kind of historical linguistics, describing language within the period or periods of time that the data originally occurred. In this sense, corpus studies will never give a fully updated perspective on the language in question, because it is likely that changes will occur between the period of collecting the data and the study of the data.

Data are retrieved from corpora by *concordancers*, which are computer search engines that retrieve the requested tokens and present them to the linguist in *concordances*.[46] A concordance is a sorted or unsorted list of tokens and their immediate context. Many present-day concordancers allow the user to access further discursive context and also extralinguistic information. The linguist investigates the tokens to establish types. This is what Leech (1992: 114) characterizes as inductive grammatical research: "using the concordance as a means of identifying the syntactic, semantic, pragmatic and/or stylistic parameters of a particular item or construction". Again, while corpus linguistics is inductive, it would be untrue to claim that corpus linguists do not operate with categories that are established beforehand, or that corpus linguistics is free of investigations that are dependent on theoretical preconceptions – in fact, many corpus linguistic studies are conducted to test theories and hypotheses.

Corpus linguistics is thus both a qualitative and quantitative empirical methodology. Put simply, the qualitative part consists in the identification of types, whereas the quantitative parts consists in the establishment of the frequency of occurrence of a type by counting its tokens, often making use of vairous kinds of statistical tools and methods in the quantitative part. McEnery and Wilson (2001: 76-7) point out that qualitative and quantitative methods naturally complement each other.

A central concept in corpus linguistics is that of *association pattern*. Association patterns are "the systematic ways in which linguistic features are used in association with other linguistic and non-linguistic features" (Biber et al. 1998: 5; Biber 2000: 289). Biber distinguishes between linguistic and non-linguistic association patterns, the former involving patterns of co-occurrence of

46 Or 'KWIC' which stands for key word in context. The term KWIC is a pointer to when corpus linguistics was a more lexicography-oriented enterprise and concordancers were only able to search for lexically filled items.

the expression under investigation with particular lexemes (i.e. lexical associations) and grammatical features (i.e. grammatical associations), and the latter involving the distribution of the expression under investigation across registers, dialects, and time periods, and varieties of text (Biber et al. 1998: 6). To this list we can add a further type of association pattern: *semantic associations* which are the semantic patterns of the contexts that the expression under investigation appears in. Semantic association patterns are of a more onomasiological nature than the two other types of association pattern, and may be more difficult to operate with, but I think there are a valid and important factor in language use. Biber et al. (1998: 8) inform us that

> Though many different kinds of association patterns can be investigated with corpus-based studies, all of these patterns share an important characteristic: they represent continuous relationships. That is, the patterns are not absolute statements about what always happens or never happens in language use; rather these patterns occur to differing extents

Therefore, association patterns must be qualitatively investigated, though they are often very difficult, if not impossible, to operationalize statistically – especially the less formal and non-linguistic ones. Taking into account associations patterns is nevertheless highly useful in constructionist linguistic descriptions inasmuch as association patterns and external properties are more or less the same thing. This is even more important in a usage-based perspective, since the patterns are seen as part of the language users' knowledge of the expression under investigation and are thus stored or entrenched along with the expression itself.[47]

Biber et al. (1998: 3) sketch out the two main goals of corpus linguistics: "(1) assessing the extent to which a pattern is found, and (2) analysing the contextual factors that influence variability", which meet the empirical needs of usage-based theorizing. Kirk (1996: 253-4) sums up the advantages of corpus linguistics:

- *Falsifiability*. A corpus-based linguistic model is falsifiable in the sense that it can be tested on a new sample of corpus material distinct from the sample that was employed in the development of the model itself. In other words, because of the empirical nature of the enquiry, linguistic descriptions or models only survive as "knowledge" until refuted, either by other data or other models accounting for the same data. Falsifiability focuses not on the corpus but on its descriptive or theoretical uses. No model can ever hope to match the inescapable compulsion of the data.
- *Completeness*. Because of the rigor in a model based on corpus methodology, it should be able to account for subsequent data without exception or remainder.
- *Simplicity*. The authentic data of corpora are easier to defend than are data collected by introspection or elicitation or just casual observation, where many of the conditioning factors of use are hidden. Fewer questions are left begging or unanswered. Besides, observation of such tracts of continuous discourse or text makes it possible for the complete linguistic context

47 Association patterns are in many ways parallel to Hunston and Francis's (2000) notion of pattern. In their appeoach patterns are external syntactico-semantic configurations of elements that are typically associated with the linguistic sign in question.

of a particular usage to be examined.

- *Strength*. The model is stronger than other models to the extent that, as a report on an object of study, the quantification that occurs relates to these data alone. It is by inference and induction that researchers extrapolate to the language as a whole.
- *Objectivity*. With a corpus-based methodology, subjectivity is controlled. The subjectivity of the investigator is suppressed in that every step of the investigation is open to inspection and investigation. Moreover, the same methodology is replicable over numerous corpora.

Corpus linguistics has its limitations, and these are sometimes ignored by corpus linguists. While it is possible, and highly useful, to build models and theories on the basis of corpora, corpora should not be taken to be representatives of the language as a whole across all its speakers. Rather, corpora are themselves samples of a large, immeasurable population of naturally occurring utterances. Therefore, they are to be considered limited and finite, no matter how big they are. Corpora, and the investigations based on corpora and the accompanying conclusions are to be seen as indicators of the state-of-affairs of the language, given that one can speak of states-of-affairs in language, when language changes constantly. While a language may be said to be something shared by the members of the speech community, there probably are as many varieties of the language as there are speakers. Thus, a corpus investigation, despite the obvious advantages corpus linguistics has over introspection, in the perspective of a usage-based linguist, it will never be a representation of the entire language. Claiming so would be just as idealizing as the isolated grammar approach is accused of being. Corpora do, however, provide considerably more valuable insights, again in the perspective of a usage-based linguist, than introspective methodologies do.

This investigation does not pretend to be an indicator of the present state-of-affairs of the English progressive,[48] but rather an indicator of certain usage-patterns or usage-tendencies of the construction and how they might relate to the tenets of CL and CxG in the framework of an integrated grammar.

7.2. Data

The data used for this investigation are retrieved from a subpart of the British National Corpus (Aston and Burnard 1998) available at the VISL website (Bick et al. 1996) of 20,200,000 tokens. Using VISL's concordancer *CorpusEye* (Bick 2005), which allows for *queries* (i.e. corpus searches) based on syntactic categories and combinations of these, I retrieved all instances of finite continuous and discontinuous instances of the progressive construction (that is, non-finite subtypes of the progressive are not part of the investigation). Having weeded out all hits that were not

48 Especially since BNC was compiled in the 1990s and it is possible that the use of the progressive has developed further since then, the present study is not a statement about the entirety of present-day English.

instances of the progressive construction, the resultant number of instances was 29,739.

7.3. Methods

The 29,739 instances were quantitatively analyzed and manually classified in terms of qualitative factors such as semantics, symbolic structure, and internal as well external syntactic and semantic properties. In cases where the external patterns were provided by another construction, such as constructions that cross-relate events, a small sample of that construction was downloaded from the BNC and investigated in order to establish the origins of whatever it might contribute to the understanding of that instance of the progressive construction.[49]

A number of usage-based categories were established based on recurring usage-patterns, some comprising several members, and some comprising few members (the latter of which were typically item-class-based and item-based instances). As mentioned in the introduction, many of these have been treated in various reference grammars and elsewhere, but not in a constructionist perspective plus the various subuses have not been quantified to investigate the radial structure of the construction. These categories are subconstructions of the progressive construction; some subconstructions were further divided up into extensions, based on recurrent differentializing patterns in usage. These subsume a number of association patterns and other usage-based details that are often not provided in non-empirical accounts. The subconstructions differ from each other in various ways such as semantics and pragmatics as well as form and symbolic relations.

In addition, a number of actionality-based categories were established, which cut across the subconstructions. Most of these actionality-based categories correspond more or less to the idealized meaning of semiotic ICM of the main verb. However, a small number of cases involve recurring coercion patterns where the actional semantics of the main verb is altered by the constructional coercion, thus no longer corresponding to the semiotic ICM of that lexeme. Such cases are considered subconstructions in themselves which may be mapped onto the subconstructions mentioned in the above paragraph. Viewing coercion patterns within the progressive construction as constructional entities themselves has not, to my knowledge, been attempted before, but it is, in my opinion, very much in line with usage-based CxG, in the framework of which it is a valid hypothesis.

49 Since the VISL-subcorpora of BNC do not involve tagging of non-linguistic association patterns, there were cases where I had to double check certain instances using the SARA-concordaner in the full version of the BNC. The greatest weakness of SARA is that it does not allow for queries that are based on syntactic categories, which can be severely hindering if one is interested in syntactic structures with schematic slots as pointed out by Kirk (1999).

7.3.1. Type frequency

The prototypical use of a sign is normally the most entrenched one, and, as seen above, the general assumption in usage-based linguistics is that entrenched uses are the most frequent ones. Therefore, frequency must also be a decisive factor in the establishment of prototypes. Gries (fc), in his study of the meanings of the verb RUN, points at the fact that the most prototypical use is the one that is the least formally constrained and the most semantically variable; that is, it is the least marked one (Lakoff 1987: 58-67). Thus, in the perspective of the meaning correlation hypothesis (Pustet 2004), the prototypical use of a construction is typically also the most general one. Gries (fc) himself also hints at the most frequent use being the most prototypical one. This means that the more prototypical cases will not only be the most frequent ones but also the ones that appear in the widest range of contexts, whilst the less prototypical ones will be more specialized appearing in a much more limited number of contexts. This being said, there are also what could be called *pragmatic prototypes*, which are in fact quite specific. A pragmatic prototype is a subconstruction that has a specific pragmatic purpose and may thus be expected to be the most frequently occurring use of the construction in the context associated with it, making it the prototype in that context. It is the principle as the one behind the choice of RETRIEVER, ALSATIAN, or GREYHOUND discussed in relation to the principles of structural stability and flexible adaptability. This way, constructions or subconstructions with pragmatic points are in fact also pragmatic prototypes, and also subject to context-influenced dynamics of meaning construction.

Each identified subconstruction was counted and sorted in terms of frequency of occurrence. Also taken into consideration were class-differentiating contextual association patterns. The frequencies were accounted for in percentages (with percentages having one decimal so as to distinguish between specialized subconstructions with frequencies less than one). Optimally these contextual factors should be subjected to a multivariate analysis, but since it would be an unattainable and time consuming task to operationalize many of the factors in detail, I have opted for simple frequency-quantification, which is often used in prototype-theoretical studies and studies of entrenchment, salience, lexicon-grammar interface and collocational analysis (Tummers et al. 2005: 240-1). Thus, the investigation falls primarily into what is referred to as the *descriptive and exploratory stage* of usage-oriented empirical investigations of linguistic phenomena, the other more advanced stage being the *explanatory and hypothesis-testing stage* (Tummers et al. 2005: 242-5). The frequency-quantifications are backed up by another more advanced statistical method called *collostructional analysis*.

7.3.2. Collostruction

In CxG the most prototypical instances of a construction will be those that involve lexemes that overlap with, or are closely related to, the meaning of the construction. Another way of gaining insights into the radial structure of a construction is to measure which lexemes occur most frequently in it.

Collostructional analysis (Stefanowitsch and Gries 2003, 2005; Gries and Stefanowitsch 2004a, b) is one useful way of doing this. The lexeme under investigation is sometimes called *collexeme* in this respect, while the construction associated with the lexeme is called *collostruct*. The combination of the two is referred to as *collostruction*.[50]

The type of analysis takes into account four frequencies – namely, the frequency of the lexeme in the construction (A), that of the lexeme in all other constructions (C), the frequency of the construction with other lexemes (B), and finally the frequency of all other lexemes in all other constructions (D). These are inserted into a cross table and run through a *Fischer exact test*, a *log-likelihood test* or similar statistical calculations:[51]

Table 7.1: Collostruction cross table

	lexeme	-lexeme	*row totals*
construction	A (n of lexeme in construction)	B (n other lexemes in construction)	*A + B*
-construction	C (n of lexeme in other constructions)	D (n of other lexemes in other constructions)	*C + D*
column totals	*A + C*	*B + D*	*A + B + C + D*

The Fisher exact test calculates the *collostruction strength* between the collexeme and the collostruct, which is a type of association pattern. Collostruction strength is given as a number; a so-called *p*-value. The *p*-value, or collostruction strength, indicates the degree of *attraction* or *repulsion* in the collostruct.

The criterion for whether the *p*-value indicates attraction or repulsion is based on a number of subcalculations, the most important of which are the *expected frequency*, (a calculation of the frequency of the collexeme in question in the collostruct in question) and the actual o*bserved frequency*. If the observed frequency is higher than the expected frequency, then it is a case of

50 Collostructional analysis is basically a type of collocation analysis designed for constructions, which is reflected in the terminology. 'Collostruction' is a blend of 'collocation' and 'construction', while 'collexeme' blends 'lexeme' and 'collocation'. 'Collostruct' is a back-formation of 'collostruction' mirroring that of 'collocate' back-formed from 'collocation'.

51 I used both the Fisher exact test and the log-likelihood test. I decided on the latter because, it allowed me to make a more fine-grained distinction among the most attracted and most repelled items, as also seen in Afonso (fc). I used Gries' (2004) software pack for calculating the collostruction strengths.

attraction. If it is lower, then it is a case of repulsion. Consider the frequencies of the following six verbs in relation to the ditransitive construction:[52]

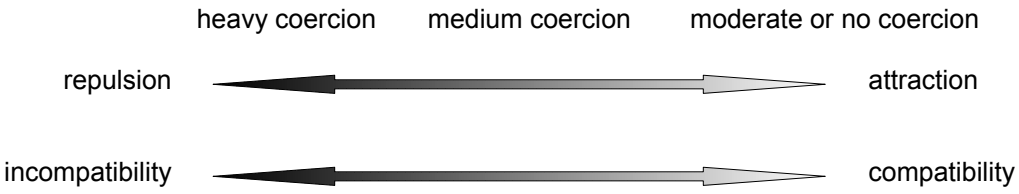
Table 7.2: Collostruction list of the ditransitive construction (Fisher exact test)

word	observed frequency	expected frequency	*p*-value	relation
give	461	8.66	3206.235	attraction
charge	4	0.32	13.164	attraction
drop	3	0.59	5.021	attraction
make	3	14.56	13.846	repulsion
read	1	2.63	1.333	repulsion
take	12	12.34	0.010	repulsion

The difference between the expected frequency and the observed frequence serves as the basis of the calculation of the *p*-value, which indicates the relative degree of the strength of attraction or repulsion. This higher the *p*-value, the higher stronger the attraction or repulsion.

The degree of attraction and repulsion may be related to degrees of compatibility and coercion; the more incompatibility there is between an item and a construction, the stronger the coercion. 'Take' and the ditransitive construction are almost incompatible and thus involve a very strong coercion. The stronger the coercion and the weaker the compatibility, the more mental effort is required in the encoding and decoding of the message (event to the point of conscious mental simulation). This is reflected in usage-patterns. Despite the fact that any lexeme may potentially appear in a construction, lexemes that are semantically compatible with it are more likely to occur in it.

Figure 7.1: Attraction-compatibility correlation



Moderate coercion involves little type-shifting and thus requires minimal mental effort and relatively simple mental simulation, while medium and heavy coercion involve much more complex type-shifting and thus require more mental effort and more complex operations of mental simulation. This correlation is essentially captured by the semantic compatibility principle, which stated that compatible words and constructions are more likely to occur than incompatible ones.

52 These are extracted from the tutorial of the piece of R-based software called coll.analysis (Gries 2004). I used this software to calculate the collostruction strength in this study.

8. The progressive construction in use

I have argued for a usage-based integrated construction grammar approach to the progressive construction. Until now, I have primarily discussed aspects of its general semantic and symbolic structure and also discussed some usage-related notions in relation to its possible grammaticalization paths. However, another usage-based aspect is the senses and relations among them in the radial taxonomic network of the construction.

As we will see in chapters 8-10, the descriptions of the subuses found in the corpus will involve contextual factors at an integrated level, meaning that many of the subconstructions are established on contextual factors, much like constructions with pragmatic points. In other cases, the progressive influences the context, such that the following discursive context accommodates to the mental spaces set up or modified by the progressive construction. Finally, there are also other cases where contextual patterns are consistent, but do not appear to warrant a subconstruction as such. Ultimately, the relations of dependency between the progressive construction and the context are a matter of interplay rather than one-sided influence.

Predicators probably have radial structures. It is generally acknowledged that each predicator construction covers a range of uses, some of which are more central than others, and some of which are more idiomatic than others (e.g. Bache and Davidsen-Nielsen 1997: 277-340). For example, according to McCawley (1971: 104), the *present perfective* has four basic uses. It has the universal use, which is to indicate that THE REFERENT STATE-OF-AFFAIRS HAS LASTED FROM ITS POINT OF INITION INTO THE PRESENT, as in 'I've known Max since 1960'. The second use is the existential use, indicating PAST EVENTS' EXISTENCE as in 'I have read *Principia Mathematica* five times'. The third use is the stative use, which indicates the ONGOINGNESS OF THE EFFECT OF A PAST EVENT ON PRESENT SITUATION, as in 'I can't come to your party tonight – I've caught the flu'. Finally, there is the HOT NEWS use as in 'Malcolm X has just been assassinated'. Likewise, Leech (1971: 14-29) lists a number of uses of the progressive construction, of which the TEMPORARY EVENT use is the major one, as in 'The man was drowning'. In addition there are the RESTRICTED HABIT use, as in 'I'm taking dancing lessons this winter', the REPETITION OF EVENTS of limited duration use, as in 'Whenever I visit him he is mowing his lawn', the ANTICIPATED EVENTS in the future use, as in 'We're visiting aunt Rose tomorrow', and the PERSISTENT ACTIVITY use, as in 'Day by day we are getting nearer to death.' Provided that the many uses of a predicator are radially structured, then this fact may be taken to be constructional polysemy. The present investigation identifies many uses that are identical to those described by

Leech, but offers a number of additional details due to the usage-based perspective it takes, also some of the already described uses will be redefined in accordance with the usage-based data. Finally, a number of association pattern-based subtype, not previously discussed in the literature will be described here.[53]

There are also several procedural and interpersonal details relating to the various types of uses of the progressive construction. I have already touched upon these aspects of meaning throughout this study, and I will discuss some of the interpersonal and procedural aspects in some of the following sections whenever relevant, while procedural and interpersonal aspects of meaning will be discussed generally in chapter 14.

8.1. Unbounded processes: the ongoing process subconstruction

The progressive construction is primarily used to express ongoingness, understood such that it profiles the MIDDLE PHASE and gaps the INCEPTIVE and TERMINAL PHASES of the aspectual frame, thus presenting the process as unbounded, in the sense advocated by Talmy (2000a: 50-55, 61-2) and gestalt psychologists.

The use of the progressive construction to present unbounded processes and construe them as ongoing is by far the most frequent one in the corpus with a frequency of occurrence of 85.5% (n=25.538), which points in the direction of it being the prototype of the progressive construction. This is not a surprise, given the fact that, according to the literature, the main purpose of progressive is to express imperfectivity. However, what the literature often does not mention, is that the use of the progressive to construe ongoingness of events seems to be covering two related subuses, which appear to ultimately form a continuum.

These two main subuses, or subconstructions, are distinguishable from each other on the basis of nitty-gritty details in their semantics, relating to the temporal extent of the processes, and the way that these details are reflected in their external properties. The two subuses will be referred to as the *local ongoing process* and *extended ongoing process* subconstructions respectively in accordance with their main differences in semantics. Leech (1971) seems to have observed the difference between these two related uses, listing them as two separate subuses called *temporary event* and *persistent event* respectively. However, while distinguishable, they are not two

53 One of the best ways to get an insight into the radial structure of a construction in a usage-based perspective is corpus linguistics or a related empirical methodology based on naturally occurring language, as it allows the researcher to include important contextual factors as encouraged in usage-based linguistics, and it has the advantages discussed in the section on corpus linguistics. It should be noted though that a corpus investigation should not be taken to present any truths as such about the construction or language in question as corpora are never fully representative of the language.

autonomous uses, as they are too semantically related, which is why I think they should be treated as forming a continuum.

8.1.1. Local ongoing process

A local ongoing process is a singular process whose termination point (or potential termination point, since it is excluded from the profiling) is positioned within a conceivable amount of time. It is very difficult to set up any demarcations for this span, which is why we are probably better off setting up a continuum. Typically, a local ongoing process, takes up a rather small stretch of time, which, however, is long enough to divide the process up into the three phases of the aspectual frame, requiring durative actionality. All of the following examples, along with the bulk of retrieved instances from the corpus, fall under this category:

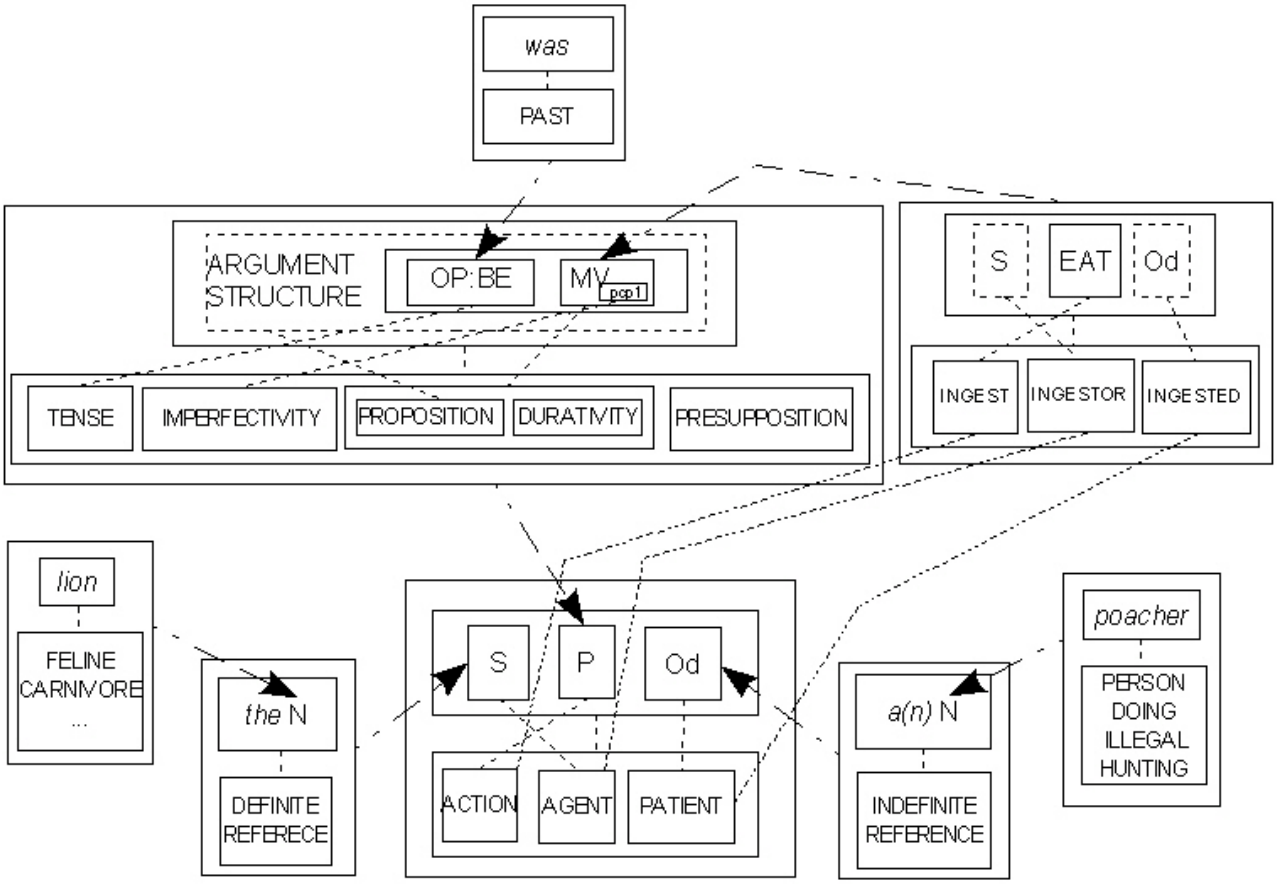
(8.1)
a. Her eyes *were adjusting* to the darkness, and now she would see that he had folded his arms over the enticing broadness of his chest and was watching her with a challenging glitter in his eyes.
b. My mother *was climbing* into her car and the rain was coming down fast.
c. William Dougal *was drinking* his third orange juice of the evening.
d. The light *is ebbing* away.
e. The cheeky buggers *were faxing* the stuff to save time.
f. The sun *was growing* very hot, and the pool was the only place to be that day.
g. But Richardson's own light *was fading*.
h. She *was fixing* her lipstick.
i. A man w*as sprinkling* petrol on a heap of sprouts to make them burn.
j. At one point even Chappie *was yelling* at him to get his arse in gear.
k. The kettle *was boiling*.
l. She *was breathing* more like a trapped animal than a woman.
m. Rachel Gray *was eyeing* Natalia jealously, wondering just how she managed to consume these cream cakes and was still able to dance.
n. He *is laughing*.
o. A long thin red snake *was moving* slowly in and out of the holes.
p. I'*m seeing* a few bright smiles here, which is, er, interesting.
q. The plant *was squirming* in delighted anticipation.
r. She'*s sleeping* now, but we thought she was going to die in that last attack.
s. Her buttocks *were twitching* rhythmically to the music.
t. She'*s yelling* at the top of her voice.
u. He *was smiling* broadly now.
v. Your ears *are flapping*, Mr O'Brien.
w. An approaching truck *was flashing* its lights.
x. He *was tapping* on the bathroom door again.

All instances in (8.1) involve what might be called *small-scale semantics*. They construe processes that take place at a small scale; they take up a small and delimited stretch of time, take place in a

delimited and definable location, and involve what could be called *local participants*. A local participant is a participant in the event in question that is compatible with the small scale of the process. It may thus be an individual, a group of individuals that is compatible with the extent of the location, or an object that does not transcend the small scale of the process. In essence the small scale semantics is activated and "stored" in a mental space, which is evoked or constructed by lexical units and other signs, which express small scale semantic situations or entities, occurring in the discursive or immediate syntactic context. In constructional terms, the small scale semantics is reflected by the external properties of this subconstruction in that the units in the syntactic and discursive contexts also construe small scale and local semantics. Each lexical item functioning as the main verb has as part of its frame a number of e-sites corresponding to the participants in the process it construes. If compatible, a binding is established between these e-sites and the corresponding semantic components of the argument structure construction of the sentence it appears in; if incompatible, the verb goes through a process of coercion first. The elements linking up with these components are then filled by lexemes or phrases with small scale semantic characteristics, thus elaborating the e-sites with local and small-scale details. The notion of scale is related to what Langacker (1987: 118) calls scale of predication, which basically has to do with the level of magnitude at which the event takes place.

The figure below is meant to illustrate the complexities of the relations of elaboration and binding among the elements of a sentence such as 'The lion was eating the poacher', which is a simple sentence constructed for the sake of simplicity of explanation. Note that, also for the sake of simplicity, from now on, the full detailed structure of the verbal domain matrix will not be given, instead each frame in the domain matrix is simply labeled with the name of the construal associated with the profiling patterns. Thus, the aspectual frame is here simply labeled imperfectivity which is the construal associated with the profiling of MIDDLE PHASE(S) and gapping of the INCEPTIVE and TERMINATIVE PHASES:

Figure 8.1: Bindings and elaboration (the monotransitive construction as an example)



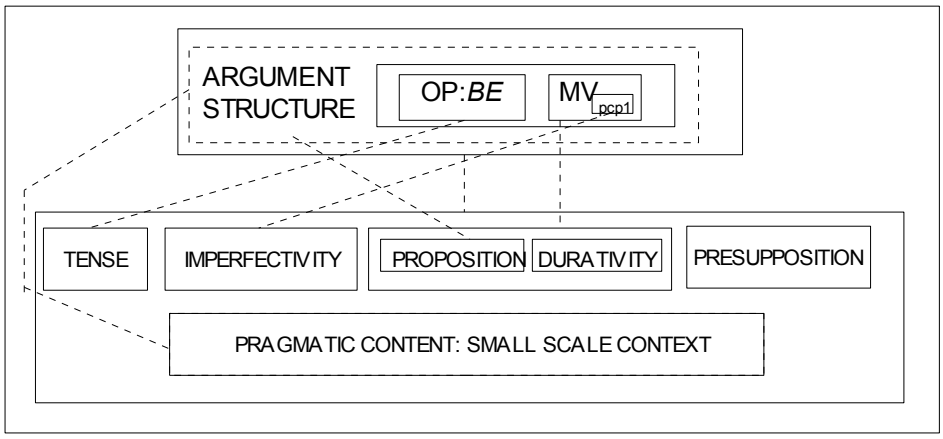
Note that external properties are indicated by punctuated boxes in the formal structure. The progressive construction provides the semantic information discussed in chapter 6. Since it is in past tense, the past form construction of BE elaborates on the temporal frame, profiling the past component. The main verb slot is filled by the verb EAT, whose prototypical meaning is INGEST. Its frame implies that an INGESTOR INGESTS food, or the INGESTED, and thus EAT also brings along its prototypical *mini-construction* (Boas 2003). A mini-construction is an argument structure construction associated with a particular sense of a given verb. For example, a polysemous verb like LOOK, which has a number of senses such as TO TURN THE EYES TOWARDS OR ON SOMETHING, TO USE THE EYES TO EXAMINE OR WATCH OR FIND SOMEONE OR SOMETHING, and TO HAVE THE APPEARANCE OF BEING OR SEEMING TO BE AS SPECIFIED (*MSNE*) as illustrated by 'She looked at the house', 'She looked angry', and 'She was looking for her keys' respectively (all of these are constructed examples). Each sense of LOOK evokes its own frame with its own force dynamic roles and relations. These relations are expressed by different argument structure constructions, and thus each sense is prototypically associated with a specific argument structure construction. The mini-construction of the first sense is [S P A], while that of the second sense is the copula construction and that of the third sense is a

more specific version of the [S P A]-construction – namely [S *LOOK* A:PP$_{for}$]. In the case of EAT, whose primary force-dynamic frame is a two-participant frame, the typical miniconstruction is the monotransitive argument structure construction. symbolically very specific instance of the monotransitive construction, in which the INGESTOR links up with the subject and the INGESTED links up with the direct object. The verbal structure [OP:*BE* MV$_{pcp1}$] appears in the monotransitive construction in this case, and bindings occur between the symbolic pair [[subject]/[AGENT]] of the monotransitive construction and the symbolic pair [[subject]/[INGESTOR]] of the EAT mini-construction, between the symbolic pair [[direct object]/[PATIENT]] of the monotransitive construction and the symbolic pair [[direct object]/[INGESTED]] of the EAT mini-construction, and between the symbolic pair [[predicator]/[PROCESS]] of the monotransitive construction and the symbolic pair [[EAT]/[INGEST]] of the EAT construction. The binding relations are also relations of elaboration, in that the semantic components of the EAT frame elaborate on the schematic participant roles in the monotransitive force dynamic frame. The EAT construction elaborates on the main verb slot, the ACTIONALITY component, and the PROPOSITION component of the state-of-affairs frame. In the subject of the construction, we find the [*the* N]-construction in which the noun is filled by 'lion'. This instance of the [*the* N]-construction primes small scale construals of 'lion'. The construction typically expresses definite referential meaning, such that the referent of the noun is construed as already established common ground. This way the lion is conceptualized as one particular instance of the category LION rather than as the entire category itself. Had it been reference to the entire class, then it would have been a large scale entity, but a lion as an individual entity is logically also a small scale entity. Likewise the direct object contains an instance of the [*a(n)* N]-construction, in which the N is filled by 'poacher'. This construction is primarily used to express reference to an indefinite entity; that is, the lexeme taking up the N-slot, here *poacher*, is construed as one individual entity that has not been part of the common ground of the interlocutors up until the moment of speech. Again, this instance of the [*a(n)* N] construction does not make reference the entire category of POACHER but rather to one particular individual member of the category and thus imposes small scale semantics onto it. It should be mentioned that both the definite noun phrase construction, with its [*the* N] configuration, and the indefinite noun phrase construction, with its [*a(n)* N] configuration, have extended uses that do make reference to the entire category that the noun in question belongs to, thus prompting large scale construals. However, these uses are generally considered non-central marginal uses and thus not the prototypes. Finally, we can assume that part of the knowledge of the progressive construction is

that it co-occurs with some type of argument structure construction, wherefore the structural layer referred to as argument structure is posed as an abstract external property of the progressive construction based on a generalization over all the argument structure constructions in which the progressive occurs in discourse. Since the argument structure very much provides a great part of the force dynamic and propositional content, it is here presented as forming a symbolic link with PROPOSITION.

In the present subpart of the BNC, instances of the ongoing subconstruction appear exclusively in small scale contexts.

Figure 8.2: Symbolic structure of the local ongoing process subconstruction



The small scale context is represented by the content box called pragmatic content and specified as small scale context. This is meant to illustrate that the local ongoing process subuse of the progressive construction recurrently appears with small scale contexts so often that the contextual information has become entrenched in the construction as external syntactico-semantic features. It is here linked up with the argument structure elements in the formal structure, since the small scale construal is very often provided by the signs that express the participants in the expressed process. It is possible, very likely actually, that it is not just the participants that construed the small scale perspective, but also the further discursive context, and in some cases also non-linguistic contexts such as the immediate physical context of the speech situation. Left unspecified are tense, telicity, actional make-up, with the exception of DURATIVITY, which is an obligatory componential specification of the progressive construction, and argument structure, because they are schematic and do not appear to pose any constraints on the use of the local ongoing subconstruction. The primary factor is the interplay between the central semantics of the progressive and the context, which in this case overlap considerably, in that it is most likely to view here-and-now situations

imperfectively as ongoing events. With the exception of agentivity (Ziegeler 1999), factors outside the progressive construction as such, are not typically seen as major influences, but as seen here, within an integrated CxG framework, which does not isolate semantics from pragmatics, they may be given a central role as done is the present study. In a way, the small scale contextual information in the pragmatic content box may even be argued to constitute a pragmatic point without which the language user would not be able to encode local ongoingness into the progressive construction, nor decode it from it. Scale of locality may not seem salient, because it is probably the most prototypical scale of ongoing events, but when it comes to the extensive scale of the following construction, it becomes more salient.

8.1.2. Extended ongoing process

The extended ongoing process subconstruction appears to be basically the same as the local ongoing process subconstruction. It profiles the MIDDLE PHASES in the aspectual frame of a durative process and gaps the INCEPTIVE and TERMINAL PHASES, thus creating an unbounded process that is still in progress. This is identical to the construal operations of profiling that apply to the local ongoing process construction. However, there is a difference. In the extended ongoing progressive, the process is temporally extended into covering a much larger stretch of time ranging over days, or weeks, months, years, even generations. Yet it is felt, at least in theory, to be delimited and thus the event does not qualify as a habit of permanent state-of-affairs. It might be tempting to classify such processes as states or inherent characteristics, but the examples below will show the untenability of this, because they construe the same basic durative and thus dynamic patterns as ongoing processes; that is, they are processes that involve change of state and which are imperfectively construed as having phases structures whose MIDDLE PHASE(S) are profiled, either progressing towards a completion point or amenable to having a termination point imposed upon them:

(8.2)
a. Political funding through PACs *is creating* a centralised system that puts the loyalty of candidates to the national source of funding above that to their local constituency.
b. Use of electronic mail *is escalating*.
c. Now the Japanese *are gearing* up for a third try.
d. We *are killing* our heritage and pillaging our children's future.
e. They'*re advertising*, we'll see them in the yellow pages.
f. We *are chasing* those that have not yet replied and we will update the report in due course.
g. Meanwhile France and Belgium *are trying* to encourage people to have more children in an effort to revitalise their flagging economies.
h. The Women's Royal Voluntary Service *are appealing* for more people to help them with their meals on wheels service.

i. In 1945 BMK *was constructing* a large carpet factory in Northern Ireland at Finaghy near Belfast.
j. HarperCollins *was giving* him a big push, and is reissuing Climbers and The Ice Monkey at the same time as this haunting tale.
k. Domestically, the Labour Party *was improving* its organization and developing its programme after.
l. It is a large figure, but the City Council *is breaking* er, new ground in the sale of link waste, and it was necessary to engage specialist lawyers, erm, Lond a firm of er, London solicitors er, to assist in the process, and members will recall that in fact, the the proceeds from the sale of link waste were four point two million pounds initially, with potentially another four hundred thousand pounds, erm, once certain conditions were satisfied.
m. This a capella tradition of singing *is flourishing*.
n. The attitude that smoking is anti-social *is gaining* currency among the more articulate, better educated and more aware groups in society, but the vicious corollary is the the tobacco and advertising must get their recruits from the lower end of the socio-economic scale.
o. Privatisation *is spreading* there as in Britain.
p. Teacher training *was growing* and expanding.
r. The collapse of tin and the rise of cocaine *is turning* Bolivian society upside down.
r. Travelling *was becoming* fashionable at this time, but it was still unusual for a woman to tour the country in this way.
s. You *are creating* a system within the countryside which is based on inequality.
t. The season of reliable weather *was drawing* to a close.
u. The distance between galaxies *is growing* all the time.

When read, all of the examples in (8.2), no matter how extensive the temporal stretch, give the impression of an incomplete and ongoing dynamic process progressing towards some unspecified completion or termination point. As with the local ongoing process, the instances differ in terms of the internal actional make-up as well as in tense and the argument structure constructions they appear in, and they share the unboundedness imperfective aspectual construal. These schematic features are probably the features that unite the local and extended ongoing processes under an abstract schema, which we will discuss further in the next subsection.

As with the local ongoing process construction, the temporal magnitude of the extended ongoing process construction is reflected in the syntactic and discursive contexts. The temporal extension of the extended ongoing process is compatible with arguments that are realized by items with semantics characterized by *large scale* construals. This is what sets it apart from the local ongoing process subconstruction. Large scale semantics involve *global participants* which are grand scale entities such as major collectives (like companies, city councils, organizations, political parties, or governments), widely spread ideas and attitudes, summary scannings of generic events, traditions, and large scale entities such as entire nations and galaxies. The location is literally

global being very large scale such as cities, nations, the world and even entire galaxies. In terms of elaboration, the e-sites of the main verb and argument structure constructions are thus elaborated with large scale semantic details.

It is possible to construe some of the examples in (8.2) as local ongoing processes. For example, (8.1b) could describe a situation in which a professor of corpus linguistics is giving a workshop in a computer cluster at a university during which more and more attendees use the computers to write e-mails instead of doing what they were being instructed to do. Of course, the fact that 'use' appears without a determiner is more likely to prompt a more generic construal. One could construe (8.2c) as describing the Japanese national bob sledge team physically gearing up for a third try as breaking the world record. In (8.2g) one might imagine a situation where a representative of France and Belgium (metonymically expressed by the names of the nations) is giving an inflamed speech in a shopping mall in which he encourages the customers to go home and make a lot of children. However, a look at the further contexts shows that the construals are quite constrained by large scale contexts:

(8.3)

a. The communications infrastructure required by the student management is also provided by the computer centre: all of the terminals and printers are in the same cross-campus network as the many hundreds of terminals for academic use (in open access terminal rooms, staff offices, laboratories, etc.). A very high (and carefully monitored) level of security id none the less maintained. Being part of this broader user community brings benefits. **Use of electronic mail *is escalating* and supplements the work of the student management system, for example, as a means of transmission of reports and requests for information**.
b. Instead, the Asuka recently made its final flight at the government's National Aerospace Laboratory. It will shortly be rolled into a museum. Asuka was the second airliner designed and built wholly in Japan. The first, the twin-prop YS-11 developed in the 1960s, faithfully copied many features of the Hawker-Siddeley 748-including a crippling design flaw. A few dozen of the 64-seat YS-11s eventually went into service and are now, to the delight of jolted passengers, nearing the end of their lives. **Now the Japanese *are gearing* up for a third try**. The Ministry of International Trade and Industry (MITI) wants to have a preliminary design for a short-haul 75-seater codenamed the ys-x worked out by 1990 and to have the aircraft in service by 1994. During the next few weeks, MITI officials will be visiting aircraft firms in America, Canada, West Germany, France and Britain, to sign up partners the need to build an aeroplane that will actually fly.
c. But the myth is also based on the assumption that people are consumers rather than products of wealth. For instance: Japan fears that providing for its growing population of dependent old people (an increase in over 65s from 9% in 1985 to 21.3% in 2025) will destroy the economic miracle of the last 40 years. But the real problem is employment opportunities, not absolute numbers. The retirement age in Japan is often as low as 50 years, so Japanese old people are turned from producers into comsumers

long before their time. **Meanwhile France and Belgium *are trying* to encourage people to have more children in an effort to revitalise their flagging economies.**

The fact that the topics deal with large-scale concepts such as campus-wide students management computer networks, nation demographics in the perspective of economics, and aeroplane construction, makes the ongoing construal virtually impossible. The cognitive structures activated throughout the text impose construal constraints upon all signs occurring in it. The discourse has activated a number of cognitive models all or most of which are associated with large scale events and relations, which prompts large scale construals of most signs occurring in the same discourse for as long as the topic is active. All of the above suggested LOCAL ONGOING PROCESS construals call for construals involving much effort and very creative mental simulations which suggests that local ongoing construals are not prototypical in usage-events where the process in the progressive has global participants.

Extended ongoing progressives occurring with more local-like participants, however, are not impossible.

(8.4) a. She *was searching* for Mr Right, and she didn't care who knew it.
b. Well, Mrs Goreng had a pretty good grasp of English – and her French *was improving*, too – but she was not versed in all the nuances of behaviour.
c. Eva's understanding of Glaswegian *was expanding* rapidly.

Each of these examples involves a single local agent, but even in such cases, general encyclopaedic knowledge sets up constraints that prompt an extended ongoing process construal, which will typically be backed up by the further contexts that the sentence in question occurs in. Looking for Mr. Right is often a project that requires much time. The acquisition of languages and dialects is something that we know from experience typically takes time. We also know that these processes either transcend physical locations entirely or involve large scale locations. Also in cases like these, the further discursive context often sets up large scale scenes:

(8.5) Paige scarcely heard him as he continued to talk; she was battling her own reaction to that brief caress. Her heart had accelerated alarmingly and the same hot electrical charge hear raced across her nerve-endings. It was incredible, and until today she'd never experienced anything remotely like it. She'd had plenty of boyfriends, but none of them serious, and none had made her react in quite such a way, despite their determined attempts to arouse her. She hadn't enjoyed the heavy petting that her peers took for granted. **She *was searching* for Mr Right, and didn't care who knew it.** So she had played the field, enjoying male company without getting in too deep or too seriously. She had a lot to give the right man. The mate her Libran soul needed to make her complete. To her mind, Travis McKenna was definitely Mr Wrong – and yet today had brought a shivering awareness of him as a man – and herself as a woman.

The above excerpt of the discourse starts out in a small scale scene in which a local event has just taken place. However, that local event prompts Paige to interpret the event in the perspective of a large scale scene, based on her general experiences with men. This context prompts a construal of the 'searching for Mr Right' as being a label for her entire large scale life experience with men.

The large scale effects of discourse on the progressive construction may be explained with reference to Fauconnier's (1994) original mental space theory in which mental spaces are coherent sets of concepts and cognitive models that are activated in the course of the discourse, or "constructs distinct from linguistic structures but built up in any discourse according to the guidelines provided by the linguistic expressions" (Fauconnier 1994: 16). While "guided" by linguistic expressions, mental spaces often "guide" the further discourse themselves, such that the following discourse and the construals involved are often in harmony, so to speak, with the activated mental spaces. Thus, mental spaces may be among the main ingredients in topic organization in discourse. Thus, the large scale construal of the progressive construction and its external properties may be seen as prompted by the dominating mental spaces of the discourse. Of course, another factor in topic organization in discourse is cultural convention (Grindsted 1992), which may also determine the structure and use of mental spaces, such that their specific involvement in discourse may vary from culture to culture.[54] The dimensions of scale are typically prompted by the conceptualizations already active in the mental spaces that are established or modified in the preceding discourse.

Only a very small proportion of extended ongoing processes in the progressive appear with local participants (out of all instances of extended ongoing processes in the corpus, only 2.8% (n=287) occur with local participants), and even then, as seen, either our encyclopaedic knowledge or the wider context create constraints that evoke construals of temporal extension.

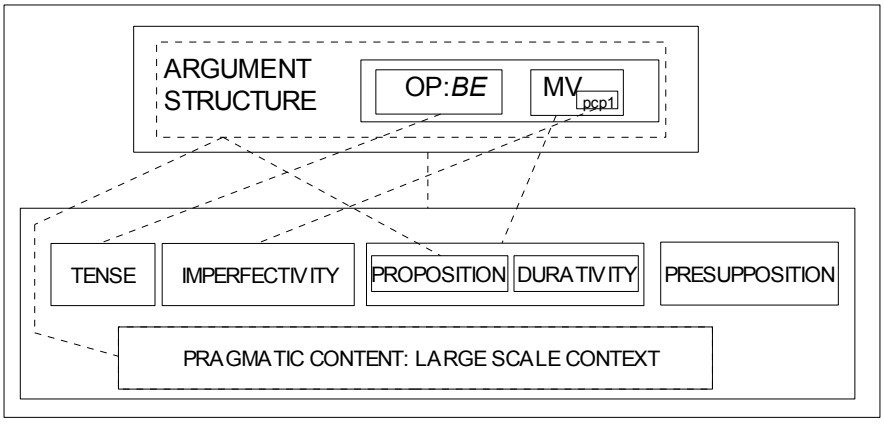
These observations suggest three facts about the extended ongoing process subconstruction. Firstly, the semantic temporal extent expressed by the predicator is a question of the lexical units or phrases in the sentence accommodating to each other and semantic coherence between the clause in question and the discursive context. The constraints that the large-scale type arguments impose upon construals of the temporal extent of the predicator are ultimately results of the structures and processes of the human cognitive apparatus. Certain entities, events, and relations are experienced as not engaging or appearing in non-extended processes in humans' interaction with the

54 With Hougaard's (2004) theory in mind that conversational structures may involve cognitive representational structures which capture generalizations over conversational experience, one might suggest that topic organizarion involves *cultural models* along the lines of Ungerer and Schmid (1996) proposals.

surrounding world. The accommodation between the parts of the utterance, and resulting construals, are products of encyclopaedic knowledge. Secondly, and related to the first point, the frequent co-occurrence with large-scale type units suggests that such combinatorial and constraining patterns are entrenched – both linguistically and encyclopaedically – which is supported by the suggestion that it takes more mental effort and imagination to come up with non-extended ongoing construals for the above examples than with extended ones. That is, the elaboration of the relevant e-sites is fast and effortless if there is compatibility between the scale relations. In such cases large-scale construals seem to be activated automatically and according to most usage-based models, automation is a direct effect of entrenchment. Thirdly, it seems that not only internal properties but also external properties, here in the shape of the external discourse- and syntactico-semantic constraints and patterns of elaboration, are integrated parts of the construction or subconstruction. This is a consequence of the inductive language acquisition model that the usage-based approach takes as its starting point and of a parallel inductive mode of acquiring encyclopaedic knowledge. Thus, the combinatorial patterns of syntactico-semantic co-ocurrence of the predicator with certain types of arguments are an integrated aspect of the pragmatic information making up the language user's knowledge of the construction.

The extended ongoing process may have the following symbolic structure, which is very much like the local ongoing one, apart from its preference for large scale contexts:

Figure 8.3: Symbolic structure of the extended ongoing process subconstruction



Again the symbolic link between the pragmatic content, now specified as large scale context, is supposed to indicate that the large scale semantics is entrenched as external features of the construction and expressed by the immediate syntactic context as well as the further discursive context.

This use of the progressive corresponds to what Leech calls (1971) *persistent activity*. While that term does indeed describe the construal of the process quite well, it also seems to make no difference between a persistent ongoing process and habit. Habits are also characterized as being persistent activites. Therefore, I have chosen the term "extended ongoing process" instead. This term not only excludes habits. It also indicates that there is indeed a vague difference between this use and the one discussed above, and that they might be subsets of a more general subconstruction.

8.1.3. A continuum

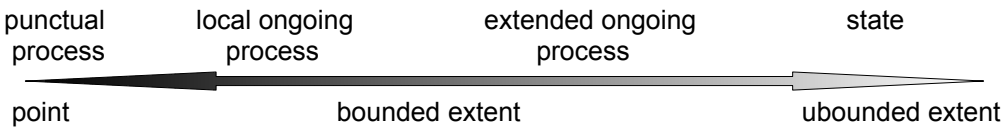
As mentioned above, it is possible that the local and extended ongoing process subconstructions form a continuum rather than being two clear-cut categories. It is extremely difficult, if not impossible, to set up criteria for when the time span is extensive enough to count as extended or small enough to count as local, and to determine where the boundary line is placed? How many hours, minutes, and seconds does it take before a local ongoing process becomes an extended one? There are no answers to these questions, and setting up a clear demarcation based on an exact number of hours, minutes, and seconds would not reflect the underlying cognitive processes and structures motivating these two different uses of the progressive to signal ongoingness.

What allows the distinction between the two uses as two subcategories of a common type is their preferences for small scale and large scale contexts respectively. As mentioned above, external contextual details regarding scalar dimension are not typically thought of as factors let alone features of the progressive construction, which is why the difference between local and global ongoing situations has not been addressed in the literature. But, as we have seen, the contextual differences may be highly integrated parts of the respectve subconstruction. They might even be pragmatic points that are essential for the understanding of the two uses of the progressive construction. An integrated CxG allows for this distinction and also addresses the issue of what the differences between the two subconstructions are. It is those factors of scale rather than the temporal extent itself that sets up the boundary between the local and extended ongoing process uses. Croft and Cruse (2004: 92-7) argue that category structures and their boundaries are dynamic and subject to construal; while there is no inherently fixed structure and no eternally fixed boundary, the boundary and structure that are construed online are actually quite clear in terms of what is inside and outside of the category. In terms of the ongoing progressive constructions, the boundaries between the extended and local subconstructions, due to the taxonomic and radial

structure of construction networks, are categories that are construed online in accordance with the context – syntactic, discursive, or non-linguistic. This is also in line with Geeraerts' (1997) notions of simultaneous flexibility and stability of categories.

The difference between the local and extended ongoing process subconstructions may be attributed to what Talmy's (2000a: 62) calls *degree of extension*, which is a semantic category that judges the spatial or temporal extent of an entity or event. A SPECK, for instance, is spatially non-extended and is classified as a *point*. Another classification is *bounded extent*, which is an entity that is spatially extended but still bounded. Talmy's example here is the concept of LADDER. The third and final classification is *unbounded extent*, which he illustrates with the concept of RIVER. In this perspective, extended ongoing processes arguably display a much higher degree of extension than local ongoing processes do in terms of temporal extent. If one were to apply Talmy's categories to verbal categories, then a punctual process would fall under the category of point, while local ongoing processes and extended ongoing processes would both fall under unbounded extent but with the latter having a higher degree of unboundedness than the former as argued above. States would be categorized as unbounded extents. I should point out that this is not the same, related though they are, as the application of the notion of degree of extension to actionality.

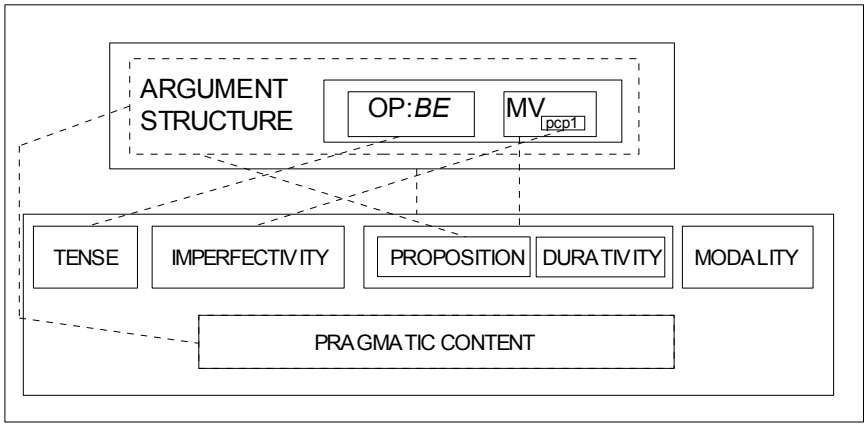
Figure 8.4: Local/extended process continuum



The idea that extended ongoing processes display a higher degree of extent is, of course a purely semantic differentiation, but it is reflected in the external properties of the subconstruction; that is, the extended ongoing process subconstruction occurs with arguments of a generally different semantic nature than those of the local ongoing subconstruction.

The local and extended ongoing process subconstructions share enough features to be grouped under one parent construction, which could be called the *ongoing process construction*. It is also probable that they form one coherent region in conceptual space. The parent construction is mainly schematic and provides the features they share, as illustrated below:

Figure 8.5: Ongoing process parent construction



This is probably very close to the prototype provided by the entire progressive construction, if it is not the very prototypical center. The progressive construction thus provides the central imperfectivity, but the discourse and syntactico-semantic contextual features provide the large scale dimension.

8.2. Probable future process

The *probable future process* subconstruction is often described in reference grammars as expressing future events that are highly probable, inevitable, or already planned or scheduled; that is a *styret fremtid* or *fremtid lagt på skinner* (Borg 1998: 78)[55] or *anticipated event* (Leech 1971). A typical example, reappearing in the literature, of such a type of controlled future is 'The train *is leaving* at nine tomorrow'. An additional characterization of this use of the progressive is that it construes a "nært forestående arrangement" (Borg 1998: 82)[56], which is why it is sometimes called the *event in near future* use (cp. Dahl's (2000a) notions of intention, prediction, scheduling, and preparation of future events).

The present investigation, however, shows that temporal proximity is perhaps not the primary defining feature of this use of the progressive construction. While the controlled future or probable future construal seems to be ubiquitous in all instances of this use of the progressive construction in the corpus, the near future construal is not, suggesting that it is not as such an obligatory component of the content of the subconstruction, as some of these examples show:

(8.6) a. Carlos *is arriving* on Friday.

55 'Styret fremtid' translates as 'controlled future', while 'fremtid lagt på skinner' translates more or less as 'future placed on rails', meaning that the future event has been planned or scheduled.

56 'Nært forestående arrangement' translates roughly as 'event (or arrangement) to happen in the near future'.

b. I understand you'*re going* home on Saturday as well, Dieter?
c. I am very pleased to see what *is going on* in the coming year.
e. In other words, we *are going* back after three or four years.
g. You *are leaving* for Australia tomorrow?
h. We *are flying* home tomorrow.

Most examples in (8.6) do refer to near-future events. The exceptions are (8.6c) and (8.6e), which refer to events that are not part of the immediate future, but are a bit more distant. Yet they are in some sense controlled. In (8.e) the going back after three years appears to already have been planned, while in (8.c) the speaker already knows the events scheduled to take place in the coming year.

While temporal proximity may be a feature, and perhaps even a salient feature, it is not a necessary feature that applies to each and every members of this subset of the progressive construction. The above examples, and the occurrences of this subconstruction in the corpus under investigation, suggests that if there is one defining feature of the prototype of this subset of the progressive construction, then it is high probability of the event taking place in the future, because it has been scheduled or planned in some other way, and, this way, this use of the progressive is also a marker of epistemic modality.

Ignoring the semantic detail for the moment, the probable future process subconstruction behaves differently from the ongoing process subconstructions. The ongoing process subconstructions have no specifications as to tense and may profile either the past or the present against the temporal frame, depending on the tense form of the operator. The probable future subconstruction, regardless of the tense form of the operator, profiles the future against the temporal frame, and it thus displays features of a tense form such as the simple past and present tenses and the more complex expressions such as [OP:*BE going to* MV_{inf}] and [OP:BE *to* MV_{inf}]. This means that this subconstruction differs somewhat in terms of its inner symbolic relations from the ongoing process subconstructions. As with most other future expressions, the probable future construction is also an expression of epistemic modality (Dahl 2000a,b) because it judges the reality of the process actually taking place in the future in terms of high probability. It makes sense to argue that the future is not modality-free, since one is never completely certain what it will be like. My guess is that this is a universal element of general cognition. The the-future-is-behind-us system of Aymara tense may support this claim (Nuñez and Sweetser fc).

While this use of the progressive is extensively described, the semantico-conceptual aspects of the probable future event use of the progressive are typically not addressed. Part of the

motivation for this subconstruction lies in the progressive construction's core semantics of ongoingness. It is possible that the original motivation for the use of the progressive to refer to future events is that, since it describes a future event with an expression that otherwise construes ongoingness, it allows for high probability judgments of the occurrence of the event. An event that is going on, or construed as such, naturally has a high degree of probability of occurrence in its entirety, because it is already going on. Thus, implicit in the imperfectivity of the progressive construction are grounds for presuppositions and strong realis assertions, especially when the operator has a present tense form. In the ongoing uses the modal semantics is not overtly salient or formally marked, maybe because high probability logically follows from ongoingness. But when the progressive is used to describe a future event, the modality of the progressive becomes overtly salient because the language user knows that the event is not going on yet, though it is technically described as such. This way, the imperfective and future construals work together in creating the probable future construal. From this pont of view, the progressive is a presupposution or a realis assertion when used to express futurity.

Of course a counter-argument could be that in cases of the multiply parented [OP:*WILL* AUX:*be* MV_{pcp1}] imperfective future construction, which inherits from the [OP:*WILL* MV_{inf}] future construction and the progressive, future construals and imperfectivity co-operate without bringing about the notion of high probability. Compare for example the following manipulated examples with the originals in (8.6):

(8.7) a. Carlos *will be arriving* on Friday.
b. I understand you *will be going* home on Saturday as well, Dieter?
c. I am very pleased to see what *will be going on* in the coming year.
e. In other words, we *will be going* back after three or four years.
g. You *will be leaving* for Australia tomorrow?
h. We *will be flying* home tomorrow.

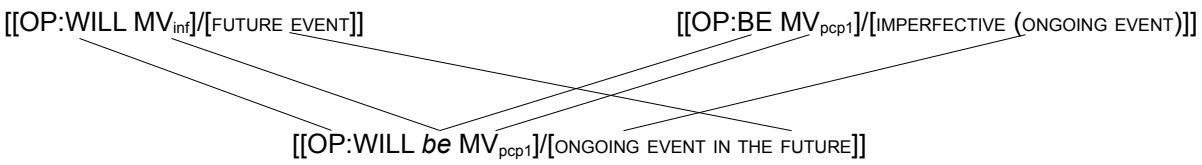
The examples in (8.7), some of which walk the razor's edge between being acceptable and being, if not unacceptable, then questionable, present processes that will be going on in the future, but without construing any special judgments regarding probability. The probable future subconstruction of the progressive and the imperfective future construction are different though involving the same domains. The difference lies in the way that the domains of futurity and imperfectivity co-operate within the two constructions.

Two important issues here are compositionality and metaphor, since it is highly likely that this use of the progressive construction is a matter of metaphorical extension from its more

prototypical uses. Compositionality often, but not always, is an issue that accompanies metaphor, as metaphorical expressions also often tend to be less compositional than literal ones.

If we look first at the imperfective progressive construction, we will find it is more or less compositionally structured and that most of its symbolic relations may be traced back to its parents. We already know the internal structure of the progressive, which has the overall symbolic structure of [[OP:*BE* MV_{pcp1}]/[IMPERFECTIVITY]]. The future construction has the overall symbolic structure of [[OP:*WILL* MV_{inf}]/[FUTURE]], the main verb describing the event to appear and the operator WILL indicating whether the temporal viewpoint is in the now or in the past. WILL is itself sometimes considered a modal marker of volition (Bache and Davidsen-Nielsen 1997: 339-40) and it is theoretically possible that [[OP:*WILL* MV_{inf}]/[FUTURE]] is a member of a more abstract modal predicator construction with the configuration of [[OP:MOD MV_{inf}]/[MODAL JUDGMENT]]. As I suggested in Jensen (2003), modal and future meanings are related, and it is possible that this is reflected formally such that the [OP:*WILL* Mv_{inf}] future inherits its form from the more abstract modal construction. In the combined imperfective future construction, the progressive maintains all of its symbolic structure as well as its semantics. Most of its formal structure is also retained with the exception of BE becoming fully substantive and semantically bleached as a bare infinitive in accordance with the formal structure of the future construction, in which the main verb is an infinitive. This suggests that the entire progressive construction takes up the main verb function in the future construction, whose operator maintains its form and function:[57]

Figure 8.6: Multiple parenting of the future imperfective construction

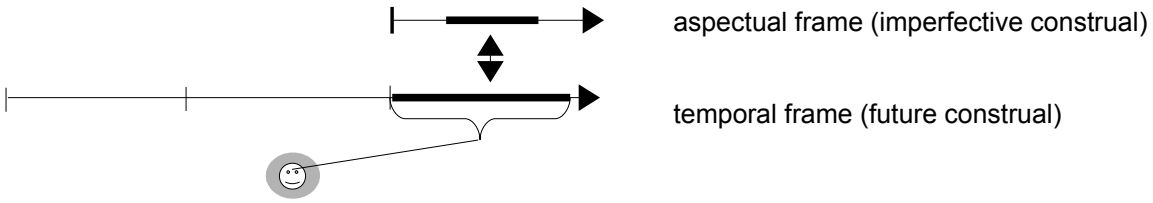


From the [OP:*WILL* Mv_{inf}]-construction, the hybrid inherits [OP:*WILL*] and the infinitive form of the verb following it, and it alo inherits the FUTURE EVENT construal. The progressive provides BE, which is morphologically morphologically fixes in its infinitive form, provided by the [OP:*WILL* MV_{inf}]-costruction. The Progressive also provides the present participial form of the main verb. Semantically, the hybrid inherits the ONGOING EVENT component of the imperfective semantics, which together firt the FUTURE EVENT semantics of the [OP:*WILL* Mv_{inf}] creates the amalgamated meaning

57 There is also the [OP:*SHALL* MV_{inf}]-construction, making a [OP:*SHALL* AUX:*be* MVinf]-construction possible. However, there were no instances of such a construction in the corpus, and I think this is due to a decline in use of the SHALL future in standard British English.

of ONGOING EVENT IN THE FUTURE. The entire imperfective future construction expresses a future construal which along with its modality is inherited from the future construction. Though bleached and obligatorized, BE does not become totally empty semantically, as it and the present participle main verb still form the gestalt that is needed for the evocations of the imperfective construal. The main verb of the progressive still has the task of expressing the event itself. The progressive element retains its ongoingness but the implicit presupposition or realis judgment of the ongoingness is overruled by the modality of the future element, such that the imperfective future construction's semantics may be summarized this way: from the TEMPORAL DEICTIC CENTER orientation is made towards a given point in the FUTURE which serves as the ASPECTUAL VIEWPOINt from which the MIDDLE PHASE of the event in question is viewed and thus profiled, while the other parts of the aspectual frame are gapped. It construes a situation as going on at some point in the future:

Figure 8.7: Construal of the future imperfective construction



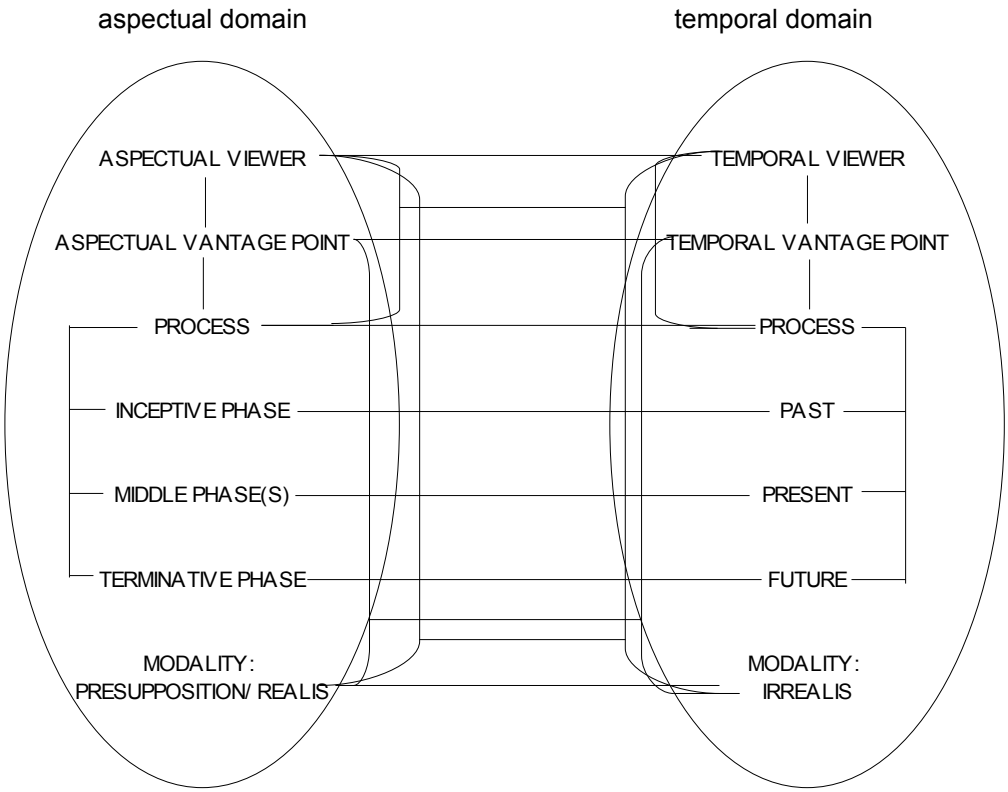
The ONGOING EVENT IN THE FUTURE reading is the construal of cases like (8.7), but not cases like (8.6). Firstly, there is the modal notion of high probability which is not present in (8.7). Secondly (8.6) do not convey the same sense of imperfectivity. The ongoingness of the events in (8.6) are not as salient as in (8.7), which are truly imperfective unbounded events. In (8.6), the aspectual reading of the event is similar to the one of the "normal" future construction; that is, a more generic one that focuses on the process itself rather than on any of its phases and which has a lower degree of sequential scanning and predication.

The probable future progressive is very different from the imperfective future construction. It has only one parent – namely, the progressive – which means that it has no other construction to inherit its future component from. Because of this, the probable future subconstruction is far less compositional than the imperfective future construction, and will consequently have less bi-unique symbolic relations. It is also more idiomatic in the sense that it is not possible to predict its semantic components from its formal elements. The probable future progressive is metaphoric; it is a metaphorical extension of the progressive construction in which the two domains are conceptualized in terms of each other. It is not an idiomatically combining construction, since it is

not possible to assign meanings to each of its elements, but rather this use of the construction displays a high degree of synergetically added meaning as well as synergetically removed meaning. One could say that while in the imperfective future, the domains of future and imperfectivity work together, in the probable future, they fuse together. Both in conceptual metaphor theory (Lakoff and Johnson 1980) and conceptual blending theory (Fauconnier and Turner 2002), metaphors involve two conceptual structures, which interact in such a way that they can be said to be fused into a new structures – namely, the metaphor.

The aspectual domain consists of an ASPECTUAL VANTAGE POINT from which the process is viewed as ongoing by profiling the MIDDLE PHASE(S) and gapping the INCEPTIVE and TERMINAL ones. Implicit in the imperfective construal are grounds for presupposition and strong realis assertion, since the process is already going on in relation to the vantage point. The temporal domain consists of a TEMPORAL VANTAGE POINT (i.e. the DEICTIC CENTER) from which the event is viewed in terms of its temporal location in relation to the VIEWER. In this case it is placed in the FUTURE. FUTURE EVENTS are typically amenable to weak realis assertions and irrealis assertions, since we never completely know what the future will bring. On the face of it, the two domains appear to have parallel structures, making it possible to set up both *epistemic* and *ontological correspondences* between them. For example, there would be ontological correspondences between the ASPECTUAL and TEMPORAL VIEWERS, between the ASPECTUAL and TEMPORAL VANTAGE POINTS, between the aspectually and temporally viewed events, and between the implicit modalities. There would also be epistemic correspondences between the relations of the respective viewers to their vantage points, between the respective VIEWERS, VANTAGE POINTS and EVENTS. Thus it might be possible that the probable future construction has the following metaphorical structure:

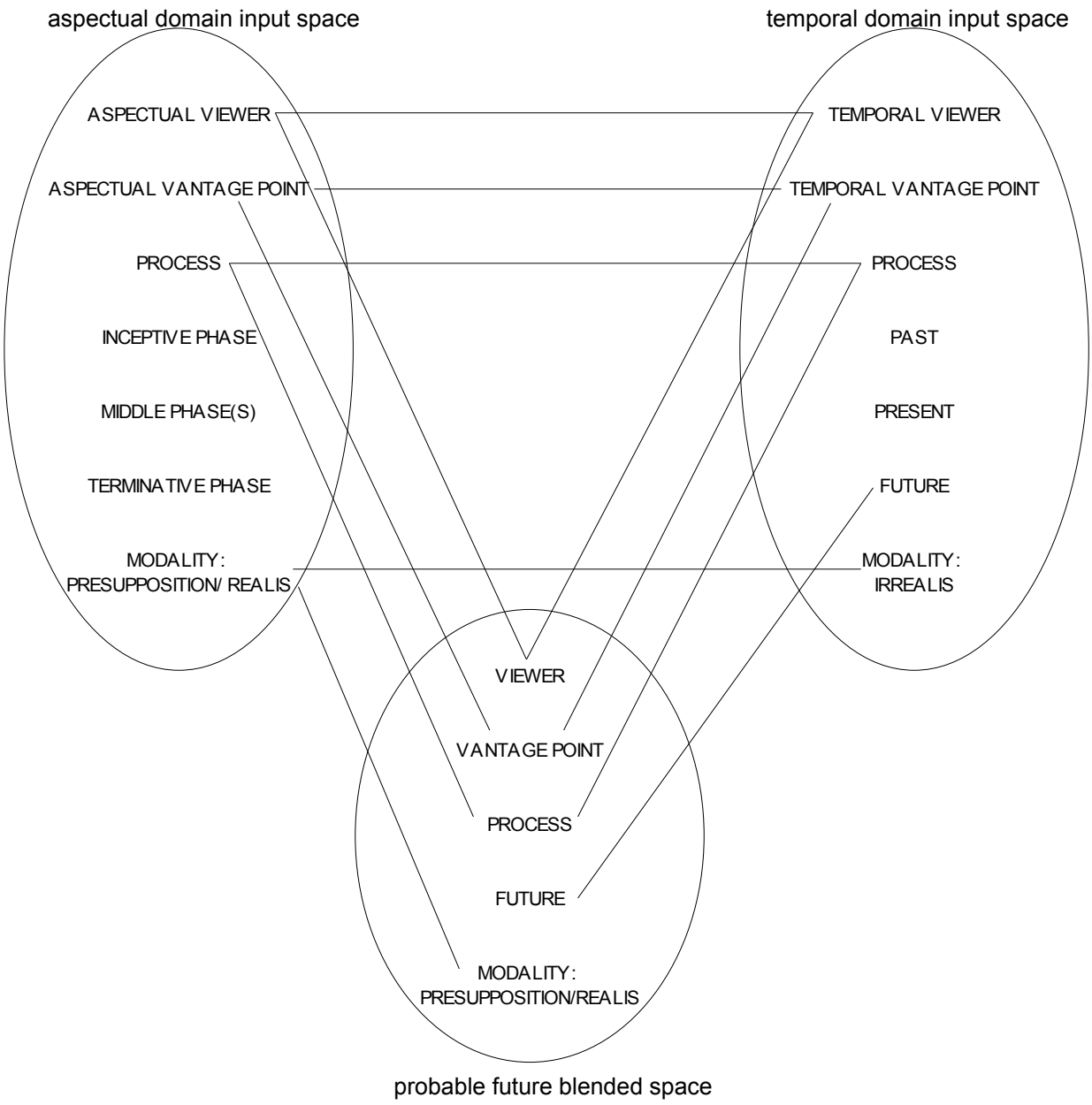
Figure 8.8: The probable future construction as a conceptual metaphor



There is a serious problem with this analysis, however. For a metaphor to be a conceptual metaphor, the source domain must be totally projectable onto the target domain. The temporal frame and the aspectual frame are in fact not structurally parallel. No epistemic or ontological correspondences can be set up between the PAST and the INCEPTIVE phase, the PRESENT and the MIDDLE PHASE, and the FUTURE and the TERMINAL PHASE. This suggests that rather than a complete projection of the aspectual structure onto the temporal structure, elements from the two input spaces are blended into a new conceptual structure, which constitutes the construal behind the probable future construction. The TEMPORAL VIEWER and the ASPECTUAL viewer fuse into a role that we just call the VIEWER. Likewise the ASPECTUAL and TEMPORAL VIEWPOINTS are blended into one VIEWPOINt. The temporal structure with the profiled FUTURE is projected onto the blended space from the temporal input space. The aspectual structure with the profiled MIDDLE PHASE from the aspectual input space is not projected, which is why the probable future blended space is "aspectless". The event is summarily scanned in its generic entirety without focus on any of its parts, rather than temporarily scanned as an unfolding process, which makes it less dynamic and more object-like, and thus the aspectual frame cannot be applied to it. The role of modality is projected from the temporal space onto the blended space, but is filled by the value of presuppositional high probability which is

implicit in the aspectual space:

Figure 8.9: The probable future construction as a blend[58]



This hypothesis of the probable future process subconstruction as a blend – on Janda's (2000) definition of a blend as a special type of metaphorical structure and process rather than the basic and single most universal process of human thought – seems a plausible way of characterizing some of the semantico-conceptual aspects of the subconstruction, because it allows to describe the onomasiological interplay between the domains of modality and imperfectivity as well as

58 Normally, a fourth space is set up, called the *generic space*, which captures the components that the two input spaces have in common. The elements in the generic space are usually slightly more schematic.

temporality. Admittedly, one might argue that the future imperfective is also a blend, but even if that is the case, it is still a quite different kind of blend – namely, what Fauconnier and Turner (2002: 365-70) call a *formal* blend; that is, a semiotic type of blend in which both form and content are blended, much like morphological blends like 'motel', 'brunch', 'Oxbridge', 'smog', and 'infomercials' (Crystal 2003: 130), and the looped slur 'grrl' (Jensen 2006a: 45). The probable future progressive is what might be called an *onomasiological blend*, which is one that only takes place at the semantic or conceptul level, not being formally reflected.

Some may object to the use of blending in the analysis of this specific use of the progressive, or the use of blending altogether. Blending in the form given to it by its originators, Fauconnier and Turner (2002) – namely, as the singlemost central and important human cognitive process – has received serious criticism from various sources. In original blending theory, blending is presented as an extremely powerful analysis that may be applied to virtually any phenomenon – linguistic, conceptual, perceptual or otherwise associated with human cognition. While the powerful generality of their version of blending suits their own purpose of presenting it as the most important human cognitive operation, it has received considerable criticism for being immune to falsifiability (e.g. Gibbs 2000; Pereira and Cardoso 2003; Ritchie 2004; Bache 2005). This criticism includes various aspects of the falsifiability principle. For instance Pereira and Cardoso (2003) point out that while it is an elegant description of creative processes pertaining to language and cognition, it is formally vague to such an extent that it is difficult to think of blending as a theory at all in a Popperian sense.[59] Pereira and Cardoso also point out an empirical weakness of blending as presented by Fauconnier and Turner (2002) – namely that there appears to be a gap between the phenomenon that the theory is based on, such as the complex figurative and metaphorical monk riddle, the discussion with Kant, French Nixon and so on, and the theory itself as a generally applicable theory. Harder (2003) makes a similar argument, pointing to Fauconnier and Turner's (2002) use of very specific and complex phenomena to create what should be a generalized theory instead of taking their starting point in the more mundane everyday phenomena, which according to Harder (2003), is an unfortunate reversal of the otherwise recommended process of theory-establishment. This creates a theory which, as also pointed out by Pereira and Cardoso (2003), is quite removed from, and perhaps not even applicable to, the majority of linguistic phenomena. As a consequence of this falsifiability problem and the gap between theory and phenomenon, it can be difficult to differentiate blends from non-blends, and often it seems that

59 In the Popperian view, a hypothesis only has scientific value as a theory if it acknowledges that there is the empirical possibility of the existence of phenomena that may contradict it or prove it false or invalid.

everything is a blend. This is what Bache (2005: 1617) calls the *ubiquity problem* of blending: "if blending is everywhere, at all times, governing the human mind in general it can hardly account for any specific manifestations of human cognition (such as language, etc.) with sufficient precision". This theoretico-empirical problem is a serious one if one does not share Fauconnier and Turner's (2002) view of blending as the singlemost important human cognitive operation, and perhaps even to some extent if one agrees with them, because, as Bache (2005: 1615-6), among others, points out, such a "silver-bullet theory" must "in order to be taken seriously at all ... offer not only comprehensiveness but also depth, and must not only be observationally adequate but also descriptively and explanatorily adequate", and given the gap between theory and phenomena pointed out by Harder (2003) and Pereira and Cardoso (2003), blending in its original unconstrained form is not adequate.

While proposing some counter-arguments to Harder (2003), Ritchie (2004) delivers a harsh criticism of blending theory in a somewhat yet related different perspective. Ritche asks whether the processes proposed in blending theory are in reality not derived from the descriptive metaphors that constitute the theory itself and its metalanguage rather than being derived from the actual linguistic, cognitive, and neurological phenomena that blending theory is said to be based on. For instance, the metaphors of 'space' and 'blending' imply boundary and conduit metaphors, separating the conceptual elements supposedly in the space from other elements, which, according to Ritchie ultimately imposes a conduit metaphor upon linguistic and other phenomena. A related criticism that often surfaces in the general cognitive linguistic and cognitive scientific communities is that there seems to be no limits to what may be placed in an input space, such that the input spaces may be structured in accordance with the researcher's desired outcome of the analysis in question. This makes blending theory ammenable to accusations of being oportinistic.

I think that this *space problem* may be related to the ubiquity problem of the unconstrained powerfulness of blending. Just as there appear to be no limits as to what may be a blend, there also appear to be no limits as to what constitutes an input space. Those who criticize the seeming everything-goes approach of blending theory call for constraints to be set up so as to curb the powerfulness of blending, thus diminishing the ubiquity problem and making blending psychologically more realistic. Fauconnier and Turner (2002: 120ff) themselves offer a number of constraints by proposing a myriad of local subtypes of blending. But these are not satisfactory, as pointed out by Bache (2005: 1619), and introducing a large number of subtypes of blending may perhaps complicate matters even more, and some may see this as an oportunity to deliver critique

involving Occam's Razor. Others may praise the descriptive delicacy such subtypes allow. Bache (ibid.) himself proposes *levels of blending* as a solution, while Gibbs (2000) sets up a number of points that may improve blending in specific (and cognitive semantic theories in general). Harder (2003) proposes that mental spaces and blending should only be involved in complex cases of cross-domain conceptual integration, but are not necessarily involved in the more simple and mundane cases. Another option, which seems to be implicit in Janda's (2000) status report regarding CL is to consider blends to be specific, metaphoric, or figurative, structures that involve the co-integration of components from different domains into one new figurative conceptual structure. instead of being universally applicable to any type of conceptual structure, blending as a process would then be the underlying construal process of this specific type of figurative structure. In that sense blends are figurative structures on par with conceptual metaphors and metonymies. Of course, this would call for a strict definition of what a mental space is, but then, blending theory has always been haunted by a rather vague definition of mental space. My suggestion is that a mental space will have to coincide with a clearly definable cognitive model or a clearly definable matrix of cognitive models. Blending would thus be primarily involved in cases where input spaces clearly coincide with domains or domain matrixes from which it is clear that components are picked out and combined with components of the other space. While primarily involved in blends, blending as a conceptualization process may of course be involved in other cases and may construct various types of meanings in coorperation with other construal operations. Needless to say, such a take on blending would require extensive research and redefinition of many of the concepts in blending theory, which there is neither time nor space to do within the limits of the present study, but it is my opinion that demoting blending from being the single most important human thought process to being just one conceptual operation out of many will impose several constraints on blending and reduce its powerfulness and consequently the ubiquity problem considerably, adding more psychological plausibility to it as well.

We have already encountered the ubiquity problem once in relation to the future imperfect construction, where it was discussed whether it was a blend or an instance of multiple inheritance. In the perspective of blending as seen by Fauconnier and Turner (ibid.), the uncurbed powerfulness of blending allows one to reduce hybrid constructions and also morphological blends to instances of formal blending, thus rendering the notion of multiple inheritance, and whatever other factore may be involved, superfluous and unnecessary. However, in a framework where blending is dethroned and demoted to being just one conceptualization operation out of many, it is possible to

combine multiple parenting with blending such that blending is one of the processes involved in multiple inheritance. Constraining blending this way removes its silver-bullet status, but allows for more varying and perhaps more credible analyses. Note that it also makes it possible to view conventional metaphors as involving blending, just as conventional constructions involve sets of construal operations.

Given all the problems with blending as presented by Fauconner and Turner (ibid.), it might not seem feasible to apply blending to the probable future process subuse of the progressive construction. But it is difficult, if not impossible, to argue that metaphor is not involved in this extension of the progressive construction. We have seen that it cannot be a conceptual metaphor since there is no direct mapping from the domain of aspect onto the domain of time. Rather, it does seem that, in this case, elements from the two domains are picked out and combined into the PROBABLE FUTURE meaning, creating a content structure that is quite different from the domain matrix and profiling and binding patterns of the more central subconstructions. I think that by constraining blending into being one conceptualization process out of many along the lines of what I have just suggested allows one to take into account cases where cross-domain component combination is evident and describe them as involving blending without having to consider everything else to be instances of blending.

The special semantic structure appears to be reflected in the formal constraints on this particular subconstruction in relation to the realization of the operator.

The tense forms of the operator are more of less evenly distributed among the usage-events of the ongoing process subconstructions. The probable future subconstruction is formally more constrained, as the freedom of choice is reduced dramatically, and present tense forms are preferred by the probable future use. This table shows the distribution of tense forms of operators among the usage-events downloaded from the corpus:

Table 8.1: Tense form of the operator in the probable future progressive

Tense form	Frequency
Present	90% (n=1,686)
Past	10% (n=188)

This preference for present tense by the probable future process subconstruction challenges the commonly established idea that operators are always paradigmatically free in terms of which tense form may realize it.[60] This idea is rooted in the view that predicators are fully compositional such

60 Some of the criticism I have received regarding this study was directed at my viewing of predicators as gestaltic

that the main verb provides the propositional content and the actionality, the present participle provides the imperfective aspect, and the operator provides the future temporality. This study, however, indicates that the probable future construction is less compositional than the central ongoing event subtypes. The future tense semantics is not traceable to any of the construction's components. The form of the operator has no consequence for the temporality of the subconstruction. The overwhelming frequency of present tense operators with the probable future construction suggests that present operators are, or are becoming, entrenched parts of the probable future construction and thus less formally schematic. This is also one of the reasons why I suspect that content of this construction is an integrated blend. The preference for the present tense form of the operator could be a reflection of the semantics being one integrated unit which blocks a high degree of compositionality and monadic symbolic structure. Also, it is possible that the progressive when used to express future processes is just generally used most frequently with the present tense, perhaps because it is more relevant to talk this way about planned and other sorts of scheduled and probably future events from a present perspective than in a past perspective, and the preference for a present tense predicator has become part of the linguistico-communicative knowledge pertaining to this subconstruction.

In many of those cases, where it does occur with a past tense operator, it is due to factors such as back-shifting, as in (8.7a), while a few cases do involve future reference from a point in the past of the deictic present of the communicative situation, as in (8.7b):

(8.7) a. I told her you *were coming*.
b. In the face of his father's protestations he had decided that the conventional path for the scholarship winner – law or medicine – was not for him: he *was going* to Oxford to do History.

In both cases, and this is also symptomatic for most of the other cases in the corpus where the operator is a past tense one, various communicative factors are at play. Backshifting is the most typical cause of probable future constructions with past predicators. Otherwise, the cause lies in

constructional entities. The main argument was typically that predicators cannot be constructions because many years of research have shown that they are compositional, the compositionality being indicated by the fact that there is free choice among the tense realizations of the operators. This critique can be debunked with two arguments. The first argument would point out that the critique is based on a misunderstanding of some of the basic principles of CxG. The critique wrongly assumes that CxG is also non-compositionalist, which we have seen is not the case. Compositionality is allowed in CxG, although strict compositionality is rejected, but sometimes compositionality comes in the shape of an idiomatically combining expression in which a given element is a assigned a specific meaning which is applicable only in the context of the construction in question. That may be said to be the case of operators in predicators. The second argument would hold that the critique lacks empirical grounding, since, as this study shows, there are many cases, such as the probable future process subuse of the progressive, where the tense form of the operator is not free, but where the present form is overwhelmingly preferred.

specific strategies that are often unique to the usage-event in question, of which (8.7b) serves as an example. Here someone's future plans are presented in a narrative whose content is situated in the past of the deictic center, which do not coincide with the ideas of a more authorities person. Using the probable future here, the sentence emphasizes that studying history is what he really wants to do. In effect, it is an example of the probable future in its controlled future use, in the sense that the student to be has decided on his future and thus, from a certain point of view, can be said to control it (though he might well end up doing law or medicine after all). It seems that, even though the potential is there theoretically to produce probable future constructions in the past tense, it seems that in praxis preferences for the present do impose constraints on the form of the operator.

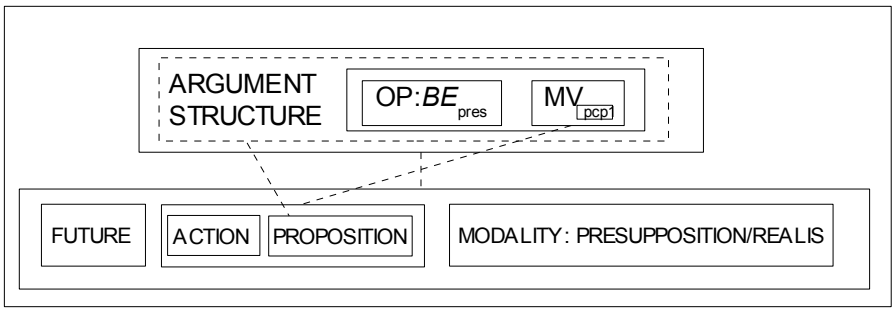
Another feature in the corpus, which surfaces in the present investigation, is that this subuse of the progressive construction occurs most frequently with main verb lexemes whose contents facilitate future event construals, such as the *deictic motion verbs* 'come', and 'go' (Fillmore 1997: 79). As with the preference for present tense forms of BE as the operator, the seeming preference – while not as striking as with the operator – for deictic motion verbs may have become entrenched as part of the linguistico-communicative knowledge pertaingin to the probable future process subconstruction of the English progressive through frequency of use, perhaps in addition to a type of semantic compatibility that facilitates this preference. These particular lexical items are compatible with future events because in many "modern" cultures traveling usually involves planned and scheduled events such as departures and arrivals.[61] They also involve motion to and from the deictic vantage point, which may be extended into the domain of time. This observation made in the present investigation shows that English follows a widespread pattern of grammaticalization. Grammaticalization of units meaning GO (TO) or COME (TO) into future tense construals are quite common crosslinguistically (Heine and Kuteva 2002). Most remarkably, in relation to the patterns of the probable future progressive construction of English are the Zonde progressive [*na* V *ya*] construction, which combined with YE (COME), constitutes a future tense construction, and the Totzil morphological incompletive aspect construction [*ch*-V] which combined with the verb BA (GO) also constitute a future tense construction (ibid.). This could be a

61 Instances of [OP:*BE going to* MV_{inf}] were not considered to be instances of the progressive construction and were weeded out, and are thus not included in this study at all. Diachronically speaking, though, it is related to the progressive. In Early Modern English as represented by William Shakespeare, there was a general purpose construction typically used with verbs of motion, some other instances of which are: 'He (is) returning to break our necks', '(They) are journeying to salute the emperor', 'I'll convey myself to hear the process', and '(They) are going to see the queen's picture'. GO was the most frequently used main verb while the most frequent grammatical realization was the progressive, and thus it was eventually entrenched as a specific grammatical construction of its own indicating futurity (Bybee MS) and not considered an instance of the progressive construction or the general purpose construction.

crosslinguistic instantiation of Stefanowitsch and Gries' (2005: 4) principle of semantic coherence in that the probable future construal and items referring to events that are typically planned and scheduled. This could be based on, or constrained by, embodiment of motion and experience of temporal relations, such as seen in the metaphors that conceptualize time in terms of motion.

The probable future subconstruction of the progressive has the symbolic structure illustrated below:

Figure 8.10: Symbolic structure of the probable future construction



Neither FUTURE nor MODALITY links up with a formal element, but are covertly expressed, the subconstruction having a low degree of compositionality. Likewise, [OP:BE_{pres}], while obviously serving the communicative function of marking the progressive, does not as such link up with any specific semantic component. Note also that there is no ASPECT component. This is because, as seen above, the process is summarily scanned, rather than temporarily scanned, making aspect irrelevant. Imperfectivity may still be present in the proposed underlying mental simulation of an ongoing unbounded process.

A related use surfaced in the present investigation, which is, in fact well-known but not well-described in the literature as such. The subuse, which only covers 1.2% (n=22) of all occurrences of the probable future subconstruction, has an additional illocutionary content – namely, that of COMMAND, or DIRECTIVE, which "instructs the receiver to perform an action" (Bache and Davidsen-Nielsen 1997: 95):

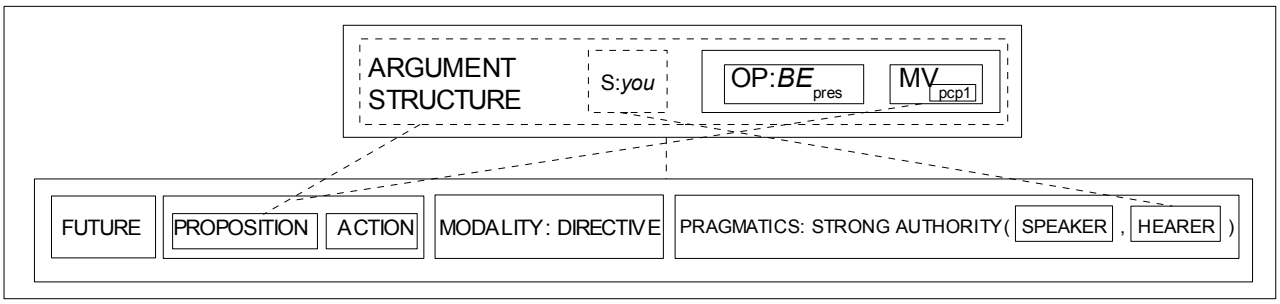
(8.8) a. The one with gun speaks. "You'*re coming* with us."
b. He stood up, blocking her escape. "You'*re going* nowhere until you explain."
c. You'*re* not *changing* anything that's on the computer at all.
d. And you'*re* not *going* either.
e. You'*re* not *going* to any disco.

The high probability construal of the probable future subconstruction facilitates its use with this type of illocutionary force. It makes use of an extension of presupposition and strong realis

assertion into the domain of deontic modality, such that it presents a judgment of high authority of the speaker. It boosts the illocutionary force understood such that, by construing the process as one that is highly likely to occur, makes the command seem very powerful, ranging from a strong directive over a command to almost being on the verge of being a performative. My guess is that, in accordance with the extension into the deontic domain, it is typically used by speakers in situations where they have some kind of legal, social, as in (8.8a), physical (8.8b), or otherwise authority or force backing them up. An interesting observation is that 77.3% (n=17) of all instances in the corpus of this subtype of the probable future construction are negated, while 22.7% (n=5) are not. This suggests that this subuse of the construction is predominantly used to prevent future events from happening, as in (8.9c-d).

This use is more specific in terms of its external and internal properties. In the corpus, no instances have past tense operators. The explanation here is rather simple: one cannot give orders in the present for something to happen in the past. Another recurrent pattern, suggesting entrenched external properties is that the subject in all instances is 'you'. Again, the explanation is quite simple, as orders are typically given to addressees. I would argue that this way of using the progressive is socio-pragmatically motivated and thus is one of the areas where social cognition influences grammar. Pragmatically, the speaker has (or construes) some type of authority that allows the speaker to request than an event happens, or to prevent an event from happening'. The subconstruction itself construes this authority, as, when encountering an instance of it, like those in (8.9), one reads authority into the speaker of the clause in question:

Figure 8.11: Symbolic structure of the deontic/directive probable future constructions



This subconstruction this encodes a system of power relations in which the SPEAKER is superior to the HEARER and has STRONG AUTHORITY, or power, over the HEARER. I have placed this relation in the PRAGMATICS component, as power relations are a matter of social context. However, this social relationship may be said to be encoded in the directive subtype of deontic modality, such that it is

in reality an intersection, as suggested above, between modality and social cognition, which would mean that the above separation of modal meaning and socio-pragmatic meaning is artificial. Note that, while not overtly expressed through grammatical means as such, one aspect of the power relation does formally surface (if one dares use the term 'surface' in a CL-oriented study), and that is the hearer, which is expressed by [S:*you*]. [S:*you*] also expresses the agent in the PROPOSITION frame, so a more elaborate version of the above figure would explode the PROPOSITION structure, rendering it as [PROCESS(AGENT, NON-AGENT(S))] and there would be a symbolic relation between [S:*you*] and AGENT in addition to the [[S:*you*]/[HEARER]] unit, and thus a binding between HEARER and AGENT. The reason for this is that the speaker typically orders the hearer to take up the AGENT or DOER role in the process that the speaker wishes to take place.

Interpersonal manipulation is obviously an issue here. Using the progressive this way, the speaker not only gives the listener a command, but also attempts to make the listener construe the same underlying asymmetric social power relation (I will return to this in chapter 14).

Since this pattern has a very low frequency, one might question whether it is tenable at all to argue that it is an established subtype. This is a valid criticism, but since the 22 examples appear in different sources with similar contexts, it does make sense to argue that it is probably a pragmatic extension of the probable future construction which has a pragmatic point, serving a specific pragmatic function:[62]

8.3. Temporary state

Ota (1963) writes that the progressive may only be used to describe processes, which is a representative of a common assumption among many grammarians of English. Much in the same spirit, Borg (1997: 96-7) informs us that relational verbs never appear in progressive constructions, whilst mental and sensory verbs sometimes do. Biber et al. (1999: 471) present measures that seem to confirm these constraints. However, Biber et al.'s study also shows that relational stative and state-like verbs do appear in the progressive. Many linguists that do take into account patterns of naturally occurring language are aware of this (Leech 1971: 22-9; Greenbaum and Quirk 1990: 55-

62 On a more anecdotal note, I can report that I encountered what seems to be an item-based extension of the probable future construction in the Mancunian variety of English spoken in and around Manchester, UK, in which the main verb is obligatorily HAVE, as in "She's having this!", which means I/WE ARE DEFINITELY GOING TO GIVE HER THIS ITEM AS A PRESENT. I encountered this construction several times in similar contexts, in which the typical physical and socio-interactive context would be a shop frequented often by female Mancunians. The speakers were exclusively female Mancunians who were searching for presents to buy for an individual who was not present. It also appeared that younger speakers tended to use the construction than older ones. The construction probably means that the speaker has decided that the item will be the present, wherefore HAVE, which prototypically indicates that the item is already in their possession, is used. Despite this, the decision encoded by the construction was typically still open for negotiation.

6) and they also make the observation that such verbs typically adopt a more dynamic meaning when in the progressive construction, which in constructionist terms means that coercion is involved.

The occurrences of the progressive in the corpus revealed, in support of Biber et al. (1999) and Greenbaum and Quirk (1990), that the progressive does occur with stative verbs and that, not only one, but several stative subconstructions may be posed, based on usage-patterns relating to the semantic nature of the main verb item in that main verbs of the instances of each subconstruction typically share a number of semantic features and external syntactic, semantic, and pragmatic properties. In this sense, each subconstruction is an item-class-based one. Most of the following semantic verb classes are based on Levin's (1993) work. Many of the following item-class-based and item-based subconstructions of the progressive are not accounted for in the general literature, but the integrated grammar premises of the present investigation allows for the "discovery" of such types because it takes usage-based linguistics as one of its fundamental frameworks.

8.3.1. Behavioral states

The corpus data suggest that there is a set of subconstructions of the progressive predicator construction which construe TEMPORARY STATES based on the behavior associated with the referent of the subject. By TEMPORARY STATE is understood a relation between entities or between entities and properties which are non-dynamic and stative, but which are expected to exist only for a limited amount of time before changing into another state or into a process. *Behavior* is here used with reference to whatever activity or series of activities that the primary agent is involved in. The situation is then construed such that the behavior is seen as a reflection or manifestation of a temporary state, often a type of property, that the primary participant is in; a state which will cease to exist when the primary participant is no longer engaged in the behavior.

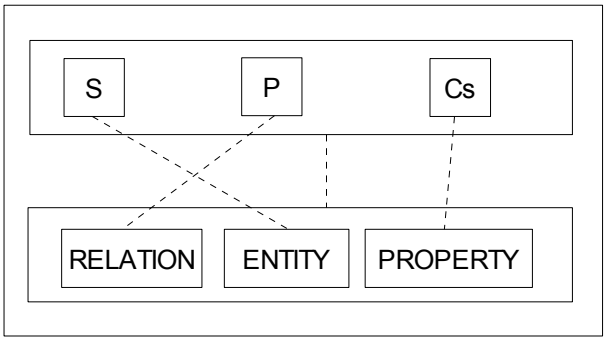
Consider, for instance:

(8.9)
a. Those so-called jokes, were no jokes, you *were being* cheeky.
b. The Hon. Gentleman *is being* rather longwinded.
c. Anyway, it was much better to persuade myself I *was being* hyperactive.
d. The Hon. Gentleman *is being* most unfair.
e. He *is being* most kind.

All of the above examples involve the copula BE-construction, which normally construes a relation between two entities such that one is a property of the other. In copula constructions, the complement typically links up with the property, the subject yypically links up with the entity, and

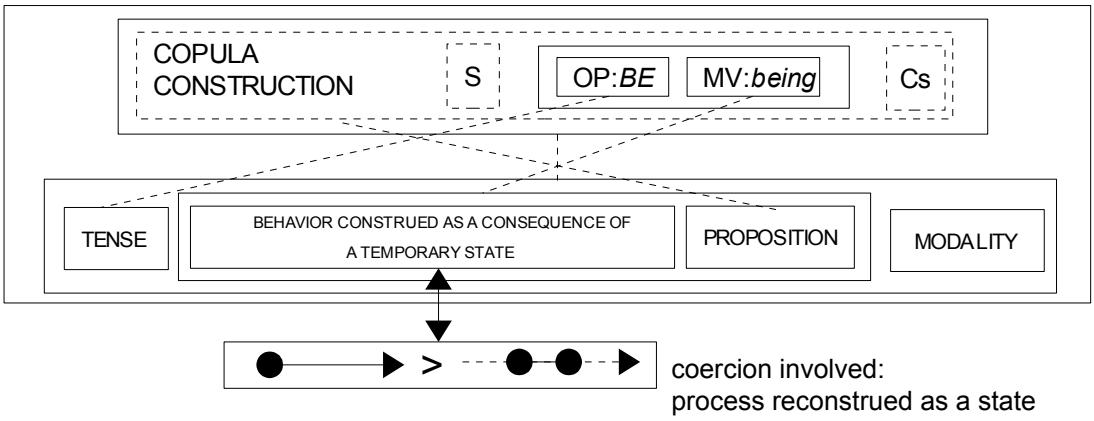
the copula verb links up with, and elaborates on, the relation itself:

Figure 8.12: The copula construction



In terms of propositional acts, the copula BE-construction normally predicates a PROPERTY (Croft 1990, 2001, 2003). This is not quite the case with the above examples. While the propositional act function remains the same, the semantic class is slightly changed from a PROPERTY into something in-between a PROPERTY and an ACTION. The relations are construed in a more dynamic way, as it represents the speaker's interpretation of an action as being a type of TRANSITORY STATE. This use is sometimes called *behavior with limited duration* in the literature (e.g. Quirk 1972), because the property associated with the referent of the subject is seen as a manifestation of patterns of behavior. For instance, as mentioned above, in (8.9a) the subject has been involved in certain events and displayed certain behaviors which were meant to be jocular ones, which the speaker construes as a manifestation of a BEHAVIORAL STATE – namely, that of being cheeky. Similar analyses apply to (8.9b-c) in which an action is being interpreted as an indicator of a TEMPORARY BEHAVIORAL STATE. The utterances in (8.9d-e) are perhaps the most illustrative examples. Even though, the bahavior itself is not overtly marked by any sign appearing in the instance of the construction and its immediate context, it is nevertheless felt that the being unfair and the being most kind are effects of the underlying behavior, in this case construed as temporary properties of the referents of the subjects. Given that the stative construal is an interpretation of the behavior, rather than being the behavior itself, I will call this subconstruction *interpretative behavioral state* subconstruction. The interpretative behavioral state use appears only with copula BE as the main verb in the corpus, and thus [[OP:*BE* MV:*being*]/[BEHAVIORAL STATE]] is an item-specific subconstruction, since it obligatorily appears exclusively with instances of the copula construction.

Figure 8.13: Symbolic structure of the interpretative behavioral state subconstruction



As with figure 8.11, a more elaborate version of the above figure would explode the proposition frame. Its structure would be that of the frame evoked by the copula construction, and there would be symbolic links between [S] and [ENTITY], forming [[S]/[ENTITY]], and between [Cs] and [PROPERTY], forming [[Cs]/[PROPERTY]]. The construction coerces the otherwise permanent and unbounded stative relational semantics of BE into a stative relation that is not expected to be permantent, but rather to be temporary. This is captured by the box beneath the symbolic diagram which shows that a process, indicatef by the arrow, is reconstrued as, or coerced into, a temporary state. The box itself relates to the feature called BEHAVIOR CONSTRUED AS A CONSEQUENCE OF A TEMPORARY STATE in that it is the coercion of a process into a state that consitutes the construal of behavior as a reflection of a temporary state. This subconstruction is a highly specific verb-based one, the main verb having to be BE, and which has a very specific external syntactic make-up as well. Indeed, one may well argue that this is perhaps a hybrid construction combining features from the progressive with fratures from the copula construction.

There are other instances which also refer to behavioral states that have other verbs than BE as main verbs, but these differ from the interpretative behavioral state in that they do not represent the speaker's interpretation of the behavior but refer to the behavior itself as a temporal state:

(8.10) a. Mike and Anne are having a ball and the dogs *are* obviously *enjoying* themselves
b. Marlene *was fuming*. How had Keith dared to talk to her like that?
c. It was a happy evening, and when Sophie left she asked, "May I tell Joanna?"
"Yes, of course"
Helen's face *was glowing*.
"And tell her that my party will become an engagement party."

These examples construe what is on the borderline between being an event and a state. For example, Mike and Anne are obviously engaged in some type of process, but at the same time they

are construed as being in a state of behavior while involved in the process. In the cases of Marlene and Helen, verbs with more or less dynamic semantics (GLOW and FUME) are metaphorically used to construe a certain non-volitional state of behavior. Of course, one could argue that the metaphorical extension itself is a type of interpretation given the basic cognitive function of metapors of judgment and comparison (Croft and Wood 2000). My suspicion is that they are ultimately item-based subconstructions since the verbs in those metaphorical senses seem not to occur in other forms (cp. '?Her face glowed' and '?She fumes with anger').

The feelings of anger and happiness are here construed in terms of physical phenomena associated with the underlying conceptual metaphors of ANGER and HAPPINESS (Lakoff and Johnson 1980). For instance 'fuming with anger' may be based an an ANGER IS HEAT metaphor, which, in turn, may be based on an underlying metonymy in which the physical reflections of the emotion stand for the emotion itself. In the case of ANGER, the body temperature that accompanies this emotion is then conceptualized as representing the entire emotion (Ungerer and Schmid 1996: 132). This is then conceptualized in terms of HEAT, giving way to the ANGER IS HEAT metaphor and expressions like 'fuming with anger'. The notion of a face glowing with happiness may actually have the same bodily roots. Happiness also brings about a rise in body temperature, which may be visually reflected in one's face turning red, which in turn may be conceptualized in terms of glowing.

Whereas the interpretative behavioral state subconstruction only takes BE as its main verb the behavioral state subconstruction appears to take any type of verb that expresses state-like behaviors or state-like processes. The emphasis here is not so much on the interpretation of the behavior as on the behavior itself.

Finally there is the constellation of BE + *wearing*, which appears frequently in the corpus. This subconstruction is a bit of an odd man out. It is not a state proper, but not a real process either, but rather something in between. It refers to a present state of wearing garments as opposed to the habit of wearing apparel, which is typically expressed by the atomic present or past constructions. It does evoke the same GARMENTS frame in which a PERSON WEARS certain GARMENTS, but the imperfectivity of the progressive construction informs that the garments are specifically being worn at a limited period of time coinciding with the aspectual vantage point, but not necessarily with the temporal vantage point. This is also hybrid in terms of behavior. Wearing clothes may be considered a type of behavior, but it is certainly not very proces-like in terms of force dynamics; nor does it require much volition or agentivity on the behalf of the WEARER. Ultimately this verb-based subconstruction may be neither a stative nor a dynamic use of the progressive construction,

but a subconstruction falling into its very own category.

8.3.2. Non-behavioral states

In addition to the behavioral state extensions suggested by the corpus data, there are a number of instances in which the progressive is used to indicate non-behavioral states. A non-behavioral state, is a stative relation among entities or an entity and a property that does not involve volitional human or highly animate agentive participants. In cases where an animate entity or a human is the subject, it is typically not the AGENT in a force dynamic chain, but rather an EXPERIENCER, a non-volitional CONDITION, a PATIENT, or some other non-agentive participant role. Like the behavioral states, these states are transitory or limited:

(8.11)
a. The, we did er our baths *were dating* from the nineteen fourteen period and they were getting rather old.
b. The system *is crying* out for a particular simple change.
c. His chin *was jutting* with yet more aggression.
d. The eyes had sunken in and the skull *was showing* through the thinning hair of the pate.

All of these examples are very diverse in terms of the nature of the state, such as whether it is an interpretation or not, or whether it involves human participants at all or not, and so on ([*CRY out for* X] is an expression used to contsrue a state of being in urgent need of something). What they have in common, though, is that the states are transitory or construed as limited, that no volitional human participants are involved, and that their main verbs all represent construals of some type of non-behavioral state, which is construed dynamically. Apart from these commonalities, there are neither formal nor semantic constraints to this subconstruction. And one might ask whether it is a subconstruction at all and not just a random conglomeration of instances of the ongoing subconstructions.

However, there were patterns among the retrieved instances that suggest a number of item-class-specific extensions of the non-behavioral state subconstruction, many of which, due to the absence of fully integration of grammar in many parts of the literature, have not been described. There is a small group of instances whose main verbs prototypically construe BEING IN A STATE OF ANTICIPATION, such as ANTICIPATE, AWAIT and FACE. There is preference for the monotransitive argument structure construction, probably because the monotransitive argument structure construction is normally associated with verbs of this type as mini-constructions of their senses.

Let us now turn to the possible types of non-behavioral state extensions of the progressive

construction:

(8.12) a. The sitting-room *is awaiting* redecoration.
b. His mind *was anticipating* a potentially most interesting encounter.
c. The possibility that the MacQuillan empire *was facing* hard times raised interesting questions about the future.

The instances of this subset of the non-behavioral state extension of the progressive construction construe BEING IN A STATE OF ANTICIPATING FUTURE EVENT(S). The argument structure is that of the mini-construction associated with the ICM content of the items serving as main verbs, which in turn is likely to be based on the frame that they all evoke – which we might (tentatively) call the ANTICIPATION frame, involving the ANTICIPATER, the specified construal of the ANTICIPATION itself, and finally the ANTICIPATED. The subconstruction thus has the templatic configuration of [$S^{ANTICIPATER}$ [OP:*BE* $MV_{pcp1}{}^{ANTICIPATION}$] $Od^{ANTICIPATED}$], capturing its mini-constructional syntactics and semantics.

Another pattern of use suggests an item-class-specific extension that refers to bodily states of pain taking only verbs of bodily states, such as those that express PAIN (like ACHE, HURT, ITCH and SMART), as main verbs.

(8.14) a. Her head *was aching* dreadfully.
b. My stomach *is hurtin*g from hunger.
c. To be honest I'*m* still *smarting* from the various wounds she inflicted.

In accordance with its main verbs' typical argument structures, this extension appears exclusively with variations on the intransitive argument structure construction. As with the *state of anticipation* subconstruction, the *state of pain* subconstruction's argument structure is provided by the mini-construction of the semiotic ICM of the main verb lexeme. The frame evoked by these lexemes could be called the PAIN frame and consists of an AFFLICTED animate entity and that BODY PART afflicted by the PAIN. The different verbs of PAIN take different perspectives of the scene captured in the frame, or elaborate on the PAIN in different ways. The template of this subconstruction is thus [$S^{AFFLICTED/BODYPART}$ [OP:*BE* $MV_{pcp1}{}^{PAIN}$]]. The specific nature of the sensation of PAIN is realized by the verbal lexeme itself. The CAUSE OF PAIN, its DURANCE as well as the AFFLICTED and the afflicted BODY PART may be realized by prepositional adverbials.

There are also usage-patterns in the corpus that suggest an extension expressing a container in the state of being full to capacity. The main verbs here are items whose semiotic ICMs construe BREACHING OF A CONTAINER, but in certain contexts may be coerced into expressing FULL CONTAINMENT, such as BRIM and specific uses of BULGE and BURST:

(8.15) a. Suddenly, she *was brimming* with happy excitement.
b. For several years every drawer in my house *was bulging* with soaps.
c. Well Loaded *are bursting* with life and enough youth to get refused service at the bar.

The specific argument structure frame is again inherited from the main verb items, which evoke a CONTAINMENT frame which is the basic CONTAINER image schema posed by Johnson (1987) consisting of a CONTAINER (here fusing the BOUNDARY and the INTERNAL SPACE), a CONTAINED and the EXTERNAL SPACE, which is gapped. Instances of this extension typically, but not exclusively, appear in the [S P A] construction as well as other argument structures associated with the verbs as mini-constructions, and thus the subconstruction has the configuration of [$S^{CONTAINER}$ [OP:*BE* $MV_{pcp1}{}^{BREACHING\ OF\ CONTAINER}$] $PREP_{with}$ $NP^{CONTAINED}$].

A small number of instances follow a pattern suggesting the existence of an extension that expresses STATE OF ABSENCE, taking verbs of absence like LACK and MISS:

(8.16) a. I mean, you'*re* not *missing* a light bulb or anything, are you?
b. It has been noticed, for instance, that bequests mentioned in wills *are* sometimes *missing* from the inventory.
c. Your content was good but you *were lacking* pace I think.
d. Democracy in the Western sense *was lacking.*

Again, the preferred argument structures are those typically associated with the verbs as mini-constructions, the most frequent ones being [S P] and [S P Od]. As with all the other subconstructions the argument structure construction is primarily provided by the relevant construal of the lexeme functioning as main verb. In this case, there are two mini-constructions available which profile different parts of the ABSENCE frame, which consists of the ABSENTEE, the specific construal of the ABSENCE, and the entity deprived of the ABSENTEE. The subconstruction thus has the templatic configurations of [$S^{ABSENTEE}$ [OP:*BE* $MV_{pcp1}{}^{ABSENCE}$]] and [$S^{DEPRIVED}$ [OP:*BE* $MV_{pcp1}{}^{ABSENCE}$] $Od^{ABSENTEE}$], which reflect the two mini-constructions associated with the most common senses.

Yet another usage-pattern observed among the non-behavioral state extensions of the progressive suggests an extension that could be called the STATE OF APPEARANCE subconstruction, which takes verbs of appearance such as APPEAR, LOOK and PROVE in their copula functions as main verbs:

(8.17) a. Léonie *is looking* quite well.
b. Morse has insisted on travelling by what he called the "scenic" route via Cirencester but, alas, the countryside *was* not *appearing* at its best: the golden days were gone, and the close-cropped fields were the sheep ever nibbled looked dank and uninviting under a sky-cover grey cloud.
c. Dinner *was proving* less of an ordeal than anticipated.

Since the main verb lexemes are typically used in their copula senses with this subconstruction, the preferred argument structure construction is the copula construction, as it is the mini-constructions associated with the relational scene that constitute the semantic frame of the copula construction. The argument structures is provided by the mini-constructions associated with the copula construals of the verbal lexemes, and so the configuration is [S$^{\text{ENTITY}}$ [OP:*BE* MV$_{\text{pcp1}}$$^{\text{COPULA}}$] Cs$^{\text{PROPERTY}}$]

There are two ways of interrelating the non-behavioral stative subuses of the progressive construction. One is an ordinary inheritance model in which they all inherit features from a schematic item-class-based non-behavioral state construction, having roughly the symbolic and syntagmatic configurations of [[OP:*BE* MV$^{\text{NON-BEHAVIORAL STATE}}_{\text{pcp1}}$]/[NON-BEHAVIORAL STATE]]. In this model, each of the verb-based subconstructions specify on the form and function of the abstract construction by filling the main verb slot and specifying the semantics, by construction-verb accommodation, and the external syntax, with the mini-construction associated with the slot-filler verb in question. This is plausible to the extent that one construes the semantic and formal commonalities among the constructions, such as the specification of the main verb as a stative verb and the absence of agentive subjects, as shared categorial features. The other way is a more *cluster*-oriented model[63] in which there is no non-behavioral state subconstruction that subsumes the verb-based constructions. Rather than being members of a common abstract subset as the one just mentioned, they inherit directly from a more general item-class-based [[OP:*BE* MV$^{\text{STATE}}_{\text{pcp1}}$]/[STATE]] schema, or perhaps even the basic schema of the progressive construction. However, since verbs share some semantic features, the constructions may be said to form a cluster of similar uses in the constructional network of the progressive construction. This is plausible, if one considers the differences in use and semantics to be stronger than the commonalities.[64]

8.3.3. Mental states

There is a considerable number of instances in the corpus in which the progressive is used with reference to mental states or mental relations between an EXPERIENCER and the EXPERIENCED. By mental state is meant an EXPERIENCER-EXPERIENCE-EXPERIENCED scene, the mental state itself being the effect the EXPERIENCED has on the EXPERIENCER, often in terms of emotions or mental stance, or being the EXPERIENCE itself, granted that the EXPERIENCE is one of emotions. Consider:

(8.18) a. "*Are*n't you *feeling* well?" someone asked.

63 This is not the same type of cluster model described in Lakoff (1987: 74-6).
64 See §8.3.6 for a further discussion of this.

b. I'*m* not *agreeing* with the situation.
c. They're all hype, and unluckily for them – the players *are believing* it.
d. I *was dreading* getting caught in the fall-out from this evening's episode of the Rose-and-Dora show.
e. I *was* really *meaning* we might get some answers.
f. She'*s longing* for a chat.
g. *Are* they *intending* to cut the trees down all around us without any warning?

Apart from the fact that all of the above examples construe non-permanent mental states and relations in an EXPERIENCER-EXPERIENCE-EXPERIENCED scene, they are quite diverse in terms of the elaboration or specification of the EXPERIENCE or mental state itself. Of course there are some that behave more alike, such as those that are very closely related derivational-morphologically such as BELIEVE/DISBELIEVE and AGREE/DISAGREE and those that overlap lexically like FEAR and DREAD.

This diverse set of what may ultimately be verb-based instances of a verb-class-based abstract [[OP:*BE* $MV^{MENTAL\ STATE}_{pcp1}$]/[MENTAL STATE] subset, or as with the non-behavioral constructions they may form a cluster of similar uses without being a subset proper.

As the reader may have noticed, mental states, while classifiable as states, since they essentially have to do with relations, are less stative than many other types of states. there is a sense of dynamicity to them and perhaps even a temporal dimension, which are granted by the progressive construction. Nonetheless, even non-progressive instances of the verbs classified as mental state verbs, such as in 'Well, I firmly *believe* in building up a library', 'I *disagree* with advertising', and 'She was soon telling Anthony everything she had felt or *feared* in the past week', there is a sense of the mental states not being wholly stative, but also not being so dynamic that they are classifiable as processes. Mental states are probably peripheral members of the STATE category, being placed closely to the boundary between STATE and PROCESS.

8.3.4. Modal states

The final set of stative uses is what I call *modal states,* because their main verb slots are taken up by quasi-modals such as HAVE TO, NEED TO, and WANT TO, and they themselves construe the degree of control, besides the model states, they construe the degree of control the participants have over the event as being minimal or non-existent:

(8.19) a. Journals publishers generally *are having* to market harder to maintain subscriptions.
b. So carmakers *are having* to rewrite their procedures to cut development times.
c. She *was having* to repeat herself.
d. I *was wanting* to see the kids.

e. The company *is needing* to meet onerous legal requirements.

These cases present a process that is either necessary or obligatory, in which the DOER participants are quite actively agentive, and should have a high degree of volitional *control* over the situation. The notion of control is often a central one in studies of voice and transitivity. Control is defined as a "semantic spectrum reflecting the degree of primary responsibility of a core element of the clause in the verbal process" (Cennamo 1993: 18). Using the progressive construction, the situation is construed by interlocutors such that it is some external factor that causes the process to take place rather than the DOER's volition and responsibility over the situation. In a way, it lowers the volitionality of the AGENT by taking away, or deemphasizing, the AGENT's control over the situation. The quasi-modal constructions already have a deemphasizing effect on the AGENT, as they add the modal notions of necessity or desire, depending on the lexeme appearing before *to*. Or, if one considers each quasi-modal a verb-based construction, each expressing its own specific modal concept, then it depends on which quasi-modal construction is used.

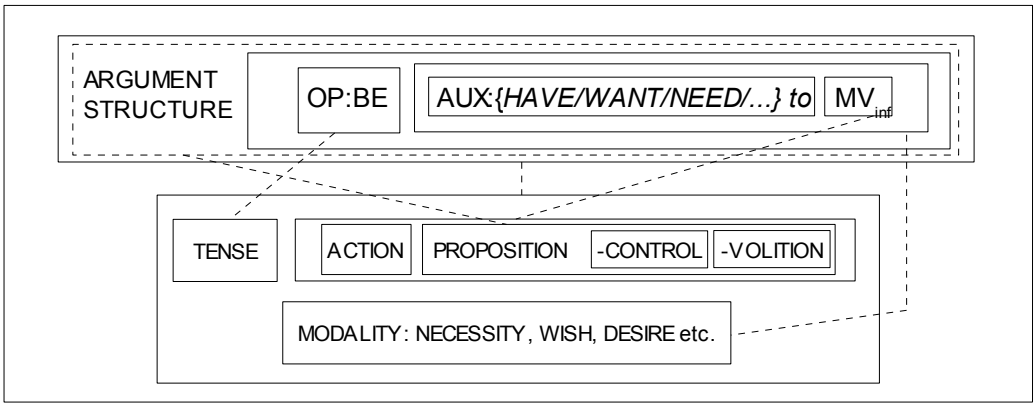
The quasi-modal constructions thus present the propositional content relating to the construal as something the agent is involved in out of necessity, or something that does not take place but which is merely a wish, desire or logical outcome of something else, again depending on which quasi-modal is used. For instance, the difference in agentivity between 'She repeated herself', and 'She had to repeat herself' is quite obvious. In the first case, she is in full control over the process of repeating herself, and the degree of volition is high. In the second case, the presence of the modal construction [[OP:*WANT* to MV_{inf}]/[NECESSITY]] adds the dimension of necessity, thus lowering the degrees of volition and control considerably. Likewise "I want to see my children" construes a situation in which the propositional content of the situation SEE(I, MY CHILDREN) is construed as a desire or wish rather than an actually happening process, and thus agentivity does not apply at all. Adding the progressive construction to utterances with quasi-modals in them further lowers the degrees of control and volition. This could be attributed to the notion of ongoingness that is essential of imperfectivity, and embodiment and mental simulation might well be involved, too. It is possible that when one is in the middle of an unfolding situation, less control over the process is exerted as if it accelerates on its own, even when an agent had initiated the process.

It is possitble that it is this principle which is applied to the combination of quasi-modals and the progressive. The progressive also adds a temporal dimension such that the state of necessity, desire or whatever type of modality may be relevant, is construed as one which is

expected not to be permanent, since ongoing processes, as mentioned, can be expected to reach a completion point or to be terminated at some point in the future. These reconstruals become especially salient when social relations are involved, since, in cases of more directive modality, for instance, the deemphasizing principle will apply to the speaker of the utterance containing the quasi-modal and progressive constructions. This gives the impression of the instruction being slightly out of the speaker's control and not so much a result of the speaker imposing power or authority over the hearer.

This subconstruction is slightly different from the other types of states in that modal states are clearly multiply parented hybrid constructions. In a CxG framework, these types of modal constructions, inheriting from two types of predicator constructions, much like the future imperfect construction discussed above, would be seen as predicator constructions having the following symbolic structures:

Figure 8.14: Symbolic structure of modal state constructions



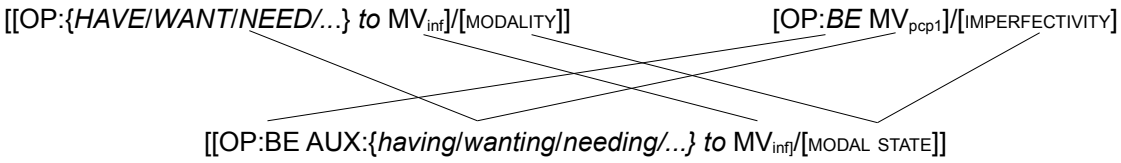
Admittedly, the above figure is rather sketchy. The PROPOSITION component could be more detailed, providing information on the AGENT, and the interface between MODALITY, CONTROL and VOLITION. There should perhaps be a component for PRAGMATIC CONTENT specifying the social implications of directive uses of this construction. All of this is left out, because I think that it would require much more research into this particular linguistic phenomenon before one can begin to pose detailed theories regarding its symbolic structure, since it appears to be a very complex one. For the purpose of the present sudy, we will have to make do with the above simple figure as a sketchy imploded outline of its possible symbolic structure.

As with the future imperfect construction, this construction is compositional in the sense that many of the components are neatly traceable to the components of the respective parent constructions. For instance, the TENSE component links up with [OP:*BE*] of the progressive

construction, while the ACTION and PROPOSITION components link up with [MV_{inf}] of the quasi-modal construction. Depending on whether one operates with item-based quasi-modal constructions or not, the MODALITY component links up either with the entire [AUX:{*having/wanting/needing/...*} *to* MV_{inf}] element, or with just the AUX verb. In the second case, each quasi-modal would be an instance of this more abstract quasi-modal construction and also covers other quasi-modals like GOT TO (which does not appear in the progressive), but not similar structures as LIKE TO. In the first case, each is an item-based construction.

The modal state subconstruction of the progressive inherits the modality specification from the quasi-modal construction serving as parent construction. Note that modal construals such as DESIRE and WISH, and to a certain extent also NECESSITY and OBLIGATION are basically deontic or deontic-like modalities. The modal state construction inherits virtually all of the contents of the limited state progressive construction. The primary issue here is the interplay between the dynamicity of the limited state and the modal relation, since, as mentioned above, an ongoing event may perhaps be felt as being less controlable even though one agentive participant is involved. By construing the modal relation as dynamic and transitory, the speaker's control of the situation is decreased, and thus the agentive properties are lowered. Figure 8.15 is meant to illustrate the inheritance relationships of the modal state construction:

Figure 8.15: Multiple parenting of modal state constructions



As mentioned, the decrease of control may be attributed to the original sense of ongoingness of the prototype of the progressive construction in that the control of an event in progress may be felt as being quite low.

This could also be analyzed as an instance of blending, If this is to be considered an instance of blending, the only choice would be a formal blend along the lines of the future perfective construction discussed above, rather than an onomsiologigal blend like the probable future subconstruction, unless, of course, one considers formal blend to be primarily a question of multiple inheritance rather than vice versa.

In a case like (8.19d), the lowering of control also changes the perspective from a deontic-based one to an epistemic-based one, thus construing the process as being more of an external

necessity than an internal obligation and thereby diminishing their own responsibility towards the hearer(s). This involves an extension from the deontic domain into the epistemic domain, thus removing the component of authority and control over the event. By removing the speaker's control over a social situation (here covering power relations as well), the notion of authority is also removed, perhaps even replacing the deontic perspective with a more epistemic one. It also involves the lowering of the degree of certainty within the epistemic domain to an intermediate between realis and irrealis assertions, which also gives the sense of distance between the speaker and the event. An interesting case, which is not from the corpus, but which I observed was, perhaps ironically, during a workshop in corpus linguistics in Manchester, UK, where technical circumstances required the participants to perform tasks which were otherwise not part of the workshop. The conveyor of the workshop uttered "That's why I'*m having* to ask you to do this" probably to request politely that the participants to do the tasks while indicating that the technical circumstances were beyond her control. In a socio-pragmatic perspective, the modal state extension may thus be utilized as a type of politeness strategy construing the content of the clause attached to the semi-modal as being slightly beyond the control of the speaker, thus disguising a directive as a request or even an entreatment.

This way of using the progressive has obvious interpersonal manipulative functions, because this subconstruction provokes the listener to construe the process and the circumstances of modality in such a way that it benefits the speaker.

Note that there are a few cases where semi-modals may be used to indicate non-behavioral states as in:

(8.20) A: And er at times, I've got to put on the pink bandage, at times, you know, to get the swelling back down.
B: Right.
A: Aye.
B: Sounds as though the pins *are needing* to come out.
A: Oh aya. Definitely need to. Even the nurse said she could see it.

In this case, a process – namely, that of the pins producing a certain sound which indicates that they need to come out – is construed as a non-behavioral state rather than a modal state. Whether this use is a conventionalized extended subuse of the [OP:*needing to* MV_{inf}]-subconstruction, which is here presented as an item-based quasi-modal construction, has yet to be revealed. It is relatively rare in the corpus used for the present study, so it would require comparison across several corpora to produce any valuable knowledge regarding this question.

8.3.5. Overview of the stative subconstructions

Perhaps not surprising, the most variable set – namely, the mental state subconstruction is also the most frequent of the stative uses of the progressive construction, having a frequency of 59.3% (n=691). What may be surprising, on the other hand, is that the behavioral types only cover 8.7% (n=102) of all instances of stative uses of the progressive. The non-behavioral set might otherwise have been expected to be less frequent that the behavioral set, because behaviors are conceptually closer to processes than non-behaviors in that, unlike non-behavioral states, behaviors typically involve dynamicity at some level. However, conceptual adjacency is not the only factor in frequency as mentioned above. Generality is also a factor, and the notion of non-behavior is *per se* more general than that of behavior, which is also reflected in the fact that a much larger number of item-class-specific extensions are found among the non-behavioral states. The cause of the patterns of frequency distribution among the behavioral and non-behavioral uses may be related to the degree of inclusion and exclusion.

Table 8.2: Frequency of state subconstructions

type	trequency
mental state	59.3% (n=691)
non-behavioral state	26.1% (n=304)
behavioral state	8.7% (n=102)
modal state	5.9% (n=69)

What unifies the subtypes under the same category is the sense of dynamicity and temporality. It might seem self contradictory that a construction used to construe unbounded events should be used for the construal of temporary states as well. However, the explanation could be found in the metaphorical relation between the prototypical uses of the progressive and the stative extension. Even though the TERMINAL phase of the imperfective profiling pattern is gapped, it is still present in the aspectual frame. This means that completion or termination is typically entailed in imperfectivity in the sense that the process is expected to reach a completion or termination point sometime postceding the deictic viewpoint. It is possible that this entailment is projected onto the state domain in the extension. Likewise, the dynamicity may be projected from the domain of processes onto the domain of states.

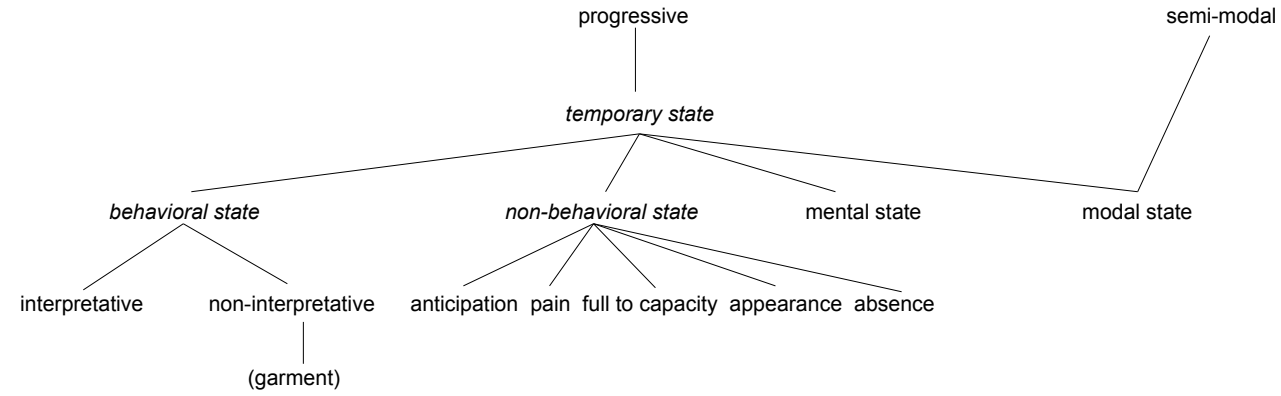
With regards to the interelations among the stative subuses of the progressive construction, there are, as mentioned, two possible ways of interrelating them in a taxonomic model. Either the model is a straight inheritance-based one, or it is an inheritance-based one that contains clusters of

similar constructions. Either type of model is compatible with usage-based CxG principles; the former more friendly towards usage-based models advocating a default inheritance approach, the latter more friendly towards usage-based models preferring a full-entry approach. The model adopting the default inheritance approach is more straightforward, but problematic in the sense that it does allow for abstract schemas that have no instances themselves other than the item-based subconstructions that inherit from them. The the model adopting the full-entry model approach takes into account both differences and commonalities among item-based constructions, and does not operate with instanceless schematic constructions as such. However, cluster-oriented models may beg the question of what features serve as the basis of the cluster, and why those features? Should it be formal features, semantic features or both? Also, they are somewhat uneconomical, as it involves considerably many very specific constructions and less general ones. In terms of categorization, this means that, while there are less specific and more general categories than in a full-entry model, it still requires a considerable number of specific categories which is, in a sense, in conflict with Geeraerts' (1997) 'three principles of economy in categorization: information density, structural stability and flexible adaptability. Moreover, cluster-oriented models are as far a I know not used in CxG, and an implementation of such models would be an entirely new, but untested, thing, and it would require much research and further development of the cluster-oriented approach before one can confidently use cluster-oriented models in CxG.

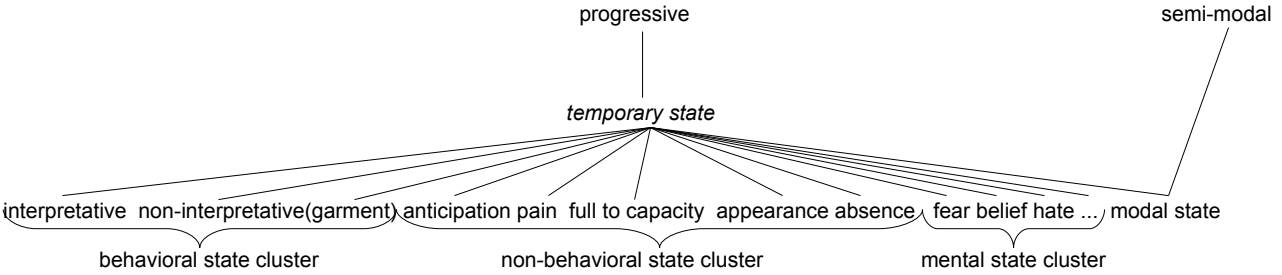
Below, both types of model are illustrated, the straightforward inheritance-based on in figure 8.16a and the cluster-oriented one in figure 8.16b. For the sake of simplicity, radiality of the network is not included, and it is presented here purely as taxonomies, and the form specifications are also left out:[65]

65 Italics are meant to indicate an abstract item-class-based subconstruction in the network which has no instances proper, but which subsumes a number of further item-based subconstructions. [BE *wearing*] is included in the shape of (garment), the brackets indicating the uncertaintly whether it is a state proper or not.

Figure 8.16: Possible subsets of state constructions



a. inheritance-oriented model



b. cluster-oriented model

A mental state cluster has been added since it is possible that all instances with a mental state verb as main verb also form a cluster rather than a subset. As mentioned above, the inheritance-based model contains a considerable number of non-instantiated subset schemas, while the cluster-oriented one contains few abstract general schemas, offering less economy. Which model is the better depends on how seriously one takes the notion of economy, but the inheritance model is certainly more in line with the economy principles already established in CL. It is possible that the two approaches do not have to rule each other out, in that what starts out as a cluster (if the notion of cluster is defendable at all) will through further generalization be established as a subset. That would be in line with the nonreductionist philosophies of usage-based CxG (Croft 2001; Tomasello 2003).[66]

8.4. Habit

As mentioned above in section 6.3, a HABIT is a hybrid actional category, inheriting from the PROCESS and STATE categories. It is a process that is repeated by an individual so frequently, or expanded in such a way, that it may be conceptualized as a permanent state or unbounded extent. One of the

66 While making reference to the cluster-oriented option, I will primarily stick to the inheritance-based model.

more well-known uses of the progressive construction is to express a process which is construed as a temporary habit.

According to reference grammars such as Greenbaum (2000: 268), the main function of the habitual use of the progressive is to indicate that the habit is not a permanent one, or to predicate "a set of events that are viewed as in progress over a limited period of time" (see also Leech 1971: 27-8). The present investigation supports this claim, although presenting a slightly more complex picture of the habitual use including a number of item-class-specific extensions. Also, this study is more fine-grained in the sense that it identifies a number of different item-class- and item-based subconstructions which are based on the verb taking up the [MV_{pcp1}] slot. We shall go through these in the remainder of the section. It should be mentioned that I will only deal with uses attested in the present corpus. It is very possible that there are other habitual uses which are not attested in this corpus but elsewhere. The exclusion of these is of course not to deny their existence.

Certain usage-patterns in the corpus indicate the existence of an extension centered around verbs of lodging. These expresses situations of NON-PERMANENT LODGING, which typically involves staying in hotels or inhabiting other places of accommodation or living in places in a limited period of time:

(8.21) a. Virtually everyone would soon know that a stranger from London *was staying* at Dymlight Cottage and was making Patrick Gabriel's.
b. She'*s living* in his flat and he's working at the hotel.
c. Erm my wife lived at Stow Upland and I *was lodging* in Ipswich and er he even allowed us to study in the, en the erm Enquiry Office in th evenings.

In this case, the frame is the HABITATION frame containing a LODGE and a LODGER. The external syntax of the construction depends on the argument structure constructions that are associated with each verb. The formal structure of the subconstruction is then [S^{LODGER} OP:*BE* $MV_{pcp1}{}^{LODGING}$ $PREP_{in/at}$ NP^{LODGE}]. The OWNER, LOCATION and so on of the LODGE are all gapped, but may be profiled by adverbs.

Another pattern suggests that there is an extension based on verbs of OCCUPATION or PROFESSION. Either the verbs refer to the OCCUPATION itself or metonymically to a part or an aspect of the occupation:

(8.22) a. By 1645 he *was acting* as Vane's deputy.
b. Antonio *was studying* business management there.
c. The Crayford business was sold and by 1845 he *was working* in Dartford, as both a silk printer and a printing-machinery manufacturer.

The example in (8.22) is potentially ambiguous. It is a case of metonymy, in which part of the

occupation stands for the entire occupation. In this case, the occupation comprises taking a degree in business management. One part of this, which is obviously also the most central part, is that of studying. This type of metonymy is quite common in English when expressing occupations. It is so common and conventionalized that I think that even though it is possible to construe Anthony as actually sitting in, say, a library studying business management books, this construal is not as likely to be the first one that comes to mind. In contexts like this, where the object of study is also the label for the degree itself, the habitual construal is probably the most likely one. As with the lodging-class, the occupation-class construes the habit as a limited one in the sense that the OCCUPATION or job is not construed as a life-lasting one. This subconstruction does not appear to have any specific external syntax as it appears with a variety of verbal entities each possessing different argument structure constructions and mini-constructions associated with them.

A small group of very specific instances construe a TAKING MEDICATION as a limited habit. In my data, only the light verb TAKE appears as the main verb, but other verbs cannot be excluded:

(8.23) You'*re* not *taking* any pills at all, are you?

In all instances, the predicator occurs with a monotransitive argument structure construction, having the structure of [S$^{\text{MEDICATED PERSON}}$ OP:*BE* MV:*taking* Od$^{\text{MEDICATION}}$], which is ultimately a specific mini-construction of the specified sense of [[TAKE]/[CONSUME]] that has to do with the CONSUMPTION OF MEDICINE. Obviously this is a highly specialized subconstruction with a very specific function, indicating that the period of medication is a temporal one (or in this case, the period of not taking medication).

There is a group of instances that behave slightly different from the other types of habits – namely, what I call the *life state extension.* This extension does not merely construe a habit, but a very specific hybrid between a habit and a state:

(8.24) a. How'*s* it *going.*
b. Hope all *is going* well.
c. Hi Ron, how'*re* you *doing*?

Part of the semantics is derived from the main verbs, which are typically *abstracting verbs* such as certain uses of GO and DO. By abstracting is meant that the verb gives very little details regarding the process it refers to. For instance, DO in its abstracting function construes someone BEING INVOLVED IN AN ACTIVITY, but does not give any details at all regarding the nature of the activity. Of course such verbs may be used in relation to both local and extended ongoing contexts, but often, when used in the progressive in large scale contexts, they construe life states. The life state appears

frequently in interrogative constructions in the corpus, probably because in English-speaking societies, it is generally considered polite to ask about the addressee's life state upon greeting each other.

While constituting item-based subsets of an item-class-based subconstruction in a usage-based inheritance-oriented network, the above uses would be clusters of similar uses in a cluster-oriented one.

8.5. Doubt-marker

The corpus data suggest another modal extension of the progressive construction – namely, the use of it to express the speaker's doubt towards the propositional content of their own utterances. Consider the following uses of the progressive construction (note that in (8.25a) the notion of doubt is amplified by a same-polarity tag question):

(8.25) a. I'*m assuming* that's twelve week is it?
b. So now I always and so I, I'*m thinking* that it might be that, that I that erm maybe you know like I used to be anxious about something like that and I used to wake up and the dream used to happen, but now that I've double checked that I know for sure that, that I'm safe you know for the night it doesn't happen any more by cutting off possibility.
c. She *is hoping* to buy garden furniture and a barbecue so she can enjoy the summer months in style.

In these cases we encounter imperfective construals of processes of cognition – namely, those of assumption, thought, hope, and the like. The verb of cognition seems to add an element of doubt understood such that the speaker is in doubt of the truth or probability of the proposition expressed, making it an irrealis assertion. Doubt-marking is essentially a function of *stance*, which is the speaker's attitude towards the content of the utterance (in that sense, modality is a type of stance too). In relation to communication, doubt is when the speaker questions the truth of an utterance; that is, the speaker is uncertain about the validity of the utterance, which may be caused by anything from lack of knowledge to lack of belief. This way doubt is also a way for the speaker to create detachment or distance in relation to the content of the utterance.[67] The notion of doubt-stance could also be derived from basic imperfectivity in that the progressive construction construes the thought process as still going on, implying that it has not reached a conclusion yet.

It is probable that it is the same mechanism at play as in the modal state construction, in which in which the implications of ongoing constructions, being less controllable, have a control

67 See Precht (2003) for more on stance in English, and Biq (2004) for stance constructions.

lowering effect. Finally, the lowering of control can also be said to cause an expansion into the epistemic domain of modality from the deontic one.

One might question whether these are not just examples of local ongoing processes, and that the processes are merely of the mental kind. This is certainly a correct observation, but the doubt-marking function appears to be specialized enough for one to argue that this is a specialized modal extension of the progressive construction. It is limited to certain verbs of cognition, and thus an item-class specific subconstruction. There are additional formal patterns that set it apart from the regular ongoing processes. Firstly, whilst regular ongoing instances have a more or less equal distribution when it comes to the tense form of the operator, the doubt-marking use of the progressive prefers present tense operators:

Table 8.3: Tense form of the operator in the doubt marking subconstruction

tense	frequency
past	4.8% (n=11)
present	95.2% (n=218)

As with the probable future subconstruction, this challenges the notion of the operator always being fully paradigmatically open. The preference for present tense forms of BE indicate that this subconstruction is most often used in contexts that are compatible with present tense semantics, and that this has become entrenched to some degree as part of the linguistic knowledge of this construction. There are also external indicators that this is a subconstruction entrenched on its own. One of these factors is the nature of the object, which in connection with verbs of cognition reports the thoughts. Normally, the object is a clause of some type of phrasal structure, like a noun phrase. Verbs of cognition may also occur with prepositional phrases referring to what is being thought about. However, the doubt-marking use of the progressive appear in my data most frequently with a clausal object:

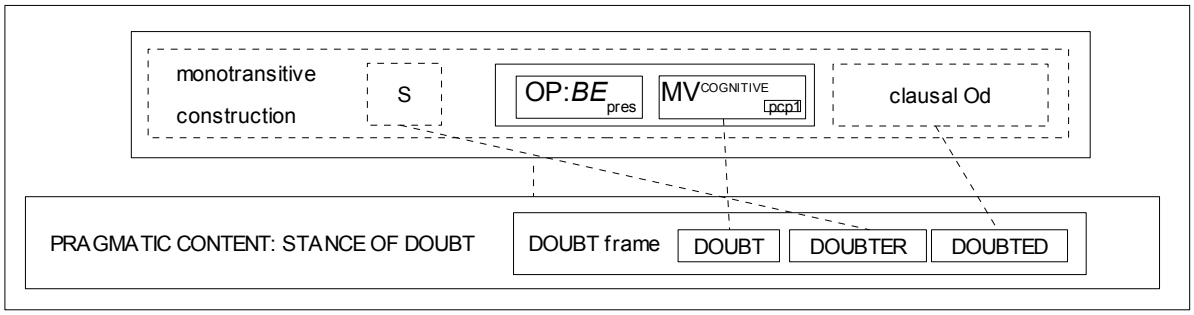
Table 8.4: Nature of object co-occurring with the doubt marking subconstruction

object	frequency
clausal object	90% (n=207)
other object / PP	10% (n=23)

The argument construction structure is likely to involve a THOUGHT ACTIVITY frame, evoked by the verb of cognition, in which the thinking entity is profiled by the subject and the subject of thought is profiled by the direct object. The thought process itself is specified by the verb. In this case, the

object of the thought process is the propositional content of the direct object.

Figure 8.17: Symbolic structure of the doubt marking subconstruction



Since the function of this subuse is primarily pragmatic, its content is presented exclusively as pragmatic content. However, the doubt frame itself is of course more conceptual and what is traditionally considered semantic, so this construction illustrates very well that the distinction between semantics and pragmatics is very blurred – perhaps to such an extent that ultimately it is untenable to uphold it.[68]

8.6. Annulled process

Another specialized use of the progressive is what could be called the *annulled process* construal surfaced in the present investigation. While it is uncertain whether the doubt-marking use of the progressive has conversation structuring properties, it is almost certain that this one does have functions related to conversational structure:

(8.26) a. "Have you told her we're going to kill her yet?"
"I *was coming* to that."
b. "He goes round lecturing to old Cornwall societies, women's institutes and that sort of things."
"And he's at the top of your list?"
"No, I didn't say that, sir. I'm just passing on gossip for what it's worth." Wycliffe smiled.
"As I heard the gossip, Riddle replaced the Scapegoat in the Will and two witnesses heard him scream as he bowled down the hill."
"I *was coming* to that bit, sir."
c. "Sorry, I was asleep."
"I was glad to find you in, I thought you might be away for the weekend."

68 This use of the progressive construction appears to also serve a conversation-structuring function in that, by expressing doubt towards the content of the utterance, the speaker is likely to prompt either a confirming turn, like a backchanneling turn, or an other-initiated other-repair by the addressee. This would certainly apply to (8.25a) which prompts a confirming backchanneling turn, but this may well be attributed to the tag-question as well. This is only a hypothesis which requires extensive research though, but if it turns out to be the case that this use has conversation structuring properties, these could have to be included in the pragmatic content.

"Yes, I *was going* to my parents, but I – I decided not to."

At first sight, it might seem that we are really just dealing with past tense instances of the ongoing progressive construction. This argument would be further supported by the fact that imperfectivity does not necessarily entail natural completion. A point of completion is entailed as an expected phase, but not a necessary phase. Events may be terminated at any point before the natural completion point, if such is applicable, is reached. Since only the middle phase is profiled, the process may be interrupted and the completion point never reached. This would not be possible with a process that was construed perfectively as illustrated by the examples in (8.27) which are artificial alternations of the naturally occurring sentence 'I *was writing* that sentence' which occurs in the corpus:

(8.27)
a. I *was writing* that sentence, but never finished it because someone spilled juice in my laptop.
b. ?I *wrote* that sentence, but never finished it because someone spilled juice in my laptop.
c. *I *had written* that sentence, but never finished it because someone spilled juice in my laptop.

However, in (8.27) we are not dealing with interrupted processes. We are dealing with processes that never took place. In (8.26a-b), two fictive dialogues retrieved from the corpus are presented in which one speaker introduces a topic the other speaker was intending to introduce. The other speaker then uses the progressive to indicate that it was his intention to introduce that topic, but that this has now been annulled. That does not prevent the other speaker from taking up that topic again. It also does not mean that the other speaker was actually intending to introduce the topic in reality, but that is how it is construed. In (8.26.c), we see an example of an otherwise planned future event (future from a point in the past) being annulled.

While semantically different from the prototypical progressive construction by virtue of not construing an ongoing process – not even a completed or terminated one but rather one that was scheduled to take place but never did take place – its content also differs pragmatically. Like the doubt marker, it appears to have conversation-structuring functions, at least in some cases, indicating the cancellation of the introduction of a topic, because the other interlocutor has introduced it already. The user of the annulled process subconstruction was planning to introduce a topic into the discourse or to add some new information to the present topic of conversation, but before the user of the annulled process construction gets a chance to do this, the other interlocutor introduces the new topic or information. The annulled process subconstructions is then used to

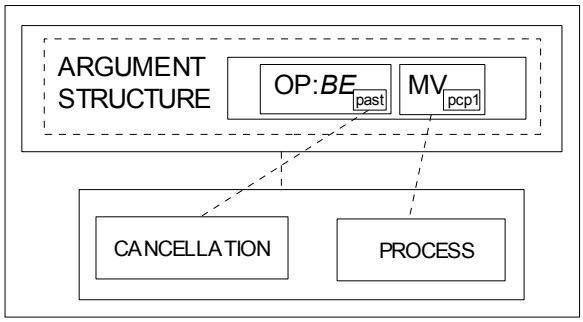
indicate that its user was planning on introducing that very topic or information later on, but that this conversational act has been canceled by the other interlocutor's instrocution of it. This is particularly salient in (8.26a,b) where 'was coming to' is used. It does not seem to apply to (8.26c) though, or at least it applies to a much lower degree, which just announces the cancellation of a planned event. There may be reason to believe that the use in (8.26c) is, or perhaps once was, the prototypical use, and then [OP:BE_{past} *coming to* PP_{to}] is an item-specific pragmatic extension applying the cancellation principle to conversational topic organization such that the cancellation is applied to a conversational act rather than a process as such.

The annulled process use is another example of a subconstruction of the progressive where the operator is constrained in terms of tense form, since this construal only applies to instances in the past tense. In these examples, the operator has been changed to a present tense form (8.28):

(8.28) a. I'*m coming* to that.
b. I'*m going* to my parents.

Interestingly, when appearing in the present tense, they act more like probable future constructions, suggesting that maybe the annulled process extension is diachronically derived from it. This could also explain why probable future constructions seldom appear in past tense.

Figure 8.18: Symbolic structure of the annulled process construction



Note that none of the otherwise prototypical components are included here, though probably present in the shape of underlying conceptual implications. Instead of tense, it is here suggested that [OP:*BE*] forms a symbolic unit with cancellation. This may be an idiomatically combining construction where the operator, which is, as mentioned, obligatorily in the past tense, idiomatically indicates the cancellation, while the main verb still expresses the process. One of the reasons for believing so is that the operator is fixed in the present tense. When the operator is morphologically fixed, it is often in cases involving a high degree of idiomaticity. This may well also be the case here.

If [OP:BE_{past} *coming to* PP_{to}] is indeed a pragmatic extension of the annulled process subconstruction of the progressive, then it is a subconstruction that inheriting the form, but it specifies aspects of both its internal and external properties. It also containing an additional pragmatic structure containing what Hougaard (2004) calls an *interactional script*, which is basically a conversational structure stored as a cognitive model. It is dynamic in the sense that it has a basic form and then allows variations on it. In that sense, it seems to me, prototypicality also applies to interactional scripts. Interactional scripts are very much a question of social experiences of the norms and conventions (they are in a sense constitutive of these norms) in social interaction. The particular interactional script whichis relevant to this subconstruction of the progressive would constist of an *adjacency pair* (Hutchby and Wooffitt 1998: 39-47). In this pair, one turn contains an element introducing a topic, which prompts a turn by the other interlocutor announcing a canceled plan of introducing that topic, using the progressive construction. While plausible to me, this would require more corpus work in a proper spoken corpus, and it would require combine insights from both CL and conversation analysis. Unfortunately, there is a feel in the respective research communities that these two approaches to language and communication are not reconcilable, works like Hougaard (2004) and Fried and Östman are (2006), as of yet, hard to come by.

8.7. Wish

The final subconstruction identified in the corpus, the *wish* marking use, is a marker of deontic modality expressing the speaker's attitude toward the process expressed. It construes judgments of low authority which are extensions of irrealis assertions. Some examples are:

(8.29) a. I *was hoping* we might have a drink before dinner.
b. I *was wondering* if you still wanted to go and see Len Seager?
c. I *was thinking*, your husband's such a kind gentle person – he might like to do a bit of voluntary work.

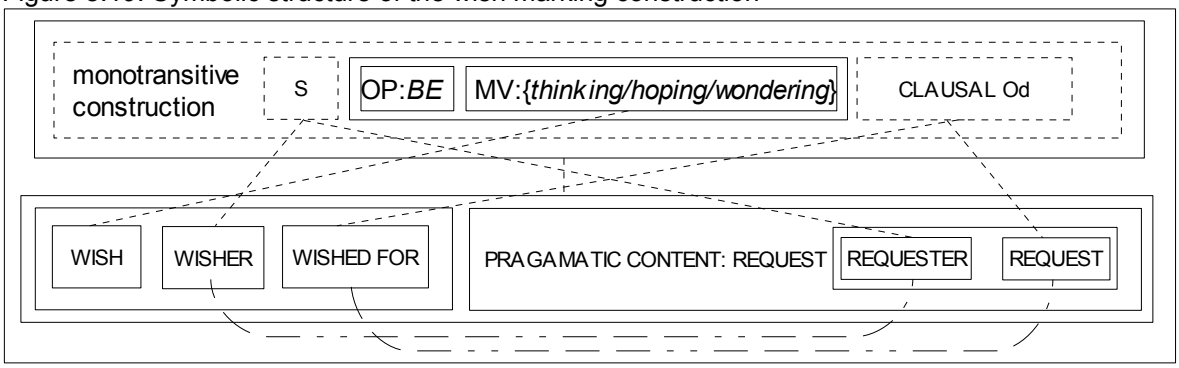
It is a quite specific construction in that it only appears with certain verbs (THINK, HOPE, and WONDER), and the operator is exclusively in the past tense. The above utterances are, in fact, all requests disguised as wishes, which may in turn be said to be disguised as statements about various cognitive processes. In that sense, we may be dealing with an extension of the progressive which is both metaphorical and pragmatic. The pragmatic part is the illocutionary function as a request, while the metaphorical part consists in a request being conceptualized as a thought process or a wish.

The wish-marking use of the progressive construction is obviously interpersonally

manipulative in that it prompts the listener to construe the wish itself as a quasi-entreaty despite the fact that it is often in reality a request. There is also an obligatory dynamic procedural aspect to this subuse of the progressive construction.

The wish marking use appears exclusively with the monotransitive construction, which is the typycal mini-construction of verbs of cognition, in which the object is a reporting clause in the corpus, though cases where the object is elided, such as 'I *was hoping*' are not unthinkable.

Figure 8.19: Symbolic structure of the wish marking construction



The components associated with the progressive construction are not involved here, though they may be present in the form of underlying cognitive implicatures. Instead the primary conceptual content is a wish frame having the structure of WISH(WISHER, WISHED FOR), forming a neat set of symbolic pairs with the external argument structure of this subtype of the progressive – namely, the monotransitive construction, the symbolic units being [[S]/[WISHER]], [[P]/[WISH]], and [[Od]/[WISHED FOR]].

The pragmatic context is basically constituted by a request frame in which a requester makes a request. It is likely that there is a requestee in the frame as well – namely, the person performing the requested action. In that case, the requestee is likely to link up with the subject in the direct object clause. Bindings are posited between WISHER on the one hand and WISHED FOR and REQUEST on the other. These bindings may be the ontological correspondences between the domains of wish and request if one accepts that metaphor is involved here.

9. Actional constructions

In the examples we have gone through in chapter 8, there has been considerable variation in actionality among the instances of the progressive construction. Leaving aside the stative and habitual uses for the time being, all the processes have one thing in common despite the differences (some are directed, some are atelic, some are continuous, some are iterative etc.) – namely that they

are durative.

This is because predicator semantics involves a complex categorial interplay of cognitive models and construals (cf. Bache 1997). The interplay is ultimately embodied in the sense advocated by Johnson (1987) and Lakoff (1987) in sensory-motor perception, understood such that, as mentioned before, humans have the ability to perceive the phasal structure of processes that display duration; or rather, humans have the ability to impose this phasal structure onto such processes, which is a generalization based on recurring experiences – both as participants and observers, as it were – of such processes. On the other hand, humans lack the capacity for imposing this structure onto abrupt punctual events. It is possible, however, to perceive a series of similar punctual events as constituting one process, through the unit-formation process of *melding* (Talmy 2000a: 56), and impose the phasal structure onto it.

Linguistico-semantically, the essence of imperfectivity is the profiling of the MIDDLE PHASES of a process, but in order to do that, the process itself will have to be of such a nature that one can actually perceive the phases and apply the aspectual frame to it. If the phases are not perceptible then it is not really possible to make phasal aspectual construals without coercion. Rather, the process is required to unfold over a stretch of time that is extensive enough. In actional terms, the process will have to be durative, because punctual processes are simply too abrupt for one to perceive their phasal structure.

If the actional content of the semiotic ICM of the lexical unit serving as the main verb conflicts with the durativity of the progressive construction, its semantics is coerced into taking on a more durative meaning (such as the coercion of a series of punctual processes into one laerge process). Coercion is essenatially a procedural meaning constructing operation. While coerceion might not be said to be one single construal operation as such, I think it makes sense to agrue that coercion of the kind discussed in this study involves construal operations. An instance of coercion typically involves a set of construal operations which bring about the coerced construal of the linguistic item in question. If one wants to argue that coerceion is a construal operation, one will have to find cases of coercion in other aspects of perception. Wright (1976) argues for something that could be coercion in visual perception, as he claims that context determines the construal of stimuli like the duck-rabbit. It could be argued that this is an instance of contextual coercion in the conceptualization of images. Note, however, that context-influenced coercion of visual stimuli might as well be argued to involve sets of regular construal construal operation. For instance, the construal of the duck-rabbit could be said to involve attention, categorization of recognizable

gestalts, figure-ground alignment, and perspective, or situatedness (Croft and Cruse 2004: 40-73).

There are regular patterns of coercion which have been discussed by Bache (1997), Givón (1993a: 153-160), and Croft (MS) in various different frameworks and terminologies. While these patterns are widely accepted as operations that occur every time non-durative verbs of a specific type appear in the progressive, one may actually take it a step further and argue that these patterns are constructions and, by quantification, also get some insights into their prototypicality. In this chapter, the actional coercive constructions that appear in the progressive construction will be discussed, based on an assumption that they are part of the categorial interplay will be discussed and quantification of the coercion patterns themselves taken into consideration.

9.1. Durativity and continuity

Durativity is the primary actional quality of the progressive construction. Despite the variability among what could be considered secondary actional qualities in relation to the progressive construction (such as telicity, atelicity, continuity, iterativity etc.), the instances of coercion observed in this study appear to follow certain patterns. In this section, we shall look at the actional types of the progressive construction.

The most frequent secondary actional qualities are atelicity, exemplified in (9.1), and telicity, exemplified in (9.2), with frequencies of 55.1% (n=16214) and 38% (n=11303) respectively:

(9.1)
a. I *was standing* square over our own line ready for the pass back an.
b. Shelley *was sitting* by herself and Miguel was turning towards her.
c. She *was crying* hard now, tears coursing down her face over the pale.
d. I *am looking* at the most magnificent townscape in London.
e. An hour later, mother and baby *were sleeping*.

(9.2)
a. As Alex watched, the green stuff on her face *was turning* blue.
b. And he *was painting* a vigorous picture of the Noonday of the future.
c. Peter and his registrar were already gowned, gloved, and *were putting* sterile drapes on the patient.
d. For all he knew, Gwen *was lying* upstairs dead and the man in front of him was building up to another outburst.
e. He'*s tearing* me apart, she thought, appalled.

There are variations in certain other actional dimensions, but this seems to be of little consequence here. This is probably because the most salient actional feature is durativity. Another feature that they have in common is continuity. Directionality as such does not appear to have any major influence on the progressive construction. The preference for continuity may be related to

unboundedness, because continuity is the primary factor of unboundedness as is suggested by gestaltist research into figure-ground relations and boundedness (Rubin 1915). Unboundedness involves continuity, as the unbounded entity is seen as one uniform continuous mass. This basic principle is projected onto the imperfective construal of events, which itself presents the processes as unbounded by gapping the phases that contain their boundaries. This makes the progressive more compatible with verbs and other lexemes that have continuity as part of their actional potential than those that are lexically iterative. In this definition, the principle of semantic compatibility is applied at a more detailed and sophisticated level. We might also find the explanation for the slightly higher frequency of atelicity here. As the reader may recall, atelicity as an actional category implies a process that is dynamic, but does not progress toward any natural endpoint, only to be ended by termination. In contrast with telic processes which are ended by completion. This way an atelic process is also an unbounded one, not having any completion point. It is possible that the semantic similarity between the unbounded imperfectivity of the progressive and the unboundedness of atelic verbs causes the slightly larger frequency of atelicity in the progressive construction. If that is the case then perhaps directionality does have some semantic motivational influence after all.

9.2. Iterativity

While durativety seems to be the standard actional category associated with the progressive construction, there are a number of deviating actional patterns, such as those involving iterative processes. An iterative process is a series of semelfactively repeated punctual processes construed as forming one single process:

(9.2)
a. Davide *was shaking* his head, his teeth almost chattering.
b. Now Mary *was shivering* in earnest, and Karen felt in danger of doing so too
c. "Now let me tell you" – the finger *was wagging* – "Andrew has been brought to the limit of his patience".
d. Her heart *was pumping* so violently against her breastbone.
e. Both of them *were breathing* hard, such a hurry and scramble of lips.

Note that in all of the above cases, iterativity is lexically encoded into the main verb item. All of the instances in (9.2) are atelic. In fact, there were no instances of telic iterative processes in the progressive in the portion of the BNC investigated in this study. Again, this could be a reflection of the semantic compatibility principle. This does not mean that telic iteratives, such as the fabricated example in (9.3) are impossible. They are potentially possible and are probably produced now and then in naturally occurring language, as illustrated by the grammaticality of the following

(constructed) example:

(9.3) The gorilla *was shaking* bananas out of the tree when the poacher shot it.

Of course, a counter-argument of sorts could be that the telicity is primarily provided by the caused motion construction and not by any element in the predicator, and that this is actually a case of an otherwise atelic iterative process being coerced and reconstrued as being telic.

In addition to the lexically iterative cases, there are a number of other patterns that involve what Givón (1993a: 153-160) refers to as the conversion of a bounded, or terminated, event into an unbounded, or ongoing, event. My data show a number of recurring patterns of such conversion, which using constructionist terminology, I will call *patterns of coercion*. More specifically, they are patterns of actional coercion. Though they make up a small proportion of all instances of the progressive, they are consistent enough to suggest that they display some degree of entrenchment.

There are a number of instances in which the action expressed by the main verb in conjunction with the argument structure would be inherently punctual and reversible such as the examples in (9.4):

(9.4) a. Your ears flapped, Mr O'Brien.
b. An approaching truck flashed its lights.
c. He tapped on the bathroom door.

The punctuality of the above may be underlined by the possibility of insertion of quantitative adverbials such as 'once':

(9.5) a. Your ears flapped once, Mr O'Brien.
b. An approaching truck flashed its lights once.
c. He tapped on the bathroom door once.

Using the progressive construction, the language user changes not only the perspectival aspectual construal, but also the truth-conditional semantics of the proposition itself, provided that one consideres actionality part of the truth-semantic aspects of a proposition.

(9.6) a. Your ears *are flapping*, Mr O'Brien.
b. An approaching truck *was flashing* its lights.
c. He *was tapping* on the bathroom door again.

The progressive not only converts the process into an ongoing one, it also coerces it into an iterative process, which is quite a type-shifting of the state-of-affairs semantics. The fact that these examples express an iterative process blocks a punctual construal which is reflected in syntactic restrictions that do not apply to (9.5) and (9.6):

(9.7) a. *Your ears *are flapping* once, Mr O'Brien.
b. *An approaching truck *was flashing* its lights once.
c. *He *was tapping* on the door once.

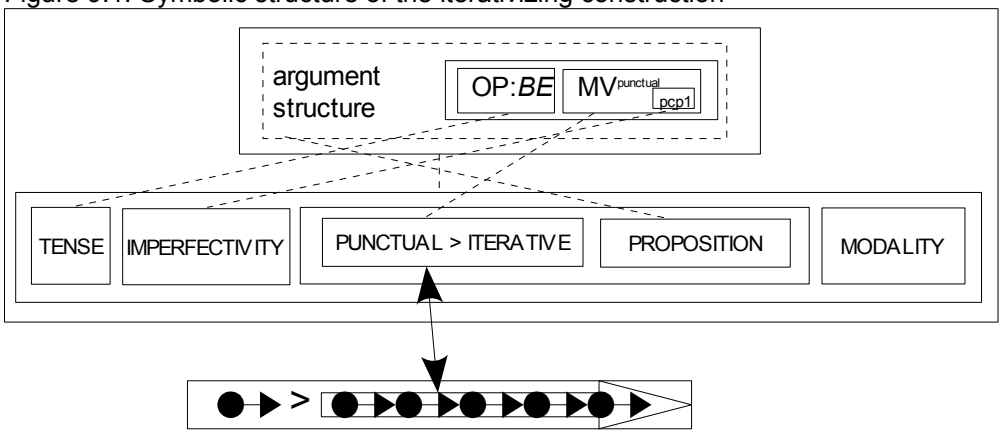
This pattern is quite consistent in that all reversible punctual processes occurring in the progressive in the corpus are converted into iterative processes, which suggests that there is an underlying schema behind them, which is illustrated in figure 9.1 below. Note that such a type of conversion conversion is similar to what Talmy (2000a: 56) calls the cognitive process of melding:

> a grammatical form for a discrete type lexical item would trigger an operation of **melding**, whereby the separate elements of the original referent would be conceptualised as having fused together into a continuum.

It is likely that melding is the primary construal operation in iteravizing coercion. As hinted at above, melding is possibly the underlying cognitive process of both the constructional coercion of abrupt punctual processes into interative durative ones and the perceptual conversion of series of similar or identical punctual processes into durative gestaltic processes. In relation to the progressive, this means that each separate punctual process is melded together with the other identical processes into one iterative process. This is an instance of unit-formation in accordance with the principles of similarity and adjacency, to use gestaltist terminology. Sensory-motor embodiment may be a decisive factor in this process in that punctual events are not perceptible in terms of phases due to their abruptness. That means that in human experience there is incompatibility between punctuality and imperfective viewing. However, as mentioned, humans are able to meld series of identical or similar events into one gestaltic unit and yet perceive its phases, which is probably the underlying motivation of this coercion pattern.

Since this pattern of coercion consistently recurs, it makes sense, within a usage-based framework, to consider the pattern to be based on a constructional schema, which is itself based on the principle of regency or frequency of use. This principle applies in that the coercive pattern occurs virtually every time a punctual verb appears in the progressive; that is, it displays regency, which is a basis for, and a reflection of, type entrenchment. This schema is entrenched as what could be called a *coercing construction*, which is an abstract pattern that has no substantive form specifications, but which captures recurrent patterns of coercion when certain lexemes are used in certain constructions. This particular coercive construction is item-class based in that it captures the coercion into iterative durativity of punctual and reversible verbs only. Moreover, the resulting iterativity is atelic but may be coerced into being telic by the argument structure construction the predicator appears in.

Figure 9.1: Symbolic structure of the iterativizing construction



The box outside of the symbolic diagram is meant to illustrate the coercion process. The small arrow befor '>' represents a punctual event, while the big arrow caontaining a series of punctual events represents the iterative process derived through conversion. Note that the punctual process is exclusively a reversible one. Coercive constructions are probably not only found in the realm of predicators but virtually in all recurrent cases where lexical items are coerced into taking on a new meaning because of mismatches between them and the constructions.

Perhaps not surprisingly, lexical iterativity is more frequent than coerced iterativity in the progressive construction in the corpus:

Table 9.1: Frequency of iterativity

source of iterativity	frequency
lexical	73.6% (n=318)
coerced	26.4% (n=137)

Note that in relation to the total number of instances of the progressive, these numbers are rather low. This is expected given the principle of semantic compatibility and also the assumption that mental simulations requiring more mental effort is less economical than mental simulation requiring less effort. Thus, more linguistic signs prompting economical mental simultation are generally also more likely to occur in discourse than those requiring more and more complex mental simulation. Since this coercion pattern, while apparently conventionalized to some degree, requires more complex mental simulation, one can expect it to be less frequent than the straightforward durative actional pattern. In cases of lexical iterativity, the melding is already built in, as it were, and does not require constructional coercion and very little mental effort in simulation, whereas coerced iterativity requires more mental effort. The lexical iterative cases also involve more construction-verb compatibility than the coerced ones. Hence, the attraction-

compatibility principle applies here and may well be the primary factor in the preference for lexical iterativity over coerced iterativity in the progressive construction. Neither iterativity nor punctuality are as such compatible with the contents of the progressive construction, which prefers continuity and durativity.[69]

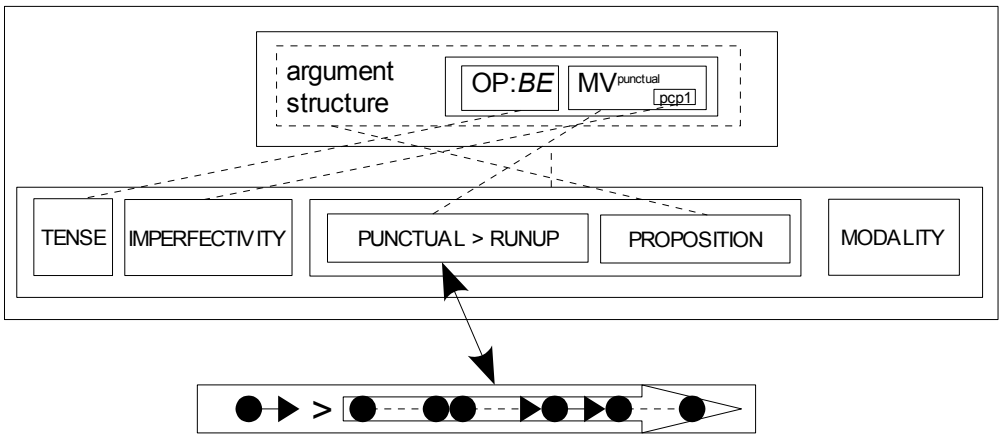
9.3. Runup

Another possibility for conversion from a punctual and bounded process into an unbounded one is by unfolding the process over time, so to speak, such that it becomes durative and continuous:

(9.8) a. We *were winning* 3-0 when I woke up.
b. That boy over there *is dying* too.
c. So the day had come, and she *was accepting* it very calmly.

What all of these instances have in common, apart from the fact that their main verbs are lexically punctual, is that they are also telic in the sense that one or more of the participants undergoes a change of state. Unlike directed durative processes, directed punctual ones do not imply a gradient change from the initial state to the resultant state. That is, they are simply too rapid for such a gradient change of state to take place, and instead they involve either-or relations between the initial state and the resultant state: either an entity is X or Y; it cannot be partly X or partly Y. Moreover, the processes are irreversible. This actional coercive construction may have the symbolic structure illustrated in figure 9.2:

Figure 9.2: Symbolic structure of runup progressives



The box outside of the symbolic diagram is meant to illustrate the coercion process. In which a pinctual even, represented by the small arrow before '>' is coerced into a larger process represented

69 As it happens this is also symptomatic of the Danish body-based aspect constructions, where reversible punctual verbs are also coerced into expressing iterative processes as in 'De *stod og hoppede*' (literally 'they were standing and jumping'), in which punctual HOPPE ('jump') is iteravized (Jensen 2006b).

by the large arrow after '>' which subsumes the punctual process itself as well as the states and processes leading up to is (and possibly also the resultant state).

Figure 9.2 captures the *summativity principle* – namely, that the partial completion of the whole process equals the full completion of a part of the process. The summativity principle normally does not apply to irreversible directed punctual events, because they are too rapid for their parts to be identified.

When such verbs appear in the progressive they are coerced into adhering to the summativity principle, such that the events that lead up to the punctual state of change are seen as part of the process itself. The process itself becomes the TERMINAL PHASE. The progressive construction profiles the pre-terminal events as MIDDLE PHASES. In principle this could also be a consequence of sensory-motor embodiment in the sense that, like reversible punctual events, irreversible punctual events cannot be perceived in terms of phasal structure, and coercion is required in order for there not to be conflict between imperfective viewing and the event. However, given that they are irreversible, iterative melding is not possible since it requires the resultant state to be the same as the initial state.

Therefore, the intuitive solution is to convert it into a *runup* event. A runup event (Croft MS) is one in which the events leading up to an irreversible punctual event are encluded into the event, such that it adheres to the summativity principle as in (9.8). It is likely that, in English, runups are exclusively construed by coercion. Runup events in the progressive may be telic, but it is not necessarily required that the natural completion point be reached. It is possible for someone to be dying, but have their life saved, or for someone to be winning at some point during the match, but end up losing the match in the end.[70]

9.4. States of being full to capacity

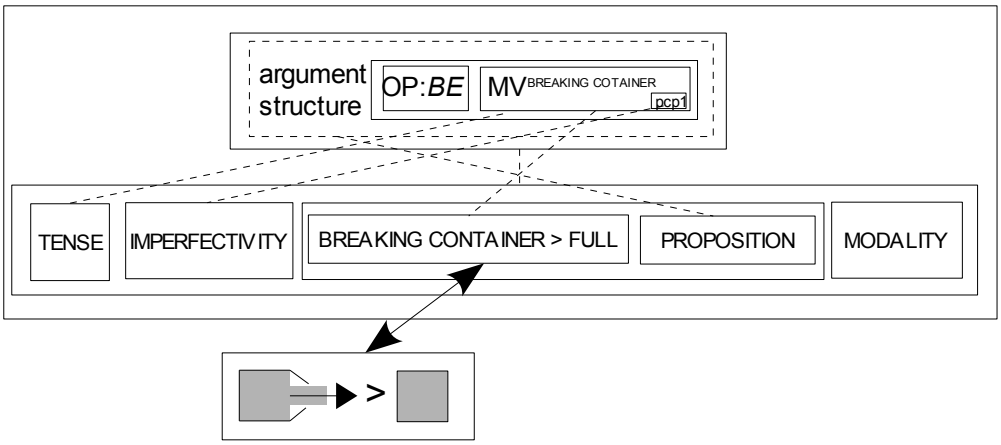
The use of the progressive construction to express states of being full to capacity essentially involves coercion. It coerces irreversible punctual verbs of BREAKING THE BOUNDARY into expressing states of BEING FULL TO CAPACITY. We saw that in (8.15a,c), which are repeated below for the sake of convenience:

(9.9) a. Suddenly, she *was brimming* with happy excitement.
b. Well Loaded *are bursting* with life and enough youth to get refused service at the bar.

70 Jensen (2006b) indicates the possibility of a similar coercion pattern in the Danish body-based aspect constructions. It appears that, in many cases, irreversible punctual verbs in this kind of construction is coerced into a runup event as in 'Manden ligger jo og dør' (literally 'the man is lying and dying') in which DØ ('die') is construed as a runup event rather than a punctual one.

This coercive construction is related to the runup construction and also involves the summativity principle by including the events leading up to the process of BREAKING THE BOUNDARY into the process itself. Unlike the runup construction, however, this construction freezes the process just before the BOUNDARY is broken, construing a dynamic and tense STATE OF BEING FULL TO CAPACITY. It may have the following symbolic structure:

Figure 9.3: Symbolic structure of the full container subconstruction



This being an item-based construction, the main verb is specified as one indicating the breaking of the BOUNDARY of a CONTAINER. This is the verbal semantics which gets reconstrued in the progressive, as illustrated by the box outside of the symbolic diagram. The box represents the coercion process. The illustration in front of '>' represents a CONTAINER whose BOUNDARY has been breached, while the illustration after '>' represents the coerced construal in which the CONTAINER is intact but FULL TO CAPACITY.

Note that there is also some overlap between coercion and reanalysis. Reanalysis implies that a gestalt is analyzed as having form X in stead of form Y, by assigning other functions within the whole to its parts than those normally assigned to them. This is, in a way, what happens to the duck-rabbit. In grammaticalization, if the Y-analysis becomes widespread enough, it may become the standard construal of the grammatical gestalt. The type of coercion discussed here is slightly different in that it involves a change of the gestalt, not just in terms of the function of the parts, but also in terms of the parts themselves, since the boundary is construed as intact in the pre-coerced conceptual content and as broken in the coerced conceptual content. Iterativization also involves a change of the gestalt in that one punctual event is reconstrued as several puntual events (we might call this process *reduplication*, borrowing a term from morphology), which are then melded into

one durative event. Summativization, as seen with runup coercion, however, is arguable a case of reanalysis. It does not chance the gestalt of the punctual event, and it dos not add new parts from out of the blue, as it were (which is the case of iterativization). What it does is to reanalyze the states and events leading up to the punctual event as parts of a whole which also involves the punctual event itself. It could be argued that reanalysis is a specific type of coercion.

9.5. Temporary states as a result of coercion

One might also argue that the temporary state uses of the progressive construction involve coercion. The semiotic ICM of the main verb is normally a state proper. However, the semantics of the progressive changes or specifies that the nature of the state into being a temporary one. This is, in a sense, a kind of type-shifting, or coercion. Examples were given in (8.9), and the symbolic structure was suggested in figure 8.12.

10. Secondary aspects of use

In addition to the primary subconstructions discussed in chapters 8 and 9, there are a number of secondary uses of the progressive which cuts across the primary subconstructions. These patterns of use are primarily dependent on contextual patterns and not so much on the progressive itself. Therefore, they are not seen here as subconstructions of the progressive as such. Rather, they are instances of various subconstructions of the progressive – most typically the ongoing ones. However, they do add semantic elements from the progressive construction to the discourse they appear in, and it is possible that these patters of interplay between the progressive and other constructions in the discursive context are weakly entrenched, but not so much that they are to be seen as grammatical units in their own right, though the possibility cannot be denied that some of them may actually be hybrid constructions inheriting from the progressive as one of the parents.

10.1. Simultaneous processes

According to Quirk (1972: 92; also Leech and Svartvik 1994: 67) the progressive construction expresses what they call *temporaries*, which is an action in progress and not the occurrence of an action or a state. The label 'temporary' implies that the process is extended yet bounded. As we have seen, certain uses of the progressive construction involve bounded extension that really cannot be classified as temporary. This is why I prefer the term 'ongoing'. as Givón (1993a: 153-60) points out, ongoingness implies simultaneity as opposed to sequentiality. It displays simultaneity

with the aspectual viewpoint: the processes is going on, while it is being aspectually viewed. It also diplays simultaneity in the sense that describing a process as ongoing facilitates the construal of some other event taking place simultaneously.

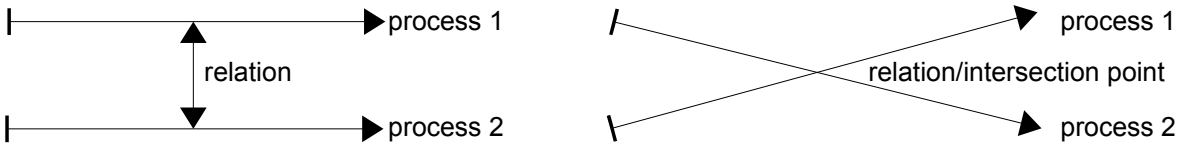
Most subconstructions of the progressive are used to express such simultaneity in conjunction with grammatical constructions that express *simultaneous cross-event relations*, to use a Talmian-style (Talmy 2000a: 345) terminology, such as the [X_{cl} *when* Y_{cl}], [X_{cl} *while* Y_{cl}], [X_{cl} *as* Y_{cl}], [*now that* Y_{cl} X_{cl}] and [*in* $Y_{cl(pcp1)}$ X_{cl}] constructions.[71] Simultaneity is not *per se* part of the progressive construction's semantics, but is detectable from it only in instances where it occurs in constructions like the ones above.

Simultaneous processes involve a complex figure-ground relation in which one process is foregrounded as the FIGURE and the other backgrounded as the GROUND. The constructions and their different information-structural variants construe schematic FIGURE-GROUND alignments. For instance, [X_{cl} *while* Y_{cl}] expresses a figure-ground relationship between two parallel events where [X_{cl}] is construed as being more salient in relation to [Y_{cl}]. The [X_{cl} *when* Y_{cl}]-construction construes a FIGURE-GROUND relation between two either parallel or intersecting events where [X_{cl}] is the FIGURE and [Y_{cl}] is the GROUND. Generally, it seems that the elements generalized under [X_{cl}] express FIGURES, and the [Y_{cl}] elements express GROUNDS (see Talmy 2000a: 312-405 and Croft MS for discussions of constructions that verbalize simultaneous events and the FIGURE-GROUND relation between them). I will refer to them as the *figure slot* and *ground slot* respectively. As mentioned before, there are basically two ways of cross-event relations of simultaneous processes:

- the processes take place in parallel without necessarily having any relations to each other apart from the FIGURE-GROUND relation
- the processes intersect and are related beyond the FIGURE-GROUND relation

The former type of cross-event relation is often expressed by constructions with 'when' in them, while the latter is often expressed by contructions that contain 'while':

Figure 10.1: Two types of cross-event relations of simultaneous processes

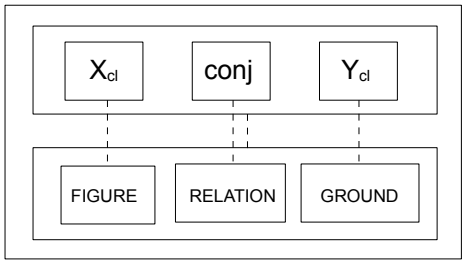


a. parallel processes b. intersecting processes

71 I made a corpus-based mini-investigation of each of the said constructions upon which the characterizations of these constructions are based.

It is not specified in figure 10.1 which one of the processes is the FIGURE and which is the GROUND, since this is linguistically specified when the construction are put to use. One can assume that these cross-event relations are ultimately cognitive models, which are then elaborated on linguistically by the constructions mentioned above. The illustration below is meant to illustrate the general symbolic structure of such constructions:

Figure 10.2: Simultaneous event constructions



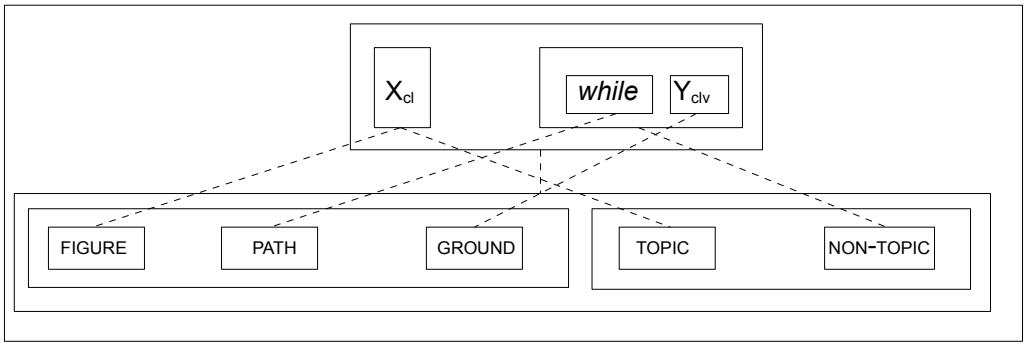
The assumption that they express a figure-ground relationship in addition to pure simultaneity is based on the gestaltist theory that humans cannot perceive two very different stimuli as being equally salient parts of the same scene at the same time (Rubin 1915).

There is an additional layer of figure-ground relations in such constructions that does not have anything as such to do with relations of simultaneity between the processes, but to information structure (Lambrecht 1994; Bache and Davidsen-Nielsen 1997: 113-5). Consider the following examples of the [X_{cl} *while* Y_{cl}] construction:

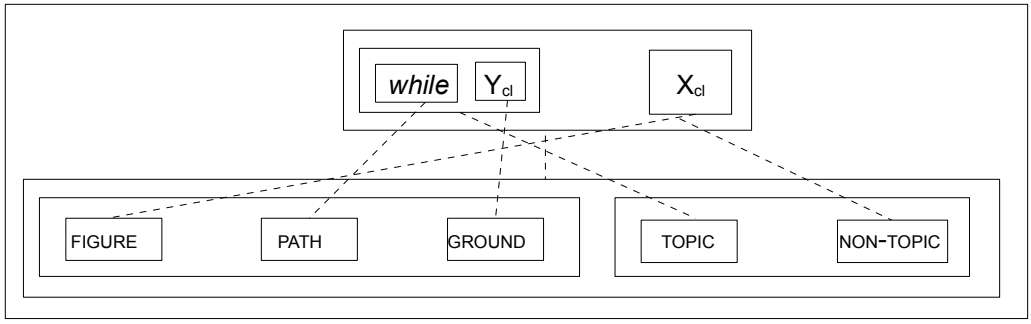
(10.1) a. All the children went out while we had a meal.
b. While we had a meal all the children went out.

In both cases 'all the children went out' is the FIGURE and 'we had a meal' is the GROUND in terms of the cross-event relation of simultaneity; but, in terms of information structure, in (10.1a), 'all the children' is the FIGURE, or *topical element* in information structural terminology, whereas, in (10.1b), it is 'while we had a meal' that is the topical element. In English, the initial component of a structure is typically the *topic* (e.g. Bach and Davidsen-Nielsen 1997: 113-5). The examples in (10.1) are information structural variants of the [X_{cl} *while* Y_{cl}]-construction in which the X- and Y-slots are moved around to create a difference in information structure, but not in the relation of simultaneity:

Figure 10.3: Simultaneous event constructions and information structure



a. [X_{cl}] as FIGURE



b. [*while* Y_{cl}] as FIGURE

Thus, these constructions are quite complex functioning as FIGURE-GROUND organizers at more than one level.

There seems to be three patterns of use in the expression of simultaneous process of the progressive construction. It may be used as figure-ground organizer in a cross-event relating constructions where one process foregroundings another as expressed by the parallel and intersecting process construction, or as an evaluation (we will look at evaluations later in this section):

(10.2) a. He *was burrowing* in a briefcase, while he waited. (FIGURE)
b. Seb *was forking* hay from the loft above the stables when he heard his name being called from outside. (GROUND)

The above examples suggest that the primary figure-ground contributions come from the simultaneous event constructions, rather than from the progressive construction. When a FIGURE, it appears in the figure slot, as in (10.2a), and when GROUND, it appears in the ground slot, as in (10.2b).

There are some phenomena that may serve as counter-evidence to this idea. It seems that properties from the progressive construction actually override properties of the simultaneous process construction.

(10.3) a. When she entered the house, Mrs Funell *was coming* down the stairs.
b. When I returned, Jett *was sitting* exactly as I'd left him, hugging himself and rocking gently to and fro.
c. The whole place *was buzzing* when she arrived at work next morning.
d. Maria *was sobbing* with desire as she felt his hands push insistently at her thighs, and then the rigid flesh she had freed to her caress just moments previously was nudging at her body, demanding entry and release.

The instances of the progressive construction appear in the figure slot of the simultaneous events construction, but are construed as GROUNDS. This has to do with the semantics of the progressive construction. The progressive construction aspectually profiles the MIDDLE PHASES of a process, thus construing it as an unbounded extent. Gapping the INCEPTIVE PHASE and TERMINATION PHASE, the imperfective aspect focuses on an unbounded, homogenous, and continuous part of the aspectual frame. This is reflected in its inherent durative and continuous (or iterative) actionality. If we compare this to the general characteristics of the ground in a FIGURE-GROUND relation as being homogenous and unbounded, we will see enough similarity to be able to suggest that imperfectively viewed processes are more likely to be construed as GROUNDS than FIGURES when appearing in simultaneous event constructions. This is supported by the fact that the progressives that appear in the corpus are more frequently used to construe GROUNDS than to construe FIGURES:

Table 10.1: Use in simultaneous event constructions

use	frequency
ground	83.7 % (n=407)
figure	10.1 % (n=49)
evaluation	5.3 % (n=30)

Taking the semantic compatibility principle into consideration, one might predict that progressives in [[Y_{cl}]/[GROUND]] units, as in (10.4), are generally more frequent than in any other unit in the simultaneous event construction.

(10.4) a. While the kick *is being* executed the hands should always maintain a good, high-guard position, as a defence against a counter-strike should the kick be blocked or misdirected
b. While other members *were betting* on horses, doing their football pools, or playing cards, Ken would be at the centre of a small circle that also included Hattie Jacques, Joan Sims and Kenneth Connor, doing the Times Crossword
c. A few pints later, when the Vomits *were doing* their first encore, Jamie and I were up dancing, jumping up and down, Jamie shouting and clapping his hands and dancing about on my shoulders

This is the case in the corpus used for the present investigation, but the frequency of ground

construals of the X-slot is around 10% lower than that of the Y-slot :

Table 10.2: Distribution over Y- and X-slots

symbolic unit	Frequency
[[Y_{cl}]/[GROUND]]	44.2% (n=228)
[[X_{cl}]/[GROUND]]	35.3% (n=182)
[[Y_{cl}]/[FIGURE]]	3.7% (n=19)
[[X_{cl}]/[FIGURE]]	11% (n=57)
evaluatives	5.8%

This indicates some patterns of entrenchment that suggest the existence of a very specific, hybrid subconstruction based on a simultaneous process construal in which the process expressed by the progressive construction is most typically conceptualized as the ground, which is derived from recurrence in simultaneous process constructions of the kinds discussed here.

The third pattern is based on what I call *evaluation*, also sometimes known as the *interpretational progressive*. According to Leech (2005), who presents a diachronic variety-based study of American and British corpora, it is a type of advanced progressive – an extension of an extension of the progressive construction with a specialized discursive function. Here are two examples (10.4) from (Leech 2005) and two from the corpus (10.6) to illustrate the interpretational use of the progressive:

(10.5) a. I can only add that when Paul Gascoigne says he will not be happy until he stops playing football, he *is talking* rot.
b. When he speaks of the apocalypse, however, he *is* not *speaking* of it the literal and popular sense.

(10.6) a. When you say that Brian I mean you you're, you'*re talking* about at the end of the planning the future after you prioritize?
b. When you buy a network from CompuAdd, you'*re buying* quality, security, compatibility – and value.

In all examples, the progressive predicator construction occurs in the [*when* Y_{cl} X_{cl}] construction, which is merely an information structural variant of the [X_{cl} *when* Y_{cl}] construction, and contains the following symbolic units: [[Y_{cl}]/[[EVENT][GROUND]] and [[X_{cl}]/[EVALUATION][FIGURE]]; it is possible, though, that the inverted version of the simultaneous cross-event relating construction is obligatory with the evaluative subuse, since no instances occur in the non-inverted version. Unlike the ordinary simultaneous process subconstruction, the evaluation subconstruction seems to conform to the simultaneous event construction in terms of cross-event relating FIGURE-GROUND alignment. This is probably because it is more pragmatically motivated in that it presents the speaker's evaluation of

the content of the [[Y_{cl}]] clause. In communicative terms, the evaluation is more salient than the process that is being evaluated, since the primary purpose of the utterance is to express the speaker's opinion on the process and not the process itself. It is another case where the progressive is used to express stance. Leech (2005) considers this use to be a recent use of the progressive construction. While not considering an extension as such, I think it is likely that it will become entrenched as one, provided that it increases in use.[72]

In this case, the illocutionary content of the utterance overrides the more semantic content of the progressive construction, so in the case of the evaluation subconstruction, the simultaneous event construction seems to be the major contributor of content, allowing the imperfectively construed process to be the FIGURE. This is even clearer in example below which involves the [*in* $Y_{cl(ing)}$ X_{cl}]:

(10.7) But in so doing I *was breaking* the law. It is not permitted to sound a car horn after a certain hour. I could be prosecuted.

The major use of this construction seems to be evaluation, and it appears to contain the following symbolic units [[$Y_{cl(pcp1)}$]/[[EVENT][GROUND]] and [[X_{cl}]/[[EVALUATION][FIGURE]]. Since the ground slot is grammatically substantive, the progressive may only appear in the figure slot. This is so, because ongoingness is logically more relevant to the here-and-now, or indeed the origo, than are non-ongoing progressives. This claim is in part supported by Bergen and Wheeler (2006), which shows that it is easier for speakers to mentally simulate a process which is expressed in the progressive than one which is not; that is, it is easier to simulate it if it is construed as ongoing. It may well be this effect of ongoingness that makes the evaluation seem more relevant than what is being evaluated. Compare (10.7) with these altered examples:

(10.8)
a. I can only add that when Paul Gascoigne says he will not be happy until he stops playing football, he talks rot.
b. When he speaks of the apocalypse, however, he speaks of it the literal and popular sense.
c. When you say that Brian I mean you you're, you talk about the end of the planning the future after you prioritize?
d. When you buy a network from CompuAdd, you buy quality, security, compatibility – and value.
e. But in doing so I broke the law. It is not permitted to sound a car horn after a certain hour. I could be prosecuted.

In (10.8) evaluations are still presented, but in non-progressive form, and the evaluation seems less

72 The same effect applies to instances of cross-event relating constructions without the progressive, as seen in (10.8).

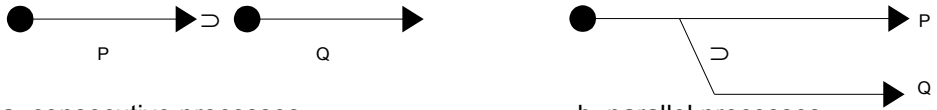
intertwined with each other and the evaluative expression seems less relevant than when it involves the progressive construction. This suggests that the pragmatic property of the EVALUATION being more relevant than the EVALUATED is provided by the progressive, and only applies in cases where the progressive construction is involved.

10.2. Causally related processes

This secondary use of the progressive implies the relation between two events, such that one is the result of the other; that is, the progressive construction may be used to express *causally related processes*. In this case, too, it is a contextually derived use since it is only used to express causality in certain grammatical constructions that we will here subsume under the collective term *resultative constructions*. What resultative constructions have in common is the construal of *causal cross-event relations* (i.e P ⊃ Q). One such construction is the [*if* X *then* Y] construction, having the following internal units: [[X]/[P]], [[Y]/[Q]], and possibly [[[*if*][*then*]]/[⊃]]. Thus [X] is the *condition slot* and [Y] the *consequence slot*. Others are, for instance, [*the* X*er the* Y*er*], [Y *providing that* X], non-simultaneous and non-temporal [Y *as* X], and [Y *because* X].[73]

There are two possible uses of the progressive in such constructions – namely to express *conditional processes* and *consequential processes*. In addition, the latter has an evaluative subuse. There are two ways for the conditional and consequential processes to be related: either they are consecutively ordered, such that the conditional process precedes the consequential one, or they are parallel such that the conditional process gives rise to the conditional one, which will take place in parallel with the conditional one:

Figure 10.4: Consecutive processes



a. consecutive processes b. parallel processes

As with the simultaneous processes, it is possible that these cross-event relations are underlying cognitive models, which are expressed by the types of constructions discussed above.

About half of the occurrences of the progressive in such constructions were a generic process type construal, conceptualizing the causal cross-event relation to be eternally true, while more specific ongoing and extended ongoing uses take up about one fourth each.

73 I made a corpus-based mini-investigation of each of these constructions upon which the descriptions are based.

10.2.1. Conditional process

The progressive is used more frequently to express the conditional process than consequential processes with a frequency of 78.8% versus the 22.2% of consequential processes out of all occurrences of the use of the progressive with causally cross-event relating constructions in the corpus.. This may be motivated by factors similar to those motivating the preference for ground-construals in the simultaneous process subconstructional set.

(10.9)
a. A number of further points should be noted: (1) If the financial adviser *is acting* for a newly-formed bidder (eg an "off-the-shelf" company), the standard of care required of it has a special dimension.
b. If they'*re playing* another slow tune, I'd like to dance .
c. If the motor *is moving* in the negative direction the excitation cycle is complete when the index register reaches location ENDLOW and the next cycle is initiated by shifting the register to point at location ENDHI.
d. The faster a car *is moving*, the higher is the Doppler shift in frequency.
e. That's right, in other words, the insurance company can't back out of the contract, providing the client *is paying* his premiums.
f. If you *are reading* this, it means I have disappeared.
g. What I'm saying is it's quick erm people expect to do it it's something oh if they'*re writing* instead of going round I'll pick up the phone and do it.
h. If he *was working*, she didn't want to disturb him.

It makes sense to argue that, if something is the cause of the existence of something else, then it is also likely to be seen as the circumstances or background of this something else. For instance, in (10.9a) the financial adviser's acting for a newly-formed bidder serves as the circumstances of the required standard care having a special dimension. Likewise, in (10.9.b), the the band's playing the tune serves as the circumstances enabling the dancing to take place. In (10.9h), his working is the circumstances under which she does not want to disturb him. Seeing the conditional process as a background circumstance for the other process would naturally call for the preference for using the progressive with its imperfective content as the condition rather than the consequence.

10.2.2. Consequential process

The progressive appears to be used infrequently in the consequence slot. Again the explanation involves the imperfective construal of the progressive predicator. The unboundedness of ongoing imperfective construals of processes is less compatible with figure construal of consequential processes:

(10.10)
a. Or, in other words, the farther a galaxy is, the faster it *is moving* away.
b. If the metal discolours or the flux turns black, you *are overheating* the joint.

In (10.10), the progressive construes the process as the consequence of the conditional process, but it construes it as if it takes place simultaneously. Causal cross-event relational constructions with the progressive in the consequence slot thus do not present the cross-event relation as being sequential.

As with the simultaneous events uses, there is also an evaluative use of the consequential process use of the progressive, as seen in (10.11):

(10.11) a. If we do not do that, we *are abdicating* responsibility and refusing to fulfil our primary role – to tackle and solve problems of a substantial nature.
b. If so, the fates *were playing* into their hands.

The evaluative, or interpretational, use of the progressive construes the condition and the consequence as two cross-relating events. But the evaluation is construed as a consequence of the evaluated process, such that the evaluation is only relevant if the evaluated event takes place. This use has not been addressed as such in the literature, but given that Leech (2005) argues for the progressive construction as being "grammar on the move" and subject to frequent extensions, one may assume that this use has the same status as the evaluative of the simultaneous event construals – i.e. one that is presently not a subconstruction, but may develop into being one. As mentioned above, evaluations are more likely to have figure status, since the speaker construes them as being salient. Since consequences are likely to be construed as figures, there is a certain extent of compatibility between the notions of consequence evaluation.

Table 10.3: The progressive and consequential processes

subconstruction	frequency
'true' consequential process	78.6% (n=81)
evaluation	21.4% (n=22)

As with the evaluative use of the simultaneous process subconstruction, the reason may be that the ongoingness of the imperfective construal facilitates the pragmatic interpretation of the evaluation as being more relevant to the evaluated process.

10.3. Unifying construals of distributed processes

What I call *unifying construals of distributed processes* involve the construal of several similar or identical processes taking place simultaneously or in sequence, without having to be totally synchronized, as if they were one event. Unifying construals of this kind have not been researched extensively, but I would argue that they are a matter of cross-relation of events and that they

involve construal operations which have already been recognized by cognitive scientists.

Such unifying construals may be based on the gestalt principles of equality/similarity and contiguity, creating a multiplex unit of similar entities. It is likely that they involve what Croft and Wood (2000; Croft and Cruse 2004: 52) refer to as *coarse granularity*. Coarse grained construals involve the 'zooming out', ignoring the details that fine-grained granularity involves. Often the principles of equality/similarity and contiguity go together with coarse granularity, as the boundaries between the individual similar units tend to get weaker, giving the impression of one large mass unit. Granularity is thus, along with bounding and melding (since one unit is formed from the individual events), a decisive factor in non-count and mass nouns.

The same applies to the unification of distributed similar events: a number of similar events are perceived or construed as making up one large mass event. This would also involve the operation of melding. Imagine, for instance, a city being exposed to a heavy aerial bombardement, where a great number of bombs fall all over the city. Even though each bomb's falling is an event of its own, when trying to get an overview of the situation, the language user may construe the bombardment as one super-event. Such construals may be expressed verbally by virtue of certain constructions, one of these being a secondary use of the progressive construction. This is not a function unique to the progressive but applies generally to certain clause types. Consider these fabricated examples:

(10.12) a. Bombs were falling everywhere.
b. Bombs fell everywhere.
c. Bombs had fallen everywhere.
d. Bombs had been falling everywhere.
e. Bombs would fall everywhere.

All of the above examples are valid verbalizations of the above-mentioned scenario. They suggest that this construal is formally reflected by clauses having mostly plural arguments. Normally, a plural argument has an individuating function, indicating that a number of distinct, but similar, units are involved in the same local event as illustrated by the following fabricated example:

(10.13) The rioters attacked the police car with rocks and blunt striking weapons.

Unlike this, the examples in (10.12) do not give the impression of one local event, but rather a number of local events making up one super-event. Among the unifying factors is the predicator. Since all the local events are similar, they may be captured by the same verb. However, the main unifying function may be attributed to a special use of clause constructions with plural arguments.

What the progressive construction does is simply to apply its imperfective and other functions to the unified construal as if it were just one event, presenting the super-event as an ongoing one.

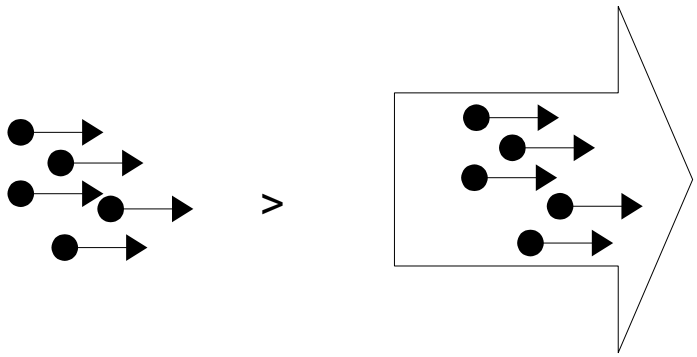
10.3.1. Distributed process

By *distributed process* I mean multiple similar or identical durative processes which may share one, more, or no participants and which take place more or less simultaneously within a locally defined and limited span of time and are expressed in the same clause:

(10.14)
a. Lucy Lane and Shaw were at work in Francis's room which overlooked the street. The shops *were closing* and there was that burst of activity before things settled down to the evening calm.
b. The crowd had almost disappeared, and the attendants *were giving* her "looks".
c. There were big baskets of flowers everywhere and waitresses *were giving* everyone sparkly drinks and asking them to sit at long tables in the dining room.
d. Their legs entwined, like some exotic two-headed carnival monster in skin-tight red, yellow and blue costumes, the limbo dancers *were gyrating* their way skilfully beneath a burning pole.
e. Boys *were playing* with machine-guns, swivelling them this way and that, peering through the sights.

Due to their similarity and simultaneity, the processes are construed as one ongoing process equivalent to the type construed by the ongoing process subconstruction. The super-event is distributed over various locations in space and time:

Figure 10.5: Unifying construal



In effect, the distributed process use cross-relates a number of similar and contiguous events. It has more or less the same function as the ongoing local process subconstruction – and also appears in small scale contexts. Again, this is probably not exclusively attributable to the progressive but to the above-mentioned unifying function of certain uses of clause structures with plural arguments.

The distributed process use of the progressive appears to display some recurrent patterns in

its external properties in that its instances most typically co-occur with arguments in the plural. Singular arguments are extremely infrequent in the corpus, and those that appear express the same individual taking part in a number of temporally contiguous – mainly overlapping – simultaneous processes as in (10.14b,d).

Table 10.4: Plurals and the progressive in unifying constructions

plural	frequency
subject	99.4% (n=309)
non-subject	0.6% (n=2)
none	0% (n=0)

The preference for plurality in subject may have to do with salience. The salient parts of unified processes are possibly realized by subjects because subjects in English have topicalizing functions, topicalization being a strategy of placement of salience.

10.3.2. Distributed process as state-of-affairs

This use of the progressive construes a unification of similar and simultaneous events, like the distributed process subconstruction, but, while the distributed process use imports its process type from the ongoing subconstruction, the distributed process as state-of-affairs use imports it from the extended ongoing process subconstruction. In other words, it construes a number of similar temporally extended, typically large scale, processes and unifies them:

(10.15)
a. Most users *are accessing* the SAS on the Manchester mainframe.
b. Some plants and animals *are becoming* scarce in the intensely farmed parts of East Lothian.
c. British beaches *are becoming* increasingly polluted despite 35 awards for the blue flag, the European Commission's highest commendation of beach excellence.
d. People *were creating* jobs for themselves in a free market.
e. The report, compiled by health specialist Cathy Read, warned that traffic exhaust may both exacerbate and initiate asthma. The condition *is affecting* growing numbers of children in the country, with one in seven primary schoolchildren suffering from it. Pollutants such as nitrogen oxide, carbon monoxide and hydrocarbons have also been linked to hay fever, chest infection and childhood cancer.
f. Sponsorships events in the arts and sports *are becoming* an increasingly popular form of publicity.

The unification of extended and large scale processes adds an extra dimension to the content, which is not found in the distributed process construction – namely, that the collection of extended processes is construed much like a type of states-of-affairs.

A feature that is imported from the extended process subconstruction is that the arguments

are of the same large scale types, typically plural instances of the counting NP construction. Again, singular agents are rare and express the same participant engaging in all of the unified events as in (10.5e-f).

As with the distributed process use, the distributed process as state-of-affairs use appears most frequently with plural subjects and not at all with no plural arguments.

Table 10.5: Plurals and the progressive in unifying state-of-affairs constructions

plural	frequency
plural subject	97.6% (n=1,726)
other plural	3.4% (n=42)
no plural	0% (n=0)

Again, salience may be a decisive factor in the preference for plural subjects.

10.4. Generic process

The generic process use construes what could be called eternally true, or generic, relations (such as those prescribed by the law, by principles of mathematics, physics and so on, or predicted by the behavior of stereotypes), as if it were an ongoing situation taking place at small scale dimensions. Consider (10.16):

(10.16)
a. Further, in an intuitive way, the meanings of sir here are not part of the content of what is asserted; they are background assumptions about the context, specifically the kind of person B *is addressing*.
b. Article 2 defines "consumer" as "any natural person who, in contracts covered by this Directive, *is acting* for purposes which are outside his trade, business or profession".
c. Consider, for example, a situation in which A and B *are fixing* a car.
d. Unless, of course, one *was indulging* in a complicated bluff.
e. We'll have a female, and she'*s paying*, let us say escalating premiums.

The generic process use of the progressive displays certain patterns in external syntax. Typically the arguments consist of generic terms or generic uses of nominals. This is, of course, motivated by the semantic fact that there are no specific participants involved in the process. The generic process construction also displays some interesting discourse pragmatic patterns, as it typically appears in texts (spoken or written) of specific genres such as educational and instructional discourse on law and science and in discourse that involves generalized stereotypes. These are typically instructional or informative texts explaining these eternally true relations to the reader in a pedagogical fashion, such as university textbooks. The progressive is not the only type of predicator that may be used

generically. As with the previous uses, the progressive predicators in (10.16) may be substituted with most other central types of predicator constructions without losing the generic meaning, pointing in the direction of the genericness not primarily being provided by the progressive predicator. I would argue that this way of using language involves conversion of one large scale concept into a more local one. The cognitive principle behind the conversion of "universally true" relations into a type of process, I would argue, is probably what Fauconnier and Turner (2002: 322) call *conversion to human scale*:

> Human beings are evolved and culturally supported to deal with reality at human scale – that is, through direct action and perception inside familiar frames, typically involving few participants and direct intentionality. The familiar falls into natural and comfortable ranges. Certain ranges of temporal distance, spatial proximity, intentional relation, and direct cause-effect relation are human friendly

By presenting a "universally true" relation as a single event does compress it down to a more human-friendly scale. This compression allows for the application of the construals of predicator constructions, such as the imperfectivity of the progressive, which is obviously very advantageous in terms of pedagogy and making the reader, or listener, actually grasp those often complex eternally true relations.

10.5. Habitually repeated process

There is a way of using the progressive to indicate large scale construals of repeated processes, rare though it is:

(10.17) a. In 1979, BLDSC *were acquiring* 10,000 new theses each year.
b. All the time, Ken *was appearing* on television, on radio or on stage.
c. You can just imagine, this place *is cutting* cast iron and metal all day, every day.

As the examples above indicate, a process is repeated over a longer period of time, each process being imperfectively construed. The repetition is habitual in that it is so frequent that it is construed as a feature of the relevant participant. This construal is brought about by temporal adverbials indicating quantitative repetition measured by calendric time units and is thus a question of accommodation.

Thus, the habitually repeated event construal is more or less dependent on the semantics of the temporal adverbial. The progressive provides the imperfective construal such that each process that is habitually repeated is presented as an ongoing one; that is, it is essentially the profiled middle phases that are repeated habitually.

11. Collostructions

In this chapter, we shall discuss the results of a collostructional analysis of the data retrieved from the corpus. The results will be displayed in lists as is customary in collostructional analyses. Each list is ranked in terms of collostruction strength, such that the stronger the strength the higher the ranking. It also accounts for the collostruction strength itself as well as the nature of the collostructional relation (i.e. whether it is attraction or repulsion). The reader will notice that some items that appear in subconstructions of certain semantic types do not appear on the lists of lexical items of the same type. This is because the semiotic ICMs of the lexical items in question do not belong to this type.

11.1. Attraction

Table 11.1 below the fifty most attracted lexical items to the progressive construction in the corpus. According to the principle of semantic compatibility we can expect to find mostly items that are prototypically durative and continuous inasmuch as durativity and continuity are semantically compatible with the imperfectivity of the prototypical center of the progressive construction:

Table 11.1: Top 50 attracted items in the progressive (log-likelihood)

rank	word (or construction)	collostruction strength	relation	rank	word (or construction)	collostruction strentgh	relation
1	*look*	4.636324e+03	attraction	26	*start to*	9.496650e+02	attraction
2	*passive be*	4.289645e+03	attraction	27	*ask*	8.988535e+02	attraction
3	*go*	4.238048e+03	attraction	28	*happen*	8.623766e+02	attraction
4	*choke*	3.737659e+03	attraction	29	*play*	8.199433e+02	attraction
5	*try*	3.182030e+03	attraction	30	*hope*	8.025725e+02	attraction
6	*carry*	3.017990e+03	attraction	31	*move*	7.715118e+02	attraction
7	*do*	2.946787e+03	attraction	32	*lie*	7.372486e+02	attraction
8	*begin to*	2.775565e+03	attraction	33	*Plan*	7.317867e+02	attraction
9	*get*	2.648898e+03	attraction	34	*seek*	7.227649e+02	attraction
10	*say*	2.372832e+03	attraction	35	*hold*	6.977259e+02	attraction
11	*work*	2.273821e+03	attraction	36	*come*	6.934354e+02	attraction
12	*sit*	2.163978e+03	attraction	37	*live*	6.423138e+02	attraction
13	*wait*	2.058172e+03	attraction	38	*wonder*	6.086652e+02	attraction
14	*wear*	1.742452e+03	attraction	39	*feel*	6.063665e+02	attraction
15	*make*	1.609024e+03	attraction	40	*expect*	5.947075e+02	attraction
16	*stand*	1.597773e+03	attraction	41	*miss*	5.610750e+02	attraction
17	*talk*	1.581908e+03	attraction	42	*glow*	5.523101e+02	attraction
18	*take*	1.503075e+03	attraction	43	*smile*	5.411510e+02	attraction
19	*think*	1.346775e+03	attraction	44	*discuss*	5.197091e+02	attraction
20	*become*	1.264061e+03	attraction	45	*use*	4.595227e+02	attraction

21	*deal*	1.171355e+03	attraction	46	*rise*	4.406752e+02	attraction
22	*start*	1.133267e+03	attraction	47	*act*	4.347590e+02	attraction
23	*behave*	1.070584e+03	attraction	48	*walk*	4.236473e+02	attraction
24	*watch*	1.025160e+03	attraction	49	*enjoy*	4.133253e+02	attraction
25	*run*	1.010011e+03	attraction	50	*stare*	4.023356e+02	attraction

With a few exceptions, virtually all verbs among the fifty most attracted items are prototypically durative and continuous while they vary in terms of telicity. Some examples are CARRY, CHOKE, LOOK, SIT, STAND, THINK, BEHAVE, and GROW, all of which are durative, but differ in telicity. CARRY, LOOK, SIT, STAND, THINK, BEHAVE and LOOK are all atelic as they do not have any inherent completion point, but will have to be terminated. RISE and GROW, on the other hand, are typically telic as they progress towards a completion point, beyond which the primary participant has has entered a resultant state that is different from the initial state. The top ranking verb, LOOK, is as mentioned ambiguous, also being used to express stative relations. However, since the dynamic meaning of directing one's sight towards something is typically listed as the primary meaning in dictionaries, I take that it is also the prototypical meaning. I should mention that polysemy of this kind is one of the biggest caveats of collostructional analysis, because collostructional analysis cannot measure senses of words. Or rather, it is a caveat due to the present status of most corpora, which do not tag tokens in terms of the senses they express in the respective usage-events. If such tagging was made in a corpus, then it would probably be possible to apply collostructional analysis to word senses. So, parts of LOOK's attraction could be due to its polysemy. A number of the top fifty attracted items are verbs that are quite schematic in meaning and have a broad range of uses – including light verb functions. These verbs are DO, GET, GO, MAKE, TAKE, TRY, RUN, and COME. While it is possible that these verbs (and many if the other verbs on the list) may be used to express a punctual event, my estimate is that they are most often used to express durative events, and that their semiotic ICMs have durativity as part of their contents. Note also that many of these verbs involve superordinate level categories and basic level categories of processes. For instance, DO provides semantically only very few general features, indicating that it is a PROCESS involving a DOER or similar agentive participant. This why, the DO category is very abstract and may cover virtually all types of process, and even many states as well. This may be one of the reasons that DO has developed a pro-form use and may endophorically (and probably also exophorically) refer to more specific verbs and associated processes occuring elsewhere in the discourse. And it may also be the genericness and semantic dynamicity of DO which causes the high degree of attraction to the progressive construction. GET and TAKE are also

quite abstract semantically, but, I think, specifically enough for their semantics to be basic level categories. They are probably semantically subsumed by a superordinate category having to do with TRANSFER, both verbs expressing RECIPIENT-ORIENTED TRANSFER, and each of them subsumes a number of subordinate categories specifying the type of RECIPIENT-ORIENTED TRANSFER, expressed by verbs like PICK (UP), STEAL, SNATCH etc. Again, while not as generic as DO, it may still be that the genericness of basic level terms like GET and TAKE motivates the attraction. Of course, there could be other reasons too. GET may function as the operator in the get-passive, much like BE functions a operator in the progressive and in the be-passive, but the get passive is relatively rare in connection with the progressive construction in the corpus used for the present study. TAKE may additionally function as a light verb in many cases like 'TAKE a bath' or 'TAKE a nap'. The same applies to RUN which prototypically refers to a generic HIGH VELOCITY SELF-PROPELLED MOTION BY LEGGED ANIMATES, and may thus be a basic level category under a more abstract SELF-PROPELLED MOTION category along with WALK. SIT and STAND predicate basic level categories of bodily posture, and along with the semantic categories of RUN and WALK, the semantic categories of SIT and STAND subsume various specific types of running, walking, sitting or standing. It is possible that the genericness of superordinate category verbs and especially basic level category verbs may be a reason for the high frequency of such verbs in the progressive, and the resulting high degree of attraction.

What is also interesting is the appearance of four stative verbs. What is interesting about the four stative verbs – namely, HOPE, FEEL, EXPECT, MISS – that appear on the top fifty is that they are all primarily mental states and they are probably peripheral members of the STATE category, being very close to the boundary between state and process. There certainly seems to be more dynamicity to them, and mental states than to other types of states in general. MISS is interesting, because it subsumes two related senses or mini constructions that construe STATE OF ABSENCE – namely, BE IN A STATE OF ABSENCE and SUFFERING FROM SOMETHING OR SOMEONE ELSE BEING ABSENT. The latter sense appears in the transitive construction, while the former appears in the intransitive construction and (in the BNC at least) appears exlusively in the progressive form. This is probably why MISS appears among the 50 most attracted verbs. Another factor is that this sense of MISS most typically appears in the present participle form as in "there's an X missing or An X is missing (from Y)" or "the missing X etc." function more like an adjective than a verb. When applied to non-animate entities, MISS in the progressive does appear to be more like a copula construction, while with animate subjects it appears more like a LIMITED STATE sub-use of the progressive. My estimate is

that the combination of BE and 'missing' is an item-specific extension of the STATE OF ABSENCE subconstruction of the state sub-use; one which itself has two members which are determined by the entity that takes up the subject function. Instances with animate subjects are closer to the prototypical core of the progressive construction while, if the subject is inanimate, it transcends or is close to transcending the boundary of states proper.

Ranking 14, we find WEAR. Its high ranking is perhaps due to its possible status as a highly entrenched subconstruction of its own and its doubtlessly special status among the other subconstructions of the progressive.

The relation of BEGIN TO ranking as 8, and, START TO's, ranking as 29, to the progressive construction is also one of powerful attraction. Both refer to a part of the inceptive process of a larger process, inceptive processes typically being continuous and temporally extended, which is probably why they are among to items that are the most attracted to the progressive. However, the two items are themselves part of constructions. START TO and BEGIN TO are, according to Michaelis (1998) aspectual constructions themselves, their formal templates being [*START to* MV_{inf}] and [*BEGIN to* MV_{inf}]. The instances of BEGIN TO and START TO that appear in the progressive are instances of a multiply parented construction that combines imperfective and inceptive aspect, much the same way that the more widely recognized complex predicator constructions like the perfective progressive. The progressive inceptive constructions thus profile the inceptive phase of a durative process but gaps the boundaries of the inceptive phase that distinguish it from the middle phase. It construes the inceptive phase as ongoing as opposed to when START TO and BEGIN TO appear on their own where they profile the entire inceptive phrase (see also Wierzbicka 1988 and Smith and Escobedo 2001).

Stefanowitsch and Gries (2003: 230-1) made a collostructional investigation of the progressive in the *British International Corpus of English*, and their results follow more or less the same patterns as mine in that most of the verbs they found to be attracted to the progressive construction were also durative verbs with a couple of exceptions. Even though Stefanowitsch and Gries do not discuss actional features like continuity, the verbs on their top thirty are also primarily continuous. Many of my top fifty verbs are also found on their top thirty.

In accordance with the semantic compatibility principle, the actional nature of the items supports the claim that, while the progressive construction prototypically specifies temporal extent and continuity of the event, it does not require any specific telicity.

11.2. Repulsion

Here follows a list of the fifty most repelled items by the progressive in the corpus; the stronger the repulsion, the higher ranking. Again, the semantic compatibility principle would predict that we are most likely to encounter items that are not compatible with dynamicity and the semantic features of the progressive construction:

Table 11.2: Top 50 repelled items in the progressive (log-likelihood)

rank	word (or construction)	collostruction strength	relation	rank	word (or construction)	collostruction strength	relation
1881	*copula be*	1.267239e+03	repulsion	1906	*grant*	8.754577e-01	repulsion
1882	*seem*	2.818758e+01	repulsion	1907	*link*	7.979554e-01	repulsion
1883	*mean*	1.814171e+01	repulsion	1908	*calculate*	6.167099e-01	repulsion
1884	*remain*	1.005850e+01	repulsion	1909	*conclude*	5.801624e-01	repulsion
1885	*believe*	9.970246e+00	repulsion	1910	*ensure*	5.235894e-01	repulsion
1886	*involve*	9.351526e+00	repulsion	1911	*manufacture*	4.033612e-01	repulsion
1887	*need*	7.445672e+00	repulsion	1912	*derive*	3.480708e-01	repulsion
1888	*understand*	5.660009e+00	repulsion	1913	*process*	3.143675e-01	repulsion
1889	*include*	4.668403e+00	repulsion	1914	*unite*	2.875933e-01	repulsion
1890	*want*	4.350545e+00	repulsion	1915	*last*	2.550622e-01	repulsion
1891	*interest*	4.231397e+00	repulsion	1916	*attach*	2.539657e-01	repulsion
1892	*love*	3.350862e+00	repulsion	1917	*range*	2.074602e-01	repulsion
1893	*have*	3.215645e+00	repulsion	1918	*qualify*	2.023980e-01	repulsion
1894	*concern*	3.126400e+00	repulsion	1919	*accompany*	2.013912e-01	repulsion
1895	*thank*	2.886985e+00	repulsion	1920	*appreciate*	1.973829e-01	repulsion
1896	*exist*	2.833380e+00	repulsion	1921	*incorporate*	1.673662e-01	repulsion
1897	*announce*	2.706694e+00	repulsion	1922	*hate*	1.535311e-01	repulsion
1898	*suppose*	2.584718e+00	repulsion	1923	*obtain*	1.439317e-01	repulsion
1899	*enable*	2.240405e+00	repulsion	1924	*kiss*	1.375482e-01	repulsion
1900	*appoint*	2.223943e+00	repulsion	1925	*emphasize*	1.315202e-01	repulsion
1901	*specify*	1.962128e+00	repulsion	1926	*wish*	1.290698e-01	repulsion
1902	*present*	1.828374e+00	repulsion	1927	*enhance*	1.255995e-01	repulsion
1903	*approve*	1.459968e+00	repulsion	1928	*reveal*	1.251938e-01	repulsion
1904	*depend*	1.037971e+00	repulsion	1929	*list*	1.220647e-01	repulsion
1905	*note*	1.018455e+00	repulsion	1930	*pause*	1.214370e-01	repulsion

Most of the items on this list are prototypically stative verbs, such as SEEM, MEAN, BELIEVE, NEED, UNDERSTAND, WANT, HAVE, EXIST, LOVE, HATE and DEPEND, with copula BE as the most repelled one, which again suggests that dynamicity is part of the prototype for the progressive construction while stativity is not. This is in accordance with the attraction-compatibility correlation, which, as hinted at above, is underlying the entire principle of collostructions.

There are also verbs that do have a sense of dynamicity to them, but still refer to situations

that are difficult to imagine as processes as such, like INVOLVE, INCLUDE and REMAIN. These may be on the border between processes and states. Just as in the case of mental state verbs, which semantically where alsmos quasi-processes, were found among the top 50 attracted verbs, these, which are almost quasi-states are found among the repelled verbs.

There are also a number of verbs that are refer to processes, like KISS, UNITE, ATTACH, and REVEAL. These verbs are processes, but it could be argued that their semiotic ICMs are incompatible with the semantics of the progressive construction, because they most typically express punctual events. UNITE and REVEAL are probably the most convincing candidates for such an explanation, since it might be argued that the exact moments of unification of entities and uncovering of something are punctual. A pressing question then is whether the events leading up to those punctual inchoative moments are part of the overall process or not. ATTACH is slightly more dubious. The act of attaching is obviously a process, but the verb ATTACH is also often used with reference to the state of being attached to something, especially when when used in the passive construction as in 'The handle is attached to the cup' (it is almost a copula-like use of the passive construction). Conversely, it may also be argued, along the lines of what was said about UNITE and REVEAL, that the exact moment of attachment is a punctual one. Both could be factors in ATTACH being repelled by the progressive. ATTACH is interesting in a diachronic perspective as well. The corpus is from the 1990s where e-mailing was not as widespread as it is today. Most e-mail software of today provides the user with the possibility of attaching a file to the e-mail itself. This process may be durative, lasting several seconds, depending on the size of the file. It is likely that this circumstance may cause utterances like 'I'll be down for dinner in a moment, I'*m* just *attaching* a file to the e-mail' to become more and more frequent, which may bring about a change in the actional potential of the semiotic ICM of ATTACH and change it to a more durative verb. This, in turn makes the verb more compatible with the progressive construction – especially if sufficiently many utterances about attaching files to e-mails involve the progressive construction. This way, it is possible that ATTACH today is more attracted to the progressesive than in the 1990s. KISS stands out as a bit of a mystery, since kissing may be both punctual and durative. I will return to this verb later on.

Again there are parallels between the patterns of my results and those of Stefanowitsch and Gries (2003: 230-1) in that most of their repelled verbs are also stative ones. Moreover my top fifty of repelled verbs share many items with their top thirty.

11.3. Coercion and collostruction

Given that the prototype of the progressive construction specifies durativity and continuity as its primary actional qualities, we may predict, on the basis of the semantic compatibility principle, that items that have other actional features in their semiotic ICMs will not be at the top of the list of attracted items. Since they require coercion, which involves among other things type shifting construal operations and often less automated mental simulation to unify semantically incompatible units, they will not appear among the most attracted items, in accordance with the attraction-compatibility correlation. We have already seen this in relation to the repelled items, most of which were stative verbs. When appearing in the progressive, stative verbs are coerced from being permanently stative into being temporarily stative.

11.3.1. Iteration of punctuals

Table 11.3 below displays a list of verbs that appear in the progressive, all of which are coerced into taking on an iterative construal, following the pattern of the coercive construction illustrated in figure 9.1. They are listed in terms of their overall rank among all the items that appear in the progressive in the corpus:

Table 11.3: Punctual lexical items in the progressive (log-likelihood)

rank	word (or construction)	collotruction strength	relation	rank	word (or construction)	collostruction strength	relation
249	*hit*	4.837706e+01	attraction	981	*pluck*	6.547286e+00	attraction
284	*jump*	4.192489e+01	attraction	1011	*ricochet*	6.026425e+00	attraction
297	*kick*	3.836870e+01	attraction	1063	*leap*	*5.409769e+00*	attraction
307	*sob*	3.610289e+01	attraction	1066	*bay*	5.367952e+00	attraction
308	*thud*	3.584944e+01	attraction	1094	*clang*	5.157365e+00	attraction
327	*thump*	3.232059e+01	attraction	1114	*slap*	5.024452e+00	attraction
352	*flash*	2.852182e+01	attraction	1160	*bleep*	4.638425e+00	attraction
371	*nod*	2.622761e+01	attraction	1263	*chop*	3.902390e+00	attraction
393	*twitch*	2.457389e+01	attraction	1272	*jab*	3.852699e+00	attraction
418	*bump*	*2.219204e+01*	attraction	1326	*smack*	3.420332e+00	attraction
420	*tap*	2.206874e+01	attraction	1330	*jostle*	3.382459e+00	attraction
429	*hammer*	2.122858e+01	attraction	1333	*ram*	3.382459e+00	attraction
440	*shovel*	2.035995e+01	attraction	1339	*twinkle*	3.345403e+00	attraction
463	*flap*	1.910230e+01	attraction	1382	*step*	3.020192e+00	attrction
496	*dab*	1.720622e+01	attraction	1537	*click*	2.002295e+00	attraction
569	*gasp*	1.410313e+01	attraction	1555	*clap*	1.882307e+00	attraction
594	*hop*	1.348004e+01	attraction	1561	*stab*	1.798699e+00	attraction
629	*bob*	1.294825e+01	attraction	1626	*pat*	1.385750e+00	attraction
688	*bash*	1.147075e+01	attraction	1726	*pop*	7.118126e-01	attraction

716	*bark*	1.074228e+01	attraction	1769	*flicker*	9.232644e-01	attraction
782	*wave*	9.283873e+00	attraction	1839	*shoot*	1.137180e-01	attraction
835	*rap*	8.466945e+00	attraction	1866	*snap*	2.127348e-02	attraction
920	*knock*	7.384971e+00	attraction	1924	*kiss*	1.375482e-01	repulsion

It is only after some 250 verbs that we encounter punctual verbs of this kind on the list, which of course complies with the attraction-compatibility correlation. If we investigate the list in an experiential perspective, we will see that most of the punctual items that appear in the progressive construction refer to punctual processes that often are experienced as appearing in iterated sequences such as CLAP, FLAP, KNOCK, TWINKLE and HAMMER (HAMMER may even be a borderline case between punctuality and lexical iterativity). Moreover, many of these are, perhaps due to their actional specifics, subordinate level terms which could also be a factor in them not being among the most attracted verbs.

The most notable exception to this is probably KICK. This can be attributed to a possible flaw in the construction of the corpus. Part of the data in the corpus comes from a number of martial arts magazines in which kicking techniques are often described in minute details, and often the kick is being construed as if it was temporally extended enough for us to perceive all the details, which means that many of the instances of this item are actually construed as durative continual processes, rather than a brief punctual process. Corpus imbalances constitute one of those problems that are often encountered when doing corpus linguistics if one of the sources is over represented the some results of the investigation may be skewed.[74] Nevertheless, this particular case does actually show how flexible the human mind is in terms if construal. For the purpose of pedagogically describing the details of executing a martial arts kick, which are typically very abrupt and powerful, humans have the capacity of imagination to construe it as if it were possible to make a sequential scanning of it. These cases of punctual processes being sequentially scanned are generally rare, which is indicated by the fact that the martial artist's use of the progressive with kick is the only one of its kind in the corpus – the closest thing to it are runup coercions. While very useful for socio-communicative purposes, this ability does of course require some mental effort to construe.

74 In an unpublished study on the modal verbs MAY and MIGHT (Jensen MS), where I also used the BNC, I found that MAY with a deontic construal was over represented within the domain of fiction, because the BNC includes rule books, source books and scenario books for the *Warhammer* role playing game series, which are (mis)classified as fiction. Since these books serve to convey the rules of a game, and thus inform players of that game what they are permitted to do and what they are not permitted to do, one may naturally expect a considerable amount of deontic modality which is much larger than in the standard piece of fiction (if such exists). This is a similar case to that of KICK, and both cases serve to remind us that there are drawbacks to corpus linguistics, and that imbalances in a corpus may skew the statistic results considerably.

Notable is also the fact that the one repelled punctual verb is KISS. Considering that a kiss is more likely to be temporally extended into a durative event than any other item on the list, this is quite odd. One reason could be politeness. In western culture a temporally extended kiss is typically also a deeply intimate and passionate one, and it might be less appropriate to talk about such intimate acts. Using KISS with the progressive allows for sequential scanning construals of the process. If this is indeed the case (kissing does belong to the semantic area of romantic and secual activity (Manning 1997) which is taboo in many Western cultures), then it constitutes another example of more socio-cultural factors directly influencing grammar and language use and would be a point for the integrated grammar view.

11.3.2. Irreversible punctuals coerced into runups

Table 11.4 below is a list of those items that express irreversible telicity and punctuality and are coerced into runups in the progressive construction:

Table 11.4: Irreversible punctual lexical items in the progressive (log-likelihood)

rank	word (or construction)	collostruction strength	relation	rank	word (or construction)	collostruction strength	rank
80	*die*	2.423411e+02	attraction	1029	*adopt*	5.864516e+00	attraction
135	*lose*	1.146605e+02	attraction	1359	*acknowledge*	3.167432e+00	attraction
229	*accept*	5.288781e+01	attraction	1640	*murder*	1.319218e+00	attraction
289	*kill*	4.015501e+01	attraction	1663	*divorce*	1.172806e+00	attraction
840	*decide*	8.143812e+00	attraction	1680	*win*	1.045067e+00	attraction
855	*marry*	8.060149e+00	attraction	1765	*vanish*	4.584546e-01	attraction

Apart from DIE and LOSE, we do not encounter any such instances among the first 200 verbs. DIE is interesting in that its high rank, compared to the other verbs, suggests that even though death is in itself a quite punctual one, we tend to construe it as a gradual process. That is, it is possible that we include all the events that lead up to death as part of the process of dying. This also applies to MURDER. Even though one is only murdered if one dies, the events leading up to death are also typically construed as part of the process of murdering someone. Another reason for DIE being ranked quite highly, could be that it appears as a substantive element in the idiom [BE *dying to* V_{inf}], which describes a being in the state of longing. In this perspective, the high ranking of DIE suggests that [BE *dying to* V_{inf}] is a semi-autonomous unit and entrenched as an idiom of its own. This is a factor in its position among the hundred most attracted items.

VANISH, which typically refers to a more or less abrupt disappearance is coerced into a slover disappearance where the events leading up to the disappearance itself considered part of the

process.

LOSE and WIN are coerced into runups mostly in the context of contests. The winning or losing itself happens only when the contest is finished, but if one of the contestants is in the lead this may be construed as part of the process of winning.

More abstract are MARRY, DIVORCE and ADOPT, which are construed such that they involve all the legal and personal events leading up to the event itself.

ACCEPT, DECIDE, and ACKOWLEDGE all refer to a change of mental state. The change itself is abrupt and irreversible, but preceding it is typically a large amount of thinking and consideration, which is construed as part of the change.

11.3.3. Punctuals coerced into states of being full to capacity

Before looking at the list of stative verbs in table 11.5 below, let us briefly look at the two instances of punctual verbs that are coerced into being states when appearing in the progressive. They are interesting in that the semantics of the progressive is primarily dynamic. They are dynamic in the sense that the force dynamics of the CONTAINED content actively exerts pressure on the BOUNDARY that separates the INTERIOR from the EXTERIOR. This implies that the BOUNDARY is constantly on the verge of breaking down.

Table 11.5: Punctuals coerced into states of being full to capacity (log-likelihood)

rank	word (or construction)	collostruction strength	relation
223	*burst*	5.510015e+01	attraction
730	*brim*	2.8099895	attraction

This phenomenon is more or less the opposite of runup coercions. Here what is normally an abrupt irreversible process is frozen, so to speak, at the moment just before the event occurs, and reconstrued as a state. The state however is a dynamic one. Not surprisingly these are not among the hundred most attracted verbs, yet they are both attracted to the construction. The reason is probably that the BURST and BRIM have been used so often with the progressive to express being full to capacity throughout the history of Modern English that the progressive is fairly strongly entrenched as one of the contexts that they typically appear in.

11.3.4. States coerced into temporary states

Stative verbs appearing in the progressive construction are coerced into a temporary and dynamic state construal. Thus when Meyerstein (1975: 42) argues that 'We HAVE troubles nowadays' and

'We ARE HAVING troubles nowadays' are instances of free variation, and thus synonymic, he is wrong. This is supported by the distribution of stative verbs in the progressive in the corpus:

Table 11.6: Stative lexical items in the progressive (log-likelihood)

rank	word (or construction)	collostruction strength	relation	rank	word (or construction)	collostruction strength	relation
30	*hope*	8.199433e+02	attraction	1417	*opt*	2.810872e+00	attraction
39	*feel*	6.063665e+02	attraction	1436	*disagree*	2.704248e+00	attraction
41	*miss*	5.610750e+02	attraction	1816	*endorse*	2.002980e-01	attraction
73	*face*	2.659257e+02	attraction	1830	*agree*	2.836373e-02	attraction
102	*lack*	1.721794e+02	attraction	1871	*doubt*	1.151191e-02	attraction
109	*await*	1.618018e+02	attraction	1881	*be*	1.267239e+03	repulsion
188	*itch*	7.335984e+01	attraction	1882	*seem*	2.818758e+01	repulsion
199	*intend*	6.741123e+01	attraction	1883	*mean*	1.814171e+01	repulsion
211	*long*	6.208748e+01	attraction	1885	*believe*	9.970246e+00	repulsion
221	*regret*	5.584008e+01	attraction	1887	*need*	7.445672e+00	repulsion
241	*ache*	4.968226e+01	attraction	1890	*want*	4.350545e+00	repulsion
245	*anticipate*	4.878711e+01	attraction	1891	*interest*	4.231397e+00	repulsion
261	*dread*	4.629511e+01	attraction	1892	*love*	3.350862e+00	repulsion
442	*tend*	2.032644e+01	attraction	1893	*have*	3.215645e+00	repulsion
592	*pend*	1.349283e+01	attraction	1894	*concern*	3.126400e+00	repulsion
659	*smart*	1.205292e+01	attraction	1896	*exist*	2.833380e+00	repulsion
693	*bulge*	1.141325e+01	attraction	1898	*suppose*	2.584718e+00	repulsion
804	*jut*	9.057091e+00	attraction	1904	*depend*	1.037971e+00	repulsion
1282	*disbelieve*	3.757299e+00	attraction	1922	*hate*	1.535311e-01	repulsion
1340	copula *appear*	3.330633e+00	attraction	1926	*wish*	1.290698e-01	repulsion
1410	*favour*	2.852894e+00	attraction	1945	*fear*	9.348656e-03	repulsion

Most of the stative verbs that appear with the progressive construction express behavioral, mental or other types of state that prototypically are more dynamic. Therefore, it should be no great surprise that the most repelled state verbs are BE, HAVE and MEAN, which are prototypically non-behavioral. Had there been any truth to the notion of free variation, all of the verbs should display the same level of attraction.

Note that the more stative and less dynamic the state, the more repelled it is. Most of the non-attracted items express MENTAL STATE, STATE OF PAIN, and STATE OF ANTICIPATION, while those that express various types of non-behavioral states, are highly repelled.

11.3.5. Habits

A few habitual verbs appear in the progressive construction. By habitual state is understood a lexical verb prototypically referring to a process that is construed as a habit, in the sense explained

in section 6.3, such as occupations, logding and similar long term processes:

Table 11.7: Habitual lexical items in the progressive (log-likelihood)

rank	word (or construction)	collostruction strength	relation
37	*live*	6.423138e+02	attraction
952	*freelance*	6.786585e+00	attraction
1121	*cohabit*	4.967942e+00	attraction
1661	*reside*	1.197300e+00	attraction
1732	*lodge*	6.641974e-01	attraction

Apart from FREELANCE which describes an occupation, the items on the list are all verbs of lodging. The lodging verb, LIVE, is best described as a habitual verb or maybe even a stative verb, and thus its actionality is not as such compatible with the semantics of the progressive construction. Nevertheless, an item-based subconstruction exists that evolves around verbs of lodging. One of the senses of LIVE is LODGE, and as we saw LIVE is the most frequent main verb to appear in the verbs of lodging extension of the progressive construction. Interestingly, LIVE is more likely to express permanent lodging than temporary lodging, and thus it should perhaps be less attracted than it is. It may be because [BE *living*] is a verb-based subconstruction of its own. The majority of occurrences of LIVE with the progressive involve the lodge construal. Since lodging is often temporary, it actually makes sense that LIVE is among the most attracted items to the progressive construction.

12. Overview of the progresive predicator construction

We are now able to set up a constructional network for the English progressive predicator construction based on the data from the corpus. It is likely that there are uses of the progressive that are not documented in the BNC – those are not included in the network. The purpose of setting up a constructional network is to map the specifications of inheritance among the constructions. Of course, this is not to be taken as a generalizing conclusion about the English language as such, but rather an indicator of usage-patterns and what they may suggest about the grammatical, or constructional, and cognitive interplay relating to the progressive construction.

There are at least four different basic principles for constructional network, which correspond to the four models of inheritance: complete inheritance, default inheritance, usage-based inheritance, and full-entry inheritance. The underlying principle of this network is, according to the theoretical and methodological framework of this study, the usage-based inheritance principle.

Within the framework of the usage-based inheritance principles, it is possible to operate

either with clusters of similar constructions or with subconstructions that are subsumed under subsets based on inheritance from possible abstract schemas within the constructional network. The cluster-oriented model, although appealing, as it does away with abstract schemas with no instances (something which may be theoretically problematic), would need more theoretical research and development to establish its scientific and descriptive usefulness. Moreover, an implication of cluster-oriented models is that they are also more oriented towards full-entry models of inheritance – something which many linguists would find problematic, especially those embracing the Occam's Razor principle. As of now, cluster-oriented models beg several questions some of which are how to justify clusters over subsets, and whether there is any realism to clusters at all. Inheritance-oriented models have the advantage over cluster-oriented ones, apart from being well-established in the scientific community, that there is a certain logic and order to the notion of inheritance that may be missing from cluster models. Inheritance is of course also more economic in that it allows the most general features to be stored in the superordinate constructions whether they are abstract or not. Therefore, we will settle on the inheritance-based principle in setting up the network of the progressive construction as it appears in the corpus that the present study is based on.

The primary extensions are listed in table 12.1 along with their frequencies:

Table. 12.1: Overview of subconstructions of the progressive

subconstruction	frequency
ongoing process	85,8% (n=25,538)
local ongoing process	
extended ongoing process	
probable future process	6,1% (n=1,802)
directive future process	
temporary state	5% (n=1,495)
mental state	
non-behavioral state	
state of anticipation	
state of pain	
state of being full to capacity	
state of absence	
state of appearance	
behavioral state	
interpretative behavioral state	
modal state	
habit	2,1% (n=624)
lodging	
occupation	

medication	
life state	
doubt marker	0,3% (n=86)
annulled process	0,4% (n=119)
wish	0,3% (n=75)

The frequency specifications, in accordance with the fact that most frequent instances of subtypes are typically also the most variable and thus prototypical ones, suggest that the most prototypical subconstructions are the ongoing process subconstructions. These are thus to be placed closer to the center than the other subconstructions, which also makes sense in relation to the meaning-frequency correlation (which states that the more general meanings are typically the most frequent and prototypical ones, while the more specialized ones are less frequent and prototypical).

Frequency counts and other more refined statistical methods, like collostruction analysis, are, if one accepts the meaning-frequency correlation and the semantic compatibility principle, a useful way of getting a suggestion as to how the prototype structure of a constructional network might be organized. Another useful albeit somewhat speculative method of getting some idea of the radial structure of a constructional network is to check the subtypes of the construction against a list of prototype features in a Taylorian (1995) fashion such that the more features apply to a subtype, the more prototypical it is. This is, as mentioned, normally a somewhat speculative affair, which may, if not involving experimental data, be based on a considerable degree of introspection. This study does not involve experimental data, but it does involve empirical data nonetheless, since it is based on corpus observations.

It is possible through corpus observation to set up a list of prototype features – nemely the features observed to be typical of the most frequently occurring subtype. Note, however, that this also presupposes acceptance of the maning-frequency correlation. Since this is essentially a checklist operation, the weaknesses of feature lists pointed out by Croft and Cruse (2004: 87), may also be symptomatic of this approach. Based on the corpus investigation, a number of formal and semantic features may be set up describing the progressive construction. The [OP:*BE* Mv_{pcp1}]-format is a formal feature in itself, and it may well, in a semiological, be the defining feature that determines membership of the progressive construction since all its members have this form. However, on a strictly semiological definition, the future-marking *going*-construction would also be a member of the construction as would any string of words where a form of BE is followed by a present participle. While there can be no doubt that the *going*-construction is historically and formally related to the progressive construction, its present-day function and usage-patterns as we

as its gestalt form is not just [OP:*BE* MV:*going*] but rather [OP:*BE going to* MV_{inf}], suggest that the *going*-construction is now an autonomous construction. A purely semasiologically based list of features that does not take into account gestalthood would not suffice. Likewise, a purely onomasiologically based one would not be feasuble either. In a CxG framework in which form and meaning are integrated parts of the individual construction, one will have to operate with elements from both aspects of the construction. But that in itself is not enough and two separate lists of features will not be enough. The reason is that constructions are symbolic entities in which form and function often fuse into one feature. We have seen this in relation to class specification of verbs in, for example, verb-class-based subconstructions, as well as in the prototypical constructions. The feature list will have to be both functional and formal at the same time; it has to be onomasiologically based and semasiologically based simultaneously. The feature list will have to be symbolically based. Below is a list of prototpe features of the progressive construction based on the observations in the present corpus invastigation:

a) the progressive construction has the formal schema of [OP:*BE* Mv_{pcp1}];
b) the progressive construction is an idiomatically combining construction such that;
    b1) OP:*BE* specifies the pofiling pattern in the temporal frame;
    b2) MV_{pcp1} expresses the propositional state-of-affairs and its force dynamics (in corporation with the argument structure construction;
c) the operator is morpho-paradigmatically schematic in terms of tense forms;
d) the main verb is, with some semantic restrictions, lexically schematic;
e) the lexical unit taking up the main verb function is a process verb;
f) the lexical unit taking up the main verb function is also a durative verb;
g) the progressive construction construes an unbounded process;
    g1) more specifically, the progressive construction profiles the middle phase(s) and gaps the inceptive and terminative phrases against the aspectual frame;
h) the process is sequentially scanned;
i) the process is a specific one;
j) modally, the progressive is either a presupposition or a realis assertion, expressing high probability;
k) the progressive construction is interpersonally a information-exchanging one.

These are more or less the main features of the most frequent subconstruction of the progressive construction. Of course, it is possible, even likely, that there are more features unaccounted for in this study. It is also possible to give the feature list more delicacy by exploding the features into smalle more detailed ones. Conversely, it is also possible to conflate some of the features to create a simpler list.

In any case, we are now able to check the proposed subconstructions agains the list of possible features:

Table 12.2: Feature checklist

subconstructions	a)	b)	b1)	b2)	c)	d)	e)	f)	g)	g1)	h)	i)	j)	k)
ongoing process	√	√	√	√	√	√	√	√	√	√	√	√	√	√
local ongoing process	√	√	√	√	√	√	√	√	√	√	√	√	√	√
extended ongoing process	√	√	√	√	√	√	√	√	√	√	√	√	√	√
probable future process	√	-	-	√	-	√	√	√	√	-	-	√	√	√
directive future process	√	-	-	√	-	√	√	√	√	-	-	√	√	-
temporary state	√	√	√	√	√	-	-	-	-	-	-	√	√	√
mental state	√	√	√	√	√	-	-	-	-	-	-	√	√	√
non-behavioral state	√	√	√	√	√	-	-	-	-	-	-	√	√	√
state of anticipation	√	√	√	√	√	-	-	-	-	-	-	√	√	√
state of pain	√	√	√	√	√	-	-	-	-	-	-	√	√	√
state of being full to capacity	√	√	√	√	√	-	-	-	-	-	-	√	√	√
state of absence	√	√	√	√	√	-	-	-	-	-	-	√	√	√
state of appearance	√	√	√	√	√	-	-	-	-	-	-	√	√	√
behavioral state	√	√	√	√	√	-	-	-	-	-	-	√	√	√
interpretative behavioral state	√	√	√	√	√	-	-	-	-	-	-	√	√	√
modal state	√	√	√	√	√	-	-	-	-	-	-	√	√	-
habit	√	√	√	√	√	-	-	√	√	-	-	-	√	√
lodging	√	√	√	√	√	-	-	√	√	-	-	-	√	√
occupation	√	√	√	√	√	-	-	√	√	-	-	-	√	√
medication	√	√	√	√	√	-	-	√	√	-	-	-	√	√
life state	√	√	√	√	√	-	-	√	√	-	-	-	√	-
doubt marker	√	-	-	√	-	-	√	√	√	√	√	√	-	-
annulled process	√	-	-	√	-	√	√	√	√	-	√	√	-	-
wish	√	-	-	√	-	-	√	√	√	-	√	√	-	-

This more or less correlates with the frequencies in that the ongoing process subconstructions share all features, whereas the rest only share seven to nine features. This approach is asmittedly limited in its usefulness for several reasons. It is more difficult to argue for a correlation of feature-sharing and frequency among the non-prototypical examples. The reason is that feature-sharing and frequency do not necessarily have to correlate when it comes to more specific subconstructions, because they often have specific communicative functions that override the features of the prototype. Secondly, while it does aid in getting insights as to which uses are prototypical, it does not offer much to say about the details of the non-prototypes and how they interrelate. This could be accounted for, though, with a similar checklist of overlapping family resemblance features. Thirdly, many of the cases where features are not share, one could argue that they are actually

shared to a smaller degree. In many cases, such as modality, the modality of the subtype and the prototype is actually related in that it often involves an extension from the epistemic domain into the deontic one. Another example is the temporary state subtype. While it is not an imperfective one, it could be argued that the notion of temporality is conceptually derived from imperfectivity. The feature checklist method is, however, useful as a kind of superficial guideline.

Based on the corpus-investigation and the above discussions, we can now set up a proposal for the radial structure of the progressive construction:

Figure 12.1: Possible taxonomy of the progressive construction

Figure 2.1 provides sketchy overview of how the progressive predicator network may be organized in accordance with the usage-patterns observed in the portion of the BNC that this study takes as its basis. [OP:*BE wearing*] and the possible conversational extensions of the annulled process and wish marking subconstructions are included as "(garment)", "(annulled topic)", and "(request)" respectively. The pointed arrow leading from 'quasi mdoal' down to 'modal state' is intended to indicate the multiple parenting of the modal state use of the progressive construction.

The taxonomy is radially structured with the less prototypical, and less frequent cases far from the center, and the more prototypical ones close to it. What has been described as the ongoing subconstruction is placed almost right in the center. This is because I think that it is in fact the protype of the progressive construction, providing all the typical features, elements, and comonents to be inherited and elaborated on by further subconstructions, or at least it is so similar that there is a considerable overlap between the ongoing process subconstruction and he prototypical core. The extended and local ongoing subconstructions are placed close to the center to indicate that they are the uses that are the most frequent and share most features with the center of the taxonomy. Also each extension, such as the temporal state extension and the habit extention, form radial taxonomies in their own right with instances or further extensions, ot both, as in the case of the probable future construction which coveres many instances, but also a further subconstruction in the directive future process subconstruction.

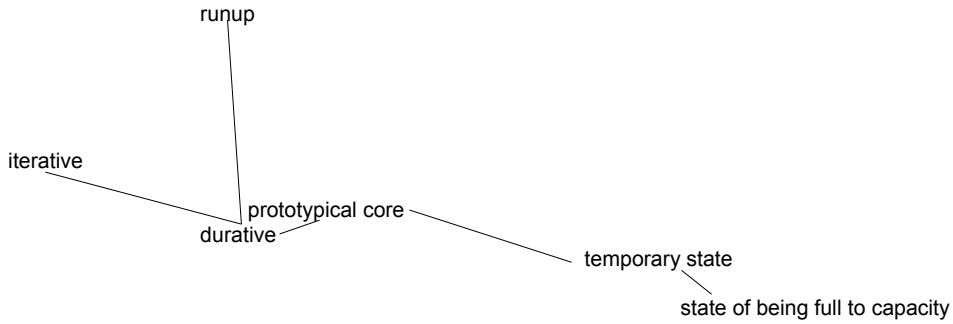
In addition to the primary subconstructions, we encountered a number of actional subconstructions many of which cut across the primary constructions, which are listed here along with their frequencies, the percentages being rounded up to the neares decimals:

Table 12.3: Overview of actional subconstructions of the progressive

actional subconstruction	frequency
durative (incl. lexical iterativity)	94,4% (n=27,898)
iterative (from punctual)	0,5% (n=137)
runup (from punctual)	0,7% (n=209)
temporary state (from punctual)	0,1% (n=16)
state (from temporary state)	4,9% (n=1,479)

With the exception of the durative subconstruction, all the actional subconstrutions involve coercion. This fact, along with the frequencies and the insights from the collostructional analysis suggest that the durative subconstruction is not a subconstruction as such, but rather that durativity is a component of the prototypical progressive construction, while the remainder are specific coercive actional subconstructions of the progressive construction:

Figure 12.2: Possible taxonomy of the actional constructions



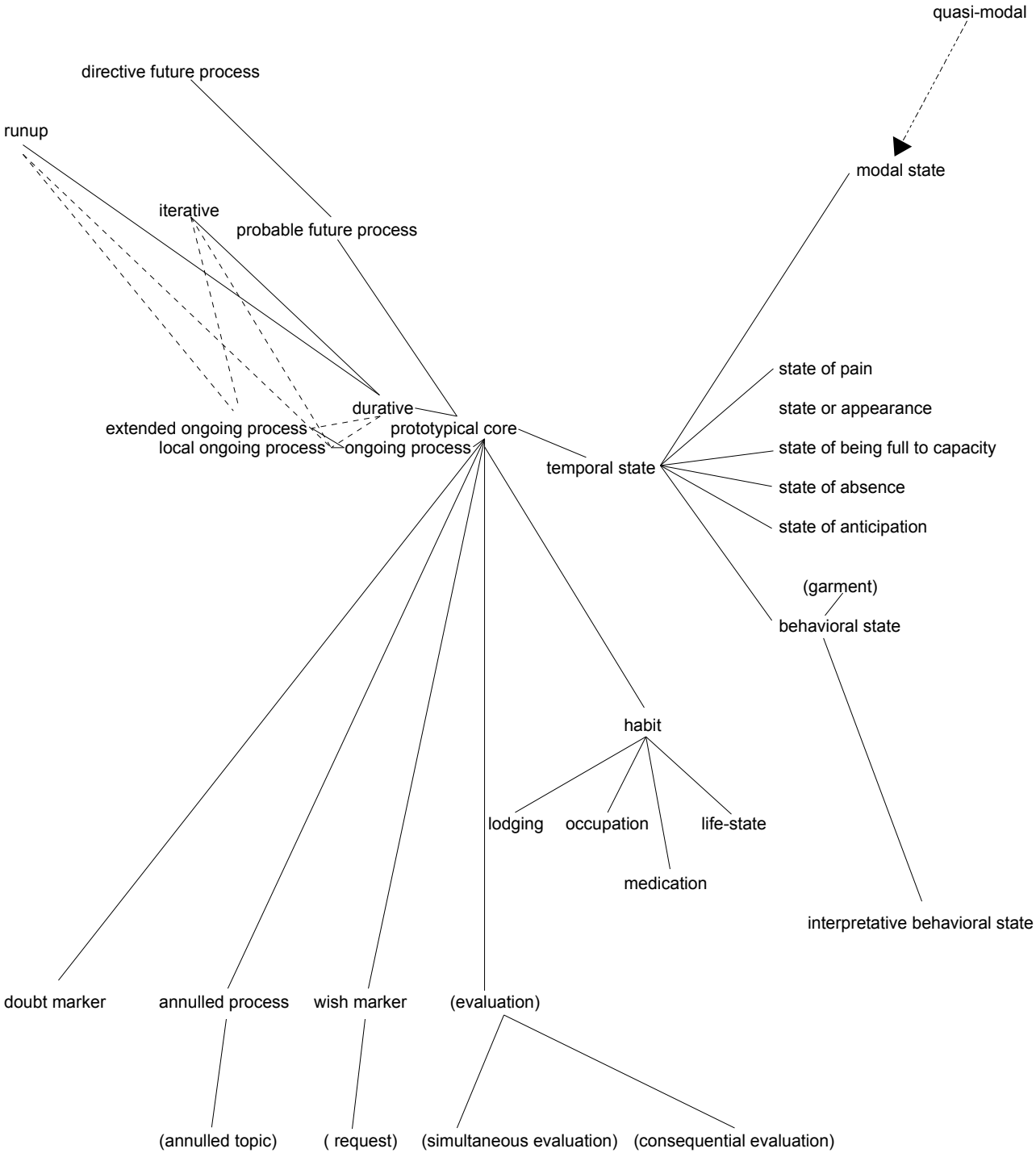
Again, the most frequent types are considered the most prototypical ones, which is why the durative actional type overlaps with the center, whereas all the other actional types involve coercion and are less frequent and thus placed far from the center.

Finally, there are the secondary uses of the progressive construction. While these are not unique to the progressive construction and thus not as such subconstructions in their own right, they are nevertheless possible uses of the progressive, one might therefore argue, that they are part of the knowledge of the progressive predicator construction. They are listed here:

- Simultaneous processes:
  - Simultaneous evaluation of event;
- Causally related processes:
  - Conditional;
  - Consequential;
  - Consequential evaluation of event;
- Unifying of distributed process:
  - Distributed process;
  - Distributed state-of-affairs;
- Generic;
- Habitually repeated process.

As suggested by Leech (2005), albeit in a non-constructional perspective, it is possible that the evaluative use of the simultaneous cross-event relating construction is becoming (or perhaps has already become, since the BNC is a corpus of British English from the 1990s) a subconstruction proper of the progressive construction: The same may apply to the other evaluative uses. We are now able to present the total network of the progressive construction as it appears in the BNC:

Figure 12.3: Possible taxonomy of the progressive consruction



The process-based actional patterns are listed as separate subconstructions, while the stative ones are conflated with the temporary state and state of being full to capacity subconstructions. A criticism of the above figure may be that, while the iterative and runup extensions qualify as subconstructional patterns, since they involve rather consistent coercion patterns, the durative one

does not qualify, but should rather be considered a feature of the prototype (the same could be said of the ongoing process subconstruction), and such criticism of the above figure would certainly be valid. The puncutated lines connecting the actional subconstructions with the ongoing ones are intended to show that these may be combined, such that instances of the ongoing constructions may contain any of the three types of actionality and the coercion patterns the iterative and runup action types involve. With Leech (2005) in mind, I have included the evaluative uses as possible extensions of the progressive subconstruction. The grey lines that have been introduced are intended to indicate which subconstructions are likely to be pragmatic extensions serving discursive functions and/or having pragmatic points.

As mentioned the taxonomy is sketchy. While capturing what could be the overall structure of the constructional network of the progressive construction with subconstructions and prototypes within these as well as pragmatic extensions, it does not capture the dynamicity of construal in relation to pragmatic prototypes, such that in certain contexts the structure of the network is restructured such that certain uses are prototypical in those contexts. This is only partially captured by the inclusion of pragmatic extensions. For instance, while capturing that the ongoing process uses are the most prototypical ones generally, the figure does not show that in specific contexts, such as, say, expressing one's doubt towards the content of one's utterance or towards the topic of conversation, the most likely and most prototypical use of the progressive construction is the doubt marking one. One could say that diagrams of this type capture the principles of informational density and stability, but not necessarily the principle of flexible adaptability. Moreover such diagrams are

The network is primarily based on the usage-based principles of the integrated grammar approach to CxG and CL presented here. It suggests that various contextual factors, such as patterns of use, may have an influence on the structure of grammar, and that many of these may be related quite closely to general human cognition.

13. The progressive construction and related predicator constructions

The progressive construction is not the only construction, let alone predicator construction, that construes imperfectivity and unboundedness of events in English. English has a considerable inventory of constructions that overlap in this particular domain. Part of understanding what a construction is, in an integrated construction grammar framework, is also understanding what it is not. This, of course, presupposes some extent of paradigmaticity and choice relations within the

grammar. While not advocating paradigms in the strict sense associated with, say, SFL, the fact that there seem to be several semantically overlapping constructions construing the same experience differently, indicates that language users do have various ways of expressing the same thing, depending on how they construe it or wish the hearer to construe it. This makes the notion of choice relevant to construction grammar.

In this chapter we will discuss a number of other imperfective predicator constructions and other types of constructions conceptualizing unbounded processes and compare them with the progressive.

13.1. Other imperfective predicator constructions

Among those predicators that are semantically and formally closely related to the progressive are those of the configurations [OP:*KEEP* MV_{pcp1}], [OP:*KEEP on* MV_{pcp1}], [OP:*GO on* MV_{pcp1}], [OP:*CONTINUE to* MV_{inf}], [OP:*CONTINUE* MV_{pcp1}] and [OP:*CARRY on* MV_{pcp1}].[75] At first sight all of these appear to have the same function as the progressive construction:

(13.1) a. She crossed the road, and *continued walking* a little steadily.
b. He *continued working* on his translation in Scotland until 1837.

(13.2) a. Cashman *continued to gaze* at the phone.
b. If your spouse *continues to live* in the house, its value is not included.

(13.3) a. Rachael did not argue, and they *went on unpacking* the crate until a quarter past six.
b. Levels of toxic waste imports will *go on increasing.*

(13.4) a. The same refrain *kept going round* in his head like an infuriating jingle.
b. The Government *keep changing* the rules of the game, which creates enormous problems.

(13.5) a. He nodded and *kept on nodding* as if he had a tic.
b. For people did not *keep on wearing* the same garments, not for eleven, twelve years.

A comparison of these to the prototypical progressive, reveals numerous overlaps in form, content and use but also some differences between the progressive on the one hand and these constructions on the other. Compare, for instance, these predicator "alternations" in the same immediate context:

(13.6) a. They *were running.*
b. They *kept running.*
c. They *kept on running.*
d. They *continued running.*

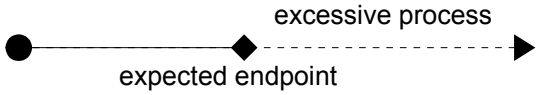
75 I made a corpus-based mini-investigation of each of those constructions which the descriptions are based on.

d. They *continued to run.*
f. They *went on running.*
g. They *carried on running.*

The first indicator that the constructions overlap is the fact that they may all appear in the same syntactic context which suggests that they share external properties. Apart from the overlaps in external properties, the constructions share some obvious internal properties – namely, the predicating main verb slot and the finite operator specifying tense, meaning that semantically they are all temporal. As is typical of predicators, the main verb slots are lexically schematic and morphologically substantive while the operators are morphologically schematic and lexically substantive. Semantically, they all share a pivotal semantic point – namely, unboundedness of a process and imperfectivity, as they all evoke the aspectual frame and subject it to the same profiling and gapping pattern.

There is, however, an important difference between these constructions and the progressive. While the progressive construes an ongoing process as unbounded, it implies that there is an endpoint in the gapped region of the aspectual frame. That is, the process is expected to terminate once this point is reached. Since it is gapped, it is construed as not having been reached yet. In the other constructions, the process continues beyond the expected endpoint and thus construes an ONGOING EVENT IN EXCESS.

Figure 13.1: Excessive unboundedness



This contrast is seen when comparing (13.6a) and (13.6b-g). In (13.6a) it is implied that they have not yet reached an expected endpoint for their running, where as in (13.6b-g), we get the impression that the running has reached and gone beyond that point. Running is an atelic process with no natural endpoint, but rather an imposed point of termination. If the main verb is a telic one, the behavior is similar, as illustrated in these examples :

(13.7) a. I *was painting* the back of the house.
b. I *kept painting* the back of the house.
c. I *kept on painting* the back of the house.
d. I *continued painting* the back of the house.
e. I *continued to paint* the back of the house.
f. I *went on painting* the back of the house.
g. I *carried on painting* the back of the house.

While (13.7a) gives the impression that the process of painting the back of the house is an ongoing one that has not yet reached the point of completion – namely, when the entire back of the house has been covered with paint – (13.7b-g) give the impression that, even though the back of the house has been covered with paint, the process is still being carried out, continuing beyond the completion point. It is possible that another, perhaps more protoypical, construal is that the process has been interrupted, and has now being resumed from the point of interrption.

One can assume that there are semantic differences between these constructions in addition to the difference between the progressive and the other constructions in (13-7). Wierzbicka (1988: 82) suggests that the difference between [OP:KEEP MV_{pcp1}] and [OP:CONTINUE to MV_{inf}] is that the former implies arbitrary and unpredictable behavior while the latter implies continuation of the process. Moreover, Wierzbicka (1988: 77-82) suggests that *to*-infinitival constructions express forthcoming or predictable events. Smith and Escobedo (2001: 556) make a similar case about *to*-infinitives. They argue that the present processes that are distant in the future from the reference point of the process expressed by the main verb in the matrix clause. This is attributed to the prepositional origins of infinitive marking 'to'.

In that sense, the progressive and the excessive constructions differ in terms of prominence of the unboundedness of the process. The progressive construction construes events that are unbounded and the TERMINAL PHASE is gapped. The unboundedness is not significant or prominent as such since, given the incompletion, unboundedness is to be expected. With the excess constructions, unboundedness is significant due to the excessive nature of the process.[76]

13.2. Other constructions expressing unboundedness

English has a number of non-finite predicator constructions that overlap semantically with the progressive and the excess constructions, primarily present participial and infinitive constructions:

(13.8) a. *There's a woman driving* a tank.
b. Did you think it was *me getting* snappy?
c. They arrived in a rush, *panting* like horses and shedding their quasi-military

76 There are probably some more differences among the excessive constructions, but this is something that cannot be addressed in much detail here. My guess is that they differ in terms of the socio-discursive-pragmatic parameters such as degree of significance of unboundedness, politeness, illocutionary force and purpose, insistence etc. Conceptually and semantically speaking, it seems that the excessive constructions may be divided up into two subgroups. Unlike (13.7b-e), it is possible to construe (13.7f-g) alternatively to express continuation from a point. That is, it establishes a point from which the process continues. Thus the point may simply be a type of anchor vantage point having no influence on the process as such, it may be an intermission point where the process is briefly halted, or it may be the expected endpoint. Note that the two former construals are thus not excess construals *per se*, and it is possible that the excess construal of them is an extension of the continuation point.

costumes.
d. If I *see them collecting* I'll ask.
e. He began a hunger strike, which resulted in *his falling* into a coma.
f. Erm er so I am a European, I *like talking* about Europe, I've travelled extensively in Europe.
g. He *liked lying* late in bed, eating and drinking, gaming if it were.

While not evoking a temporal frame due to the absence of a finite operator, the examples in (13.8) construe unbounded processes. (13.8a-e) construe a specific event, while (13.8f-g) are more generic. They do not express an individual unbounded event that is temporally scanned, but rather refer to the entire class in its entirety that the event belongs to generically. This involves unboundedness in perhaps a slightly different way than the one involved in imperfectivity and temporal scanning. Generic unboundedness is a matter of summarily scanning of events and does not involves phasal aspectual structures. All examples in (13.8) appear less dynamic than the progressive and the excess constructions, which is partially attributable to the atemporality of operatorless predicator constructions. Moreover, (13.8a-e) appear more dynamic than (13.8f-g). These groups also seem to differ in terms of degree of unboundedness. In (13.8a-e), like the instances of the progressive, the unboundedness of the process consists in gapping the INCEPTIVE and TERMINAL PHASES. In (13.8f-g), it is defined by genericity in that, since we are not dealing with a specific intance of a type of process, there are no aspectual frame evoked. Even though (13.8f-g) are less dynamic, they are not completely static. It is possible that the constructions fall along a continuum of unboundedness.

There are more constructions in English that construe unboundedness of events, as the examples in (13.9) illustrate:

(13.9) a. He *hated to see* her with blood on her hands.
b. *I like to make* jokes, but some people have no sense of humour.
c. October that year he became *the first Englishman to fly* a hot-air balloon, with a short flight in Oxford.
d. A shy bird, much preferring *to run* than *to fly.*
e. *To go* into detail would carry us too far from the main pathway.
g. I wish the old man had *lived to see* me get the farm back.

As with the present participial constructions, these infinitival constructions do not evoke the temporal frame and present unbounded, ongoing process in which the inception and terminal phrases are either gapped or absent. While overlapping semantically with the present participial constructions in many ways, they appear to differ in terms of dynamicity. The infinitival constructions are generally much less dynamic than finite present participial constructions. Even

(13.9c), while specific, is less dynamic than a present participial construction or finite counterpart would be:

(13.10) a. October that year he became the first Englishman, who *flew* a hot-air balloon, with a short flight in Oxford.
b. October that year he became the first Englishman, who *was flying* a hot-air balloon, with a short flight in Oxford.
c. October that year he *became the first Englishman flying* a hot-air balloon, with a short flight in Oxford.

There also appear to be differences in dynamicity among the infinitival constructions and they may also fall along a continuum of unboundedness.

The differences in dynamicity are partly explained in terms of propositional acts, scanning and temporality. The notion of propositional acts has primarily been used to show that part-of-speech classes are not absolute fixed universal entities but rather a matter of semiotic prototypicality (Croft 1990). However, it is likely that other types of constructions, such as predicator constructions and those sentence structure constructions they occur in, involve propositional acts. Along with scanning and temporality, propositional acts appear to be a main factor in the difference between the progressive and other imperfective and unbounded constructions. It is also likely that there are further substantial differences along the lines of what is suggested by Wierzbicka (1988).

The progressive and excessive predicator constructions express actions which are temporal and sequentially scanned as indicated by the presence of an operator in the syntactic configuration that evokes the temporal frame and specify the profiling pattern. The main verb does the predication. Thus these predicator constructions fall at the dynamic end of the unboundedness continuum. By comparison, the infinitival and present participial constructions, not containing an operator, are atemporal and summarily scanned. As indicated by Croft's (2003b: 85) distinction between present participles and gerundives it is not such that all the present participial constructions fall under one prepositional act function. Rather they are distributed over modification and reference. Likewise, the infinitival constructions are also distributed over reference and modification. Both infinitival and present participial constructions, when modifying, appear to generally construe specific events while, when making reference, they seem to generally construe generic situations.

13.3. Continuum of boundedness

Taking into consideration the gradual nature of the propositional acts of the finite and non-finite predicator constructions, we can argue for a continuum of dynamicity and unboundedness ranging from generically unbounded to specifically bounded events. The progressive construction would be placed towards the pole of specific boundedness and high dynamicity, since it primarily serves the speech act function of predication of events, given that the ongoing event subconstruction is its prototypical use. Thus, while serving to construe unboundedness like the other predicator constructions we have looked at, the progressive differs in terms of its speech act function and the exact specifics of its construal. Both of these are ultimately results of the interaction of cognition and language use. This overview of the progressive in relation to other unbounding constructions shows again how contextual factors are actually essential parts of the grammar, and consequently illustrates the need for an integrated construction grammar framework in grammatical descriptions.

13.4. Choice relations in a construction grammar framework

The progressive construction is not the only predicator construction to express imperfectivity and unboundedness of processes. As we have seen, English has quite an inventory of constructions that express unbounded construals of processes. In addition, there are the other central predicator constructions such as the simple past and simpel present constructions, the perfect construction, the modal and future constructions, and the quasi-modals as well as the many predicator types often described as catenative verbal structures.

There is a functional overlap between all types of predicator constructions – namely that they typically predicate a process, or less prototypically make reference to a process, depending on whether the predicator is finite or non-finite. They are by no means synonymous. This is pointed out in virtually every reference grammar of English. For example, Bache and Davidsen-Nielsen (1997: 285-311) operate with sixteen central tense-aspect predicators, each of which presents the language user with a set of semantic instructions as to how the situation expressed by the predicator should be interpreted in terms of tense and aspect. Table 13.1 offers a simplified version of their list of predicators (listing only ten of them) applied to the verb HAPPEN (Bach and Davidsen-Nielsen 1997: 308-9):

Table 13.1: Semantic differences and overlaps of ten predicator types

	predicator type	example	semantic instructions
1	The present	*happens*	Tag a situation of 'happening' to the world-now
2	The past	*happened*	Tag a situation of 'happening' to the world-before-now

3	The present future	*will happen*	Tag on to the world-now and then look ahead at a situation of 'happening'
4	The past future	*would happen*	Tag on to the world-before-now and then look ahead at a situation of 'happening'
5	The present perfect	*has happened*	Tag on to the world-now and then look back at a situation of 'happening'
6	The past perfect	*had happened*	Tag on to the world-before-now and then look back at a situation og 'happening'
7	The present future perfect	*will have happened*	Tag on to the world-now and then look ahead to a future time and finally look ahead at a situation of 'happening'
8	The past future perfect	*would have happened*	Tag on to the world-before-now, then look ahead at a posterior time and finally look back at a situation of 'happening'
9	The present progressive	*is happening*	Tag on to the world-now and then look at a simultaneously progressing situation of 'happening'
10	The past progressive	*was happening*	Tag on to the world-before-now and then look here at a simultaneously progressing situation of 'happening'

While the details of the semantic instructions may be subject to discussion depending on the viewpoint one takes, Bache and Davidsen-Nielsen's (1997) treatment of the predicator constructions, which builds on some of the ideas presented in Harder (1996), does illustrate that there are overlaps in terms of the situation expressed but that each predicator type presents its own pattern of temporal and aspectual viewing; that is, each predicator is associated with its own construal of the situation that is being communicated. It also shows the compositionality of the more hybrid and complex predicator constructions, as each parent construction is associated with a specific semantic instruction.

In our discussion of the progressive and other constructions that conceptualize events as unbounded, we saw that, although less profound as with the predicator types discussed by Bache and Davidsen-Nielsen (1997), there were some minute, but not unimportant, differences in construal of dynamicity and propositional act functions, each type of construction offering its own take, or perspective(s), on the situation in question.

The fact that language offers sets of predicator constructions that overlap situationally, but there are perspectival differences that seem to indicate the relevance of the notion of *paradigmatics*, a paradigm here being understood as a set of linguistic items that the language user can choose from in accordance with the way the language user wants to express the message; or the way the language user wants to manipulate the hearer into understanding the message.

Paradigms are central in some theories, such as SFL (Halliday 1994), in which it is assumed that grammar is made up of paradigms, or systems, of choices and choice relations. In contrast, paradigms are shunned in CL and CxG, or ignored, or mentioned sporadically at best. In any case, the notion of paradigm is not taken to have any psychological realism. The problem with

paradigms in the perspective of CL is seems to be the system-internal definition of linguistic units and their contents. Each item in a paradigm is considered to be defined in contrast with the other items in the same paradigm such that X in {X, Y, Z} is only X in contrast with Y and Z. Using an argument made by Bickerton as an example, Taylor (1995: 83-4) delivers a harsh critique of paradigmatics:

> Bickerton (1981: 230f) claims that the meaning of *toothbrush* is delimited by the meanings of other items in the linguistic system, such as *nailbrush* and *hairbrush*. But is it really plausible that a person who does not know the words *nailbrush* and *hairbrush* would understand *toothbrush* differently from those people who know what nailbrushes and toothbrushes are? Surely, *toothbrush* derives its meaning from the role of toothbrushes in dental hygiene, and not from paradigmatic contrasts with other terms in the language system. The concept "toothbrush" has nothing whatever to do with the way people clean their nails or adjust their hair, or sweep their floors. (italics in original)

This example is of course a grossly bizarre one, and it is thus quite easy to criticize. Taylor's remarks nevertheless capture the scepticism of many cognitive linguists towards paradigmatics. In its extreme form, paradigm theory defines everything, including semantic conceptualization, internally to the language system, whereas in CL linguistic units are embedded in the cognitive context, making language primarily experientially based. Obviously, extreme paradigmatics and embodied realism are not compatible.

A similar argument could be made in relation to syntactic structures. In an extreme paradigmatic framework, the knowledge of one construction would be defined solely in relation to other constructions in the same paradigm; that is, a construction would only get its meaning in contrast with other constructions in the paradigm. In a usage-based perspective, however, the knowledge of a construction is experientally based on use of and exposure to the construction in discourse, just as the knowledge of the concept of TOOTHBRUSH is based on our experiences with toothbrushes and dental hygeine. So one could pose an argument similar to that of Taylor: does this mean that construction X is somehow different to someone who does not know constructions Y and Z? And does it mean that there is a difference in how the two language users, would use and understand construction X? The usage-based answer would be that the knowledge of construction X, of any construction, is experientially based in terms of usage of and exposure to construction X, and so the presence or absence of constructions Y and Z would make no difference in how construction X is represented in the language user's linguistic knowledge.

However, as our discussion of the various predicator types has shown, and as pointed out in Verhagen (2004), alternate overlapping constructions often offer different perspectives on, or construals of, the same experience. It seems that alternate overlapping constructions do provide the language user with a set of construals of the experience to be communicated that the language user

may choose from. With this in mind, I think that CxG could benefit from including the notion of choice and paradigmatics into its framework. Of course, an extremist paradigmatics would be incompatible with CxG, and there would also be a challenge in identifying and delimiting the choice options.

Bache (2002) makes a case for the inclusion of paradigmatics in the metalanguage of CL and other functionalist theories, pointing to the notions of perspectivization (or construal) and the fact that superordinate categories appear to display some paradigmatic behavior:

> ...in cognitive linguistics, it is difficult to see how one can seriously discuss the nature of perspectivization or the hierachization of terms, not to mention the different profiles of semantic domains, without taking a more explicitly paradigmatic approach to language and cognition. There are ... many good reasons to operate with paradigmatics in the general meta-language, and superordinate categories provide an attractive framework for doing just that. (Bache 2002: 103).

Predicators all express processes or events, but offer different temporal and aspectual perspectives as well as different construals of modality. This way, they share communicative traits in terms of propositional acts, since they typically function to express what Croft (1990) calls EVENTS, and they typically do that through predication and less typically through reference. This main function could be seen as a category feature.

This could be a communicative superordinate category that captures all types of grammatical construction serving that function. Each captured predicator construction would be a basic level category, and the various subconstructions of each construction would be subordinate categories. Thus, the progressive construction would be a basic level construction within the predicator superordinate category, and all the subuses of the progressive which we have discussed in this study would be more specialized subordinate constructions. The paradigmatic aspect, I think, applies to all levels of this hierachy. Within the superordinate predicator category, the language user may choose among the various basic level constructions, but the context may constrain the choice in such a way that it influences which subuse of the predicators is chosen, and the language user may of course also apply the progressive construction to a completely novel context, thus using it more creatively.

Paradigms are communicatively relevant. The speaker's motivation for choosing one option over another depends on how the speaker wants the listener to construe the communicated situation. The choice is often intertwined with context, and there is a mutually influential relationship between context and utterance. For instance, the underlying motivation for saying 'You're coming with me' as opposed to 'Come with me' or 'I want to come with me' has to do with the degree of directive modality, which in turn has to do with social relations of power. By using

the progressive to give a command, the speaker prompts the listener to construe a social relationship in which the speaker has a high degree of authority and power over the listener. This way the choice influences the context. However, utterances like 'You're coming with me' as an order, typically do occur in context of power relations where the speaker actually does have authority over the listener, and would be less likely to occur in situations where the power relations were the opposite. This way, context also influences the choice.

It makes sense to include paradigmatics to some extent into CL and CxG given that construction grammarians operate with alternate constructions, providing alternate construals of the same situation, which means that the notion of choice from paradigmatics would be a valuable theoretic aspect. Of course, as pointed out by Taylor (1995) in relation to lexemes, the idea that constructions are defined solely in contrast with each other is not feasible within a theoretical framework based on experientialism.[77] However, we can assume that while knowledge of construction X is not impossible without knowledge of constructions Y and Z, and language users who do not know Y and Z would understand X just as well as language users who know X, once Y and Z are introduced into the language user's knowledge as alternates to X, there must be some sort of contrast between them. The contrasts are probably not definitive for the individual construction, but an increased number of choices offers the speaker more possibilities of manipulating the listener, so to speak. The language user must, at some level, be aware of such contrasts and the different effects each construction may have on the hearer, and while not defining the individual constructions, it is logical to assume that the differences between alternate constructions play a part in the decision by the speaker of which construction to use. Such contrasts, I take it, are ultimately derived from communication and are based on language use and exposure to language, such that the language user learns the contrast between various alternate constructions by using them, and seeing how they influence hearers. Convention, of course, is an important part of the learning of constructions.

Paradigmatics actually imply a sense of procedural language processing in relation to both speaker and listener. In relation to the speaker, the choice of construction to convey the intended construal of the progressive must be a procedual operation of some kind. The listener, when deciding the utterance, performs the construal operations associated with the constructions and signs in the utterance in order to construe the semantic contents of the sign. It would not be wrong,

77 As it happens, one does come across constructionist material that uses paradigmatics in its more extreme version. For instance, Fried and Östman (2006: 1758) argue that the pragmatic particles of Solv are primarily defined in contrast with each other.

I think, to assume that the listener calls upon a vast range of mental procedures when decoding signs (so does the speaker, when encoding linguistic signs). Finally, there is also something interpersonally procedural to the notion of constructional paradigms in that we can assume that the speaker is aware that the listener actively decodes messages. Thus, the speaker must have intentions in terms of how the speaker should decode and construe the message, and tries, by chosing some constructions over others, to manipulate the listener into engaging in certain procedures, or construal operations, and not in others. We will discuss the procedural aspects of constructional meaning and the meaning of the progressive construction in the following chapter.

14. Dynamic aspects of constructional meaning

Throughout the discussion of the progressive construction I have made reference to various procedural aspects of the constructional meanings associated with the construction. I have also dealt with representational aspects such as the various cognitive models in the verbal domain matrix as well as entrenched and conventionalized uses. Finally, I have also touched upon some of the intersection points between precedure and representation in relation to various coercive operations that seem to be entrenched as part of specific actional subconstructions of the progressive.

As Geeraerts (1997) pointed out in his study of categories, categories need to be both stable and flexible at the same time for humans to be able to recognize recurrent experiences as well as to keep up with the constantly shifting environments of the exterior world. While Geeraerts presents flexible adaptability and structural stability as categorization principles, I think they apply generally as cognitive principles to all aspects of encyclopaedic knowledge and the establishment, maintenance and change of encyclopaedic knowledge. Since it is held in the present interpretation of CxG with its integrated grammar fundamentals that language is part of the general human cognitive apparatus, one cannot satisfactorily account for it without taking into account structural stability and flexible adaptability. This entails that the more procedural aspects of communication are considered, in that conventionalized and novel meanings are procedurally constructed. This has been indirectly argues throughout this study with reference to, for instance, the centrality of construal and construal operations.

The preceding discussion have pointed at linguistic meaning being experiential, subjective, conceptual, interpersonal, social, and communicative at the same time. This intertwines with the simultaneous stability and flexibilty of meaning, and the keyword here is "function". In order for

language or linguistic meaning to be all of these things – and it would be pointless to argue that it is not – it must also be functional. Harder (1996: 75-8) makes this point when he argues that conceptualization is not sufficient in the description of meaning. As Harder points out, this involves a causal relationship between an operator and an operand, and often the role a function has in some context. In relation to language and communication, part of the function of linguistic phenomena is to cause the interlocutors to construe its meaning by accessing various conceptual structures and activating various processes of meaning construction.

In following sections, I shall discuss in more detail the dynamic aspects of meaning construction in relation to CxG in general, also bringing the progressive into the picture. I will also discuss the relation between flexibility and stability. I will also discuss the relation between flexibility and stability and then move on to discussing construals, proteanism, procedural aspects of meaning, and the possibility of involving insight from instructional semantics.

14.1. Stability and dynamicity

Our study of the progressive construction has shown that stability and dynamicity are both relevant in the description of linguistic phenomena in that the stable representational aspects are often dynamically derived through construal operations, and that dynamic procedural aspects may actually become part of the representational knowledge through regency and entrenchment. We will discuss this interplay between stability and dynamicity here, but let us first look at the two concepts and their history within CL.

Since CL arose in the 80s, partially out of the ashes of generative semantics and other theories that had been defeated in the linguistic wars (Harris 1993), it has been subject of much praise for its framework which allows for the reunion of linguistics and philology and its encouraging of crossdisciplinary studies as well as its attempt to reinsert grammar into the context of the human experience. However, CL has also been subject to severe criticism and accusations of focusing only on the stable and timeless aspects of language and cognition, such as category structures and polysemy relations, at the expense of the more dynamic aspects of language use and meaning construction, thus presenting linguistic and cognitive structures as static. CL is accused of disregarding some of the social and pragmatic aspects of language and meaning construction, and also of tending to focus a bit too much on language in the individual rather than language in the speech community. Harder (e.g. 1996) has, rightly so, pointed this weakness on several occasions, as has Sinha (1999).

While this criticism doubtlessly applies, and is deserved to some extent, it should be mentioned that some of the fundamental principles of CL do in fact imply dynamicity in meaning construction. The most obvious of these is probably construal/conceptualization. Construal operations, I think, apply to the procedural aspect of meaning construction in that construal operations are, in a sense, mental processes or mental procedures involved in the interpretation of linguistic (and other types of) stimuli. I should say that this is rather obvious in the works of Langacker (1987), Talmy (2000a), and Croft and Woods (2000; Croft and Cruse 2004), all of which offer typologies of the procedures possibly involved in meaning construction. Croft and Cruse (2004: 40) argue for the ubiquity of construal operations in language use and language understanding:

> All aspects of the grammatical expression of a situation involve conceptualization in one way or another, including inflectional and derivational morphology and even the basic parts of speech. Whenever we utter a sentence, we unconsciously structure every aspect of the experience we intend to convey.

As mentioned before, it is generally assumed in CL that the construal operations involved in language are instances of more general mental operations of thought and perception. These operations of conceptualization are doubtlessly of a dynamic nature, and they suggest that representational meaning is dynamically derived. Thus, from a certain point of view, even representational meaning may be said to be procedural. By posing the principles of the interactive and semiological functions of language, CL proponents signal that they, at least, acknowledge that representational meaning and dynamic processes in language are prompted by interactive and communicative contexts, goals, and purposes.

While perhaps rendering a somewhat imprecise static view of language, which should be criticized, the criticism is, in my opinion, often unnecessarily and unfairly harsh. Firstly, early CL, no matter how much it neglected dynamic aspects of language, produced valuable insights into language and cognition and their intersection, which were much more psychologically plausible than many of the contemporary formal theories of language. Secondly, given the history of CL as a theoretical framework, a more dynamic view of language, cognition, and meaning construction could, in my opinion, be expected to be a natural development within the theory. Indeed, in reecnt years, the more dynamic aspects of language are slowly receiving more and more attention in tandem with the scope of CL growing more comprehensive.

For instance, Ungerer and Schmid (1996) point at the dynamicity of categorization, arguing that the prototype structure of a category may be dependent on contextual factors. Prototypical

exemplars of the same category may vary in accordance with the context, such that, in one context, member A is the most likely member of the category to be expressed by the label, while, in other contexts, member B is the one; recall, for instance, that in the context of police work, the most prototypical member of the category DOG expressed by the word 'dog' is probably ALSATIAN, while in the context of hunting it is probably RETRIEVER. Croft and Cruse (2004: 94-5) make a similar case, pointing to the word 'bird' in a phrase like 'We get lots of birds in our garden' including only smaller birds into the category BIRD, like magpies, blackbirds and sparrows, which are likely to appear in a backyard, while excluding eagles, penguins, ostriches and other more exotic birds (in the perspective of a European Westerner, of course). Following Smith and Samuelson (1997), the authors thus argue for not only the structure of a category, but also the boundaries of a category, being subject to construal and contextual influence. Croft and Cruse (2004: 96) also argue for the possibility of levels of categorization being subject to context-induced reconstrual:

> Given that level status is a function of content and relations between contents, it would not be surprising if variation in level construal were to be observed between speakers, and within the usage of a given speaker at different times and in different contexts.

One might find it questionable that contextual factors may cause the entire prototype category to be restructured. Another explanation may simply be that the contextual factors place emphasis on those members of a category that are most typically associated with the context. This does not weaken the argument about dynamicity and category structures, but simply applies the dynamicity princinple differently in that emphasis is placed on different members in different contexts; member selection would still be a matter of procedure.[78]

While begining to appear in studies of categorization, the principles of flexibility and stability have yet to be applied to and tested against constructional categorial networks. Ever since Lakoff's (1987: 462-585) case study of *there*-constructions, it has been assumed that constructional networks display radial structure, and that they are indeed radial categories. Logic dictates that consequently, constructional networks should also be structured in accordance with Geeraerts' (1997) principles of informational density, structural stability and flexible adaptability. The present study of the progressive suggests that the progressive construction does abide by the informational density principle in that it subsumes a considerable number of subuses, most of which are conceptually related in one way or another.

78 We may assume that there are some stable aspects of a category structure that are immune to category restructuring, or focus of selection. My guess is that really bad members of a category, such as penguins are to the BIRD category, are less likely to be referred to by the label of the category. A penguin will be referred to as a "penguin" even in Antarctica where penguins are indeed the most frequent type of bird.

One could, as has been hinted at earlier on in this study, argue for the progressive construction having a flexible category structure along the lines of what Ungerer and Schmid (1996) and Croft and Cruse (2004) suggest in terms of context-induced selection of prototypical uses. While the unbounded construal of ongoing processes is arguably the primary and prototypical use of the progressive construction in a generic perspective, we have seen that in some contexts other less central subuses may be more prototypical. When appearing in such contexts the prototype structure of the progressive constructional network is restructured such that the subconstructional sense that is the most relevant to the context becomes the most prototypical use of the progressive in that type of context, rendering the otherwise prototypical uses marginal.

The interrelation between stability and flexibility should also apply here. The contextual factors typically associated with the subconstruction in question are considered to be integrated parts of the subconstruction. This way, contextual factors are pragmatic points in the sense of Fillmore et al. (1988). Pragmatic points are described as inbuilt, which means that they are seen as part of the representational knowledge of a construction, but it is also these contextual factors that allow for the restructuring of the prototype structure of the progressive constructional network. Within the frameworks of CL, CxG, and grammaticalization studies, the entrenchment of contextual factors as parts of the subconstruction is the result of usage of the construction in a specific way in specific contexts. Category restructuring is doubtlessly a dynamic operation, but similar patterns of restructuring often recur in similar contexts at such a frequency that it becomes entrenched as parts of the subconstruction – namely as a pragmatic point. I shall return to this in section 14.3.

It was suggested in relation to several of the subconstructions of the progressive dealt with in this study that they involve pragmatic prototyping such that in specific context they are more likely and prototypical instances of the progressive than other otherwise prototypical uses are. .

In that sense, the progressive construction displays both structural stability and representational stability as well as context-friendly flexible adaptability in relation to the prototype aspects of its radial network structure. In terms of category boundaries, it is admittedly more difficult to argue for flexible adaptability of the progressive constructional network. Diachronic evidence, however, does suggest there there is some flexibility to boundary placement as well. Bybee (2006) reminds us that [OP:*BE going to* MV_{inf}] was originally a subuse of the progressive construction, but was increasingly used with the specialized function of indicating future tense and eventually became an autonomous construction of its own. We can assume that there must have

been a transition period where the construction must have sometimes been considered a member of the progressive construction and sometimes a construction on its own.

14.2. Dynamicity of construal

Construal is argued to be the primary element in meaning construction. Croft and Woods (2000; Croft and Cruse 2004), drawing on work by Talmy (2000a,b) and Langacker (1987, 1991) suggest that a range of dynamic mental processes referred to as construal operations. Many construal operations have been suggested, such as ones having to do with attention and salience, judgment and comparison, perspective and situatuedness, and constitution and unit formation (Croft and Woods 2000; Croft and Cruse 2004). Many of these construal operations are rooted in perception and other areas of human cognition. Croft and Cruse (2004: 69) argue that not just one, but several, construal operations are typically involved in the understanding of a linguistic expression:

> any sentence involves a myriad of construals of the experience to be communicated. Everything from the choice of words and their part of speech to the various inflections and constructions that make up the grammatical structure of an utterance involves conceptualization.

In this perspective, construal operations cooperate, as it were, in the construction of meaning. Implicit in this idea is also that linguistic meaning, even though convention is involved, is dynamically derived through procedures encompassing various conceptualization processes.

While it has always been implicit in CL that conceptualization is of a dynamic procedural nature, as terms like *construal operation* or *conceptualization process* indicate it is only recently that cognitively oriented linguists have started uncovering some of the details of the dynamics of construal. For instance, Bergen and his collaborators (Bergen 2005, fc a, b; Bergen and Binsted 2004, fc; Bergen and Chang 2005; Bergen and Wheeler 2006) have found that construal is likely to involve mental simulation of the situation that is expressed by the linguistic phenomenon in question. That is, language users mentally "run through" the communicated situation, possibly even activating some of the neurons that would be activated when actually involved in a similar situation in real life.

I have already suggested several construal operations involved in various instances and subconstructions of the progressive, such as profiling, melding, summativity conversion and so on. I have also, with reference to Bergen and Wheeler (2006), suggested that the progressive involves mental simulation of a process construed imperfectively via the construal operation of unbounding. Profiling is probably the most important construal operation involved in the progressive construction, because the establishment of imperfectivity, in the approach presented here, is derived

by profiling the MIDDLE PHASE(S) of the aspectual frame. Profiling is also interesting in that it is a procedural operation applied to a representational conceptual structure in order to derive a new representation. Melding, the unit-forming construal operation in which several similar entities are construed as forming one gestalt-like super-entity, is obligatorily involved in the unifying uses of the progressive and the coercing subconstruction in which an iterative process is derived from actional punctuality. In both cases, several uniplex processes are construed as forming one multiplex one through an operation of reconstrual. The construal operation of melding as a procedural process is arguably part of the representational knowledge of each sucbonstruction, which is verb-class-based. The same may be said about the conversion in the progressive construction of punctual telic irreversible processes into complying with the summativity principle, in which the process itself is extended into subsuming the processes and states leading up to it. As with the verb-class-based iterating use of the progressive predicator construction, the summativizing use, which is also a verb-class-based one, obligatorily involves a type-shifting procedure.

This idea of conventionalized procedures, as it were, as part of the representational knowledge of a linguistic sign probably applies to all types of coercing subconstructions of the progressive, such as the ones mentioned just now, the others discussed throughout this study, as well as any other that I may not have observed. This suggests an interplay between procedure and representation in the progressive construction which is also observed by Bergen and Wheeler (2006). So does Bergen and Wheeler's (2006) observation regarding mental simulation in the progressive. In their experiment, they found that the progressive with its prototypical imperfective meaning makes it easier for language users to actually simulate the body movements involved in the process in question than in the case of the perfective. For example, it is easier for listeners to execute movements of the arms towards the body when decoding an utterance like (14.1a) and away from the body when decoding an utterance like (14.2a) than when decoding (14.1b) and (14.2b) respectively:

(14.1) a. She *was receiving* a pizza.
b. She *had received* a pizza.

(14.2) a. She *was giving* the customer a pizza.
b. She *had given* the customer a pizza.

This suggests that, the imperfective construals cause the listeners to simulate the processes mentally as ongoing, which makes it easier for them to execute the movements typically involved

in such processes. The perfective, on the other hand, makes them simulate a completed process, making it less easy for them to execute the movements. This has led to the hypothesis that aspectual predicator constructions prompt listeners to not only construe the contents of the utterances, but also to mentally simulate them, and in the case of the progressive, the processes are mentally simulated as if the language user user were a participant in the middle of such a process as it unfolded. If this is the case, then it means that predicator constructional meaning is actually more procedural than has previously been expected, not just in terms of the relation between formal input and semantic output, but also in terms of the output itself.

The construal and simulation patterns associated with the progressive may reveal some aspects of the interrelation between stability and dynamicity of semantics. It is generally assumed that a set of construals and construal operations conventionally associated with each construction within a language. For instance, Verhagen (2004: 172) argues for construal being such an integrated part of constructions that it is one of the primary causes for the co-existence of almost-synonymous units within the same language:

> the differences between one variant and the other is one of construal, and the reason for selecting one over the other is to be found in the assessment of the effect that this construal may be expected to have on the addressee's attitude and responses

That is, the construals associated with the construction in question, like the ones associated with the progressive construction, are dynamic in nature but through conventionalization they are associated with the representation of the construction in the user's linguistic competence.[79]

14.3. Proteanism of meaning

While early CL has given the impression of treating meaning as static and timeless (although CL theorems like syntactic accommodation would seem to suggest otherwise), recent works within CL suggest that meaning is, in fact, *protean*. Looking at word meaning, Evans and Zinken (fc) argue that "meaning is a process" and "word meanings are protean (flexible, indeterminate, and context-dependent)", and moreover that "linguistic meaning is a situated phenomenon, a function of language use, rather than an inalienable property of language". As Evans and Zinken point out, language consists of sets of entrenched units serving as communicative devices:

> the range of linguistic units available to the language user massively underdetermines the range of situations, events, states, relationships and other interpersonal functions that the language user may potentially seek to use in language to express and fulfil. One reason for this is that language users live in a socio-physical 'matrix' that is continually shifting and evolving. No two situations, feelings or

79 Note also how Verhagen advocates a paradigmatic view in which the user chooses one construction over another, depending on how the construals may affect the hearer.

> relationships, at any given point in time, are exactly alike. We are continually using language to express unique meanings, about uniques states of affairs and relationships, in unique ways (ibid.)

In a similar vein Cruse (2000a, b, 2002a, b; Croft and Cruse 2004) argues that meanings are ultimately construed online in the context of communication. To meet the demands of an ever-changing environment, linguistic meaning has to be flexible. Geeraerts (1997) points this out by applying flexible adaptability to category structures, but flexible adaptability also applies to meaning construction itself. However, as Geeraerts also points out, there will have to be some structural stability in the language system, otherwise, communication would not be possible, and it would not reflect the fact that humans are able to recognize recurring patterns of stimuli and store models based on what the recurring stimuli typically have in common. Stability and flexibility are both required to maintain the complex kind of communication that humans have the capacity for, and engage in virtually all the time.

In Evans' (2006; Evans and Zinken fc) Theory of Lexical Concepts and Cognitive Models (LCCM), this is accounted for by, among other things, lexical concepts, access, and cognitive models. Cognitive models are in LCCM all the non-linguistic encyclopaedic information relating to a concept, which is organized in networks. These are relatively stable, but subject to change in accordance with changes in human experience. Via lexical concepts associated with the word in question, the speaker accesses the cognitive models and activates those that are relevant to the word as used in the specific context of communication.

In (14.3a), the facet of READING of the cognitive model BOOK is acessed as 'book' is here used with reference to the reading experience, whereas in (14.3b) the facet of TOME of the cognitive model of BOOK is activated, because 'book' in this case refers to the physical commodity in a commercial transaction.

(14.3) a. Yeah, a really good book that, I've got that at home.
b. I want to buy a book.

So, in LCCM, the stability is provided by the network of cognitive models and the dynamicity is provided by context-induced online access to relevant parts of the cognitive model in question.

Cruse's (2000a, 2000b, 2002a, 2002b; Croft and Cruse 2004) construal-and-constraints theory, which was mainly developed to handle polysemy in a more dynamic perspective, is quite similar. Here, stability is provided by the *purport* of a word. The purport is all the conceptual content associated with the word in question and is associated with it through convention and history of use. Unlike LCCM, where stability is provided by neatly structured cognitive models,

purport is likened to an egg to an omelette, or dough to a bread; that is, it is some sort of conceptual ingredient to be manipulated in order to reach the final products, although presumably, being conceptual, the purport must also ultimately involve cognitive models.

In use, the purport of a word is then shaped in accordance with various constraints in the context till a final context-relevant interpretation of the word is constructed. The road to the final interpretation is made up of steps called *pre-meanings* in which the relevant aspect of the purport activated and the irrelevant ones are gapped in accordance with the contextual constraints. Cruse (ibid.) poses different types of endpoint interpretations based on the nature of the elements in the purport that made to the final interpretation. For instance, the TOME construal of *book* above would be a *facet* (i.e. a part of the whole book gestalt), while the READING construal would be a *functional way of seeing* based on the perspective of the READER. In cases where book is used with reference to a specific member of the BOOK category, the final interpretation is a *microsense*. While it is stable, the purport, given that it is the history of use of the word in question, will change slightly after each new usage-event.

Both of these theories account, albeit slightly differently, for both stability and flexibility of meaning. Could such theories be applied in CxG generally, and to the progressive specifically? The negative answer would imply either inflexible constructional meaning or total compositionality, while the positive would imply protean constructional meaning. Evans and Zinken (fc) argue that LCCM is compatible with CxG in that there are parallels between the LCCM and the CxG approaches to lexical constructions. While Cruse (2000a, b, 2002a, b; Croft and Cruse 2004) makes no such claim regarding construal-and-constraints, I would argue that both theoretical frameworks are compatible with CxG, because CxG in many ways support the notions of protean and context-adapting lexical meaning, and because constructional meaning may also arguably be protean.

There are two reaons for considering constructional meaning to be protean. The first one is based on theory-logic. If the boundary between lexicon and syntax is broken down, as it is in CxG, then, if lexemes are protean, constructions will also be protean. The second reason is also theory-based, in a way. The schematic of constructional meaning, subject to specification and elaboration, necessarily implies that constructional meaning is protean. Not only is the constructional meaning subject to specification by the units filling its slots, the units themselves will adapt to the constructional meaning through coercion if they are semantically too distant from the construction. In essence, the construction provides a contextual constraint for the purport of the lexical unit contributing to the construction of its final interpretation, while the lexical units provide contextual

constraints for the purport of the construction. Would it make sense to talk about constructional purport (in a construal-and-constraints perspective) or constructional concepts and cognitive models (in a LCCM perspective)? I would say that it would make sense, since the notion of protean constructional meaning is quite compatible with many notions from CxG such as coercion and syntactic accommodation. It also seems more feasible for constructions to be both flexible and stable semantically than if they were semantically completely fixed. Just as a theory of lexicon should reflect the reality of language use and communication in an ever-changing world, so should a theory of syntax – especially if syntactic structures are considered symbolic units, as they are in CxG.

How would semantic proteanism apply to the progressive construction? It is involved in the lexical coercion of punctual verbs into expressing iterative chains or into complying with the summativity principle. This shows that actional meaning is protean, as is also implied in Bache's (1997: 221) term, actional potential. In a way, the actional potential of a verb is part of its purport (in a construal-and-constraints perspective) or a facet of the cognitive models associated with the event expressed by the verb (in a LCCM perspective). As a further example, consider the verb KICK, which prototypically means STRIKE X WITH ONE'S FOOT. In both theoretical models, KICK is associated with some conceptual content, including its main actional potential for punctuality. The conceptual content is then specified in within the discourse through processes like syntactic accommodation and coercion, such that each of the following examples, a specific type of kicking is construed:

(14.4) a. Jenny giggled and *kicked* his ankle.
b. The child *kicked* off her sheet fractiously.
c. Blanche *kicked* him in the shin with her left shoe.
d. He stumbled into the hall, *kicking* the door closed behind him.
e. She *kicked* another stone , this time to emphasise the statement.
f. The defender *kicks* low to the joint at the back of the knee.

While different types of kicking, they are all nevertheless punctual. However, changing the predicator type to the progressive, will convert the actionality into either an iterative process or to an exploded process of the martial arts magazine type mentioned ealier on. This way, actional meaning is protean in that it accommodates with the semantics of the predicator construction in question.

While it is probably not difficult to see semantic proteanism in relation to the verb-construction relations, it might be more difficult to see the semantic proteanism of the progressive

construction. However, as mentioned above, the idea of specification and elaboration makes it obvious that constructional meaning, including the meaning of the progressive construction, is protean, as does the observation that the progressive construction adapts to the discursive context it appears in.

We have already discussed this in relation to the pragmatic prototypes of the progressive construction in section 14.2. Another quite obvious example is, in fact, the prototypical ongoing process use which was suggested to be a continuum of the scalar dimensions of the process in section 8.1. We saw that the scale semantically expressed by the elements in the syntactic and discursive context had an influence on the scalar construal of the process expressed by the progressive construction such that in large scale contexts it is a global process and in small scale contexts it is a local process. This may be illustrated by placing the same instantiation of the progressive predicator construction in different scalar contexts:

(14.5) a. My sister and her friends *were invading* my room again with their Barbie dolls.
b. The coalition of oil-craving warmongering states *were invading* yet another sovereing nation in the Middle East.

The first example places the BEING IN THE PROCESS OF OCCUPYING SOMEONE ELSE'S TERRITORY in the context of the home of one single family, while the second places it in the context of international politics and warfare. This displays a certain flexibility of constructional meaning, which may in principle be the same as the flexibility of lexical actional meaning.

A protean approach to the progressive construction is not incompatible with the notion of constructional networks of subconstructions and their specific senses. In fact, subconstructions likely start out as context-induced variations on the meaning of a construction, and are then entrenched as representational knowledge through frequent use.

14.4. The self and other selves: the instructional perspective

While CL and its offsprings deal with form, meaning, symbolic relation, and meaning construction, as well as the relation between these and cognition, not much attention has been paid to what binds all these aspects of language and communication together – namely, how the linguistic forms influence the language into understanding the encoded message, or indeed how it makes the user construct the intended meaning and thus set up the final symbolic relations. We have already seen that symbolic relations come pre-packaged with the construction, through convention, and that sets of construal operations are also, again by convention, associated with the construction. The

contents may be quite specific or quite schematic, although it appears that there is also some schematicity to constructional semantics. These are of course not built into the construction in the sense that they are biologically inherent in the language user and the language in question. That would be a bizarre claim. They are also not inbuilt in the sense of a conduit, container, or object metaphor. They are merely associated by convention and entrenchment.

While psychologically relevant, since CL assumes that linguistic signs prompt the listener to make certain construals in accordance with the content conventionally associated with the linguistic form in question, there is also an interactional and social side to language, since we can assume that the speaker uses a certain linguistic expression in order to achieve a certain effect in the listener and to make the listener make certain construals. Verhagen (2004: 175) argues that this interpersonal manipulation may be the primary function of linguistic signs: "a major force driving the evolution of a linguistic unit is the effect of its use on addressees and assessment of that effect by producers".

While there is no doubt that linguistic signs serve as stimuli to the listener, and that even linguistic signs are themselves subject to construal (to the extent that one can make this argument without being accused of being a Skinnerian behaviorist), there is also reason to believe that the speaker is at some level aware of this. The speaker uses different signs with different construals and meanings associated with them with the purpose of manipulating the listener, as it were: "natural languages ... contain elements whose function actually presupposes a conception of a linguistic utterance as an attempt to influence the addressee" (Verhagen 2004: 175). Harder (1996: 118) appears to make a similar point, emphasizing the social and interpersonal aspects of language and cognition:

> ...whatever was required to involve a concept (linguistically encoded or not) in one's own cognitive processes, the ability to involve appropriately the addressee comes on top of that, and enters into the interactive competence of the subject. As one ... extra element, it involves the status of meanings as social entities rather than elements of one's private mental processing.

In my view, the social-interpersonal aspect advocated by Verhagen (2004), Harder (1996), and Sinha (1999) among others, cannot be ignored. Language and communication must be intertwined with humans' awareness of the self and of others and the interpersonal relations involved. The awareness of the self and the selves of others may even be one of the driving forces in successful communication. As such awareness must necessarily be involved in the prediction of the behavior of others. It makes sense to argue that the choice of construction used to communicate a certain situation in a certain perspective in accordance with the effect the speakers wishes it to have on the

listener. This nessecarily presupposes this capacity of forecasting the behavior of others: "The most important adaptive capacity a social species may need is the ability to forecast the behavior of one's conspecifics. Not only what they may be disposed to do in general but what they will do right now" (Givón 2005: 120). Humans have this capacity, and it is very possible that language is to a large extent designed to function in accordance with this capacity and the awareness of other selves, since, if humans are aware of other selves and their actions, they will certainly also be aware that it is possible to manipulate other humans, using tools of communication. This is probably rooted in humans' capacity for *joint attention*, as reflected in for instance *gaze following*, *social referencing*, and other social skills that children acquire around their first birthday, which of course goes hand in hand with an awareness of other humans as *intentional agents* much like oneself whose psychological relations to outside entities may be followed into, imitated, and shared (Tomasello 2003: 21).

Language being part of the reality suggested by Givón (2005), Tomasello (2003) and others, makes it reasonable to assume, as mentioned, that part of its function is to stimulate conspecifics into engagning in certain procedural operation of meaning construction and make certain construals. Harder (1996: 114) thus argues that linguistic signs may be said to be *instructional*: "I use the word 'instructional' about linguistic meaning as constituting process input rather than static representaion" and argues (Harder 1996: 214-5), comparing language understanding to recipes, that linguistic utterances instruct listeners to make series of procedural operations to get to the total interpretation of an utterance, using an analogue between 'Did John go?' and the recipe for grilled salmon:

> inter(past(go(John)))
> [identify John and construct a mental model of him; make the model instantiate the properties of 'go'; understand this model as applying to a certain past situation; and consider whether the model is true of that situation]
>
> serve(sprinkle with lemon(grill(add salt and pepper(slice(salmon)))))
> [take a salmon, slice it, spice the slices with salt and pepper, put them on the grill and sprinkle them with lemon before serving]

This approach is not incompatible with CL and CxG since each intructional segment of a linguistic expression may be said to prompt the speaker to make different construals through various construal operations and evocation of various cognitive models. In fact, CL and CxG could benefit from incorporating the instructional perspective in some form, as it offers a perspective in which to attack the meeting point of form, content, symbolic relations, and interpersonal communication.

While I am not sure whether the recipe analogy applies completely, and also am not sure

whether there is a better constitutive metaphor than the instructional one. I think it does make sense to view interpersonal semantics as having an instructive or manipulative (I will stick to "instruction" and "manipulation" for the remainder of the discussion not having any better alternative) aspect to it; especially in the perspective of the insights offered by Tomasello (2003), Verhagen (2004) and Givón (2005).

The instructional perspective is highly compatible with the notion of alternate constructions and construals and the choice between such. Consider for example the following excerpt from two different interviews with two different people recounting the same situation (Morgan 2004):

(14.6) a. Bruce Dickinson: Martin would always drag out a little bit more to the point where, you know, sometimes, you know, *bits of furniture went flying across the room in the studio*, things like that, out of frustration.
b. Martin Birch: I drove him crazy. *He ended up throwing chairs around the studio* and screaming and yelling and went home with a blinding headache, threatening me he was never ever going to sing again.

Both utterances recount the same situation – namely that of rock singer Bruce Dickinson throwing chairs around the recording studio out of frustration with having to sing the same bits over and over again. While Birch uses the utterance 'He ended up throwing furniture across the room', Dickinson uses the utterance 'bits of furniture went flying across the room in the studio'. Birch's utterance thus prompts the listener to construe a transitive event in which it is emphasized that Dickinson is the AGENT who volitionally acts on the THEME, which is the furniture, throwing it around the place. Thus Birch overtly marks Dickinson as the AGENT. Dickinson, on the other hand, uses a *middle voice* or *ergative-like* construction which prompts the listener to construe a transitive-cum-intransitive situation, in which focus is removed from the AGENT and how the AGENT acts upon the THEME, and instead emphasizes the THEME and the activity involving it. By using an *agent-demoting* construction this way, Dickinson thus wants to draw the listener's attention away from the fact this it was him who threw the furniture around, presumably because it is slightly embarrassing to have acted in such a way.

This example, I think, illustrates the interpersonal and manipulative/instructive aspects of language and communication, and a proper cognitivist discussion of such cases cannot be executed without reference to the paradigmatic and manipulative/instructive perspectives. However, I do not think that the interpersonal/instructive perspective is primary in the sense everything can be reduced to semantic instructions, such that the word "instruct" becomes a silver-bullet, to use Bache's (2005) imagery, much like the word "blend" has become. I fail to see how, say "'bits of

furniture went flying across the room' construes a situation in which the agent and agentive action are demoted and the theme and activity of the theme are highlighted" should be worse or less true than "'bits of furniture went flying across the room' instructs the listener to construe a situation in which the agent and agentive action are demoted and the theme and activity of the theme are highlighted" just because "instruct" appears in it. A proper description will still have to explain which construals are achieved, how, and why, and the word "instruct" itself is not more revealing in that perspective than its absence.

The recipe analogy, as I see it, serves to offer an explanation as to the whats and hows of the above question, as each instructional bit specifies which cognitive model to be activated, and which construal operations to involve in constructing the meaning. Of course, in a CL and CxG perspective, each instructional bit would have to be thoroughly explicated in terms of which cognitive models are evoked, which construal operations and mental simulations are involved, the interpersonal and social aspects, as well as the usage-based ones should also be included. Harder (1996) does, indeed, offer such a framework from which many ideas could be taken and integrated into a CxG framework that takes into account the procedural and representative aspects altogether.

As regards instructional aspects of the progressive construction, Bache and Davidsen-Nielsen's (1997) description of the English predicator constructions is an instructional semantic one and is largely based on the framework offered by Harder (1996). According to Bache and Davidsen-Nielsen (1997: 308), the most important instructional segment of the progressive construction is the instruction 'look here', such that the listener is instructed to look at a progressing process. But this 'look here' instruction then involves a set of specific construal operations and cognitive models, which were suggested in §6, such as unbounding of the process by evocation of the aspectual frame and profiling the MIDDLE PHASES and gapping the INCEPTIVE and TERMINAL PHASES. This presupposes that a specific process will also be construed. Through the main verb function in conjunction with the argument structure construction together with the specifications of its arguments, the progressive construction also instructs the listener to evoke a set of propositional frames such as the force dynamic structure, and also the category that encompasses the process in question belongs to. There would also have to be specific instructions as to the choice of action type and the conversion into this type of the process associated with the main verb which is typically not a durative verb. The operator specifies tense, and thus it instructs the listener to evoke the temporal frame and profile the relevant temporal part. Of course this is only the prototypical uses. As we have seen, the progressive is also used in contexts as a specific strategy to have

specific influences of the listener, using the 'look here' instruction in new ways, which may eventually become specific instructions of their own. Also these typically involve important background factors, such as the intentions of the speaker, the social relations between speaker and listener, as well as many other factors in the speaker's choice of using the progressive rather than any other type of function.

I am not sure whether the instructions metaphor is suited for describing this interpersonal function completely, and, while the underlying idea of instructional semantics is indispensible, I wonder whether perhaps a manipulation metaphor along the lines of Verhagen (2004) is not a better one (of course instruction is to some extent embedded in manipulation). I think that many of the extended uses of the progressive, such as the directive future process, the modal state, the wish marker, and the annulled process and their respective extensions, are better described as primarily manipulating the listener into making certain construals, and instructions may be part of the grander scheme of manipulation.

Interactive communicative manipulation is evident in the directive use of the probable future subconstruction of the progressive whose function is not only to instruct or order the listener to perform (or refrain from performing) a certain action, but also to prompt the listener into construing a social power relation in which the speaker has authority over the listener, and is thus authorized to issue a command, which the listener is socially obliged to obey. Likewise, the modal state hybrid subconstructions of the progressive and the semi-modal constructions have specific instructional semantic functions – namely, to manipulate the listener into construing the modality of the situation as being beyond the control of the speaker. This may have a particular politeness function when the modal state subconstruction is used directively. In these cases, it appears to have the opposite function of the directive use of the subconstruction that expresses a probable future process, since it makes the listener construe the reason for the directive as not being based on asymmetric power relations as such but some other type of external necessity outside the control of the speaker, rendering the performing of the requested process necessary. The wish-marking use of the progressive construction serves as a strategy to manipulate the listener into making a modality judgment of a situation where the speaker wants the listener to do something, as an an irrealis assertion, or low authority assertion, perhaps even bordering on being an entreaty. While the interpersonal purpose is basically the same as that of the directive use of the probable future process subconstruction and some uses of the modal state subconstructions. Namely, to get the listener to do something -, it serves to make the listener construe the request as a quasi-entreaty and

obviously has a politeness function somewhat dissimilar to from the of the modal state subconstructions. The annulled process subconstruction is slightly different in that it instructs the listener to invoke a specific interactional script in order to structure, or restructure, the discourse.

These are very specific instances of interpersonal manipulative purposes of the progressive construction. However, it might be argued that the evocation of the verbal domain matrix and the initiation of various construal operations and other procedures are also the results of interpersonal manipulation, or instruction if you like. as is frame evocation in general. The reason is that the progressive construction and other predicator constructions instruct the listener to evoke the verbal domain matrix. Subsequently (or simultaneously), the various types of predicators constructions and instantiations thereof prompt the listener to access whatever additional frames may be required, to specify the profiling patterns, and specify various schematic components in order to construe the intended meaning.

15. Conclusions

I set out to offer a description of the progressive construction based on the integrated grammar philosophy to see whether this approach would allow us to dig out some new aspects of the much described construction. At the same time I wanted to use the progressive to show the need for such an integrated grammar framework in that it allows one, or forces one, depending on the perspective, to take into account several cognitive factors not traditionally associated with grammar.

I hope to have made a proper case for an integrated grammar view in the analysis of the English progressive construction. Using CL and CxG as the primary theoretical frameworks, I conducted an empirical investigation of the progressive construction based on instances of the progressive occurring in a section of the BNC to see if the construction may be said to be embedded in other cognitive modalities than those traditionally associated with grammar in the isolationist and componentialist programs.

To reiterate, an integrated grammar approach is a model of grammar which does not isolate the traditional components of grammar from one another, and which does not separate language competence and performance from each other. In an integrated grammar model, these two aspects of language are of equal importance and are juxtaposed with what is called langue in the Saussurian tradition – that is, language as a semiotic system in a given speech community – and with encyclopaedic knowledge in general. These four elements are considered aspects of both

language and cognition. In language, they are of equal importance and mutual influence. Encyclopaedic knowledge and language competence are part of the individual cognitive system, while the social semiotic system and language performance are part of the social cognitive system. Ultimately, the social cognitive and individual cognitive system are parts of the same cognitive system and subject to the same mental processes and construal operations.

While SFL and Dik's Functional Grammar offer integrated grammar frameworks, I have opted for an integrated grammar framework based primarily on CL and CxG for various reasons. Firstly, the encyclopaedic aspects of language have been addressed most extensively in CL, where the focus has mainly been on the representational aspects of cognition, but has recently moved to involve procedural ones also. It is generally held that cognition is embodied in the sense that it is experientially based, and that linguistic meaning taps directly on to encyclopaedic knowledge, such that the linguistic sign refers to one or more components within the conceptual structures evoked by the sign. The advanced state of research into encyclopaedic aspects of language in CL makes it particularly suited for an integrated grammar analysis of the progressive construction. Secondly, CL offers a fairly developed descriptive terminology for prototype-based categorization, which is a very important aspect of encyclopaedic knowledge. It is theorized in CL that virtually all conceptual units and structures are sorted into prototype categories, which, according to recent research, are not only asymmetric but also dynamic and context-adaptible and subject to construal. Linguistic structures and units, which are hypothesized to be subject to the same operations and processes as conceptual ones are, are also categorized this way. This connection between encyclopaedic and linguistic structuring of knowledge is highly compatible with an integrated grammar model. Thirdly, the notion of construal operations and simulation, which are presently gaining ground within CL, offer an interesting procedural perspective on language and communication, which, like encyclopaedic knowledge in general and categorization, offers possibilities for description that an integrated grammar framework will benefit from. These and several other aspect of CL which we have encountered throughout this study lend themselves very well to an integrated grammar description of the progressive construction.

I have referred to the framework of the present study as an 'integrated construction grammar' a few times. This is because the approach to the progressive construction is basically constructionist, taking as its essential theoretical fundamentals the basic ideas from CxG, such as the nature of the construction itself and the structure of grammar. Construction grammar, while not generally considered what could be an integrated grammar model, is a prime candidate for being or

becoming one. Its basically semiotic definition of a construction as a symbolic pairing of form and meaning – an entrenched routine in a speech community – is very much in line with both the notions of langue and performance (or parole). The notion of non-reductionism as well as the increasing usage-based approaches to language within CxG also address the performance and its interrelations with langue (or competence). Several theories regarding the structure of grammar, such as constructional networks and the lexicon-syntax continuum, as well as the hypothesis that constructions evoke the conceptual structures addressed in CL address the individual cognitive aspects of language. CxG is in many ways developing towards becoming an integrated grammar framework with several construction grammars increasingly developing to involve many of the aspects that are otherwise segregated off from each other in isolationist grammars. CxG is thus increasingly becoming well suited for functional descriptions of linguistic phenomena, taking into account cognitive, social, and communicative aspects of language.

I believe to have shown the value of such an integrated grammar model in the description of the progressive predicator in that it allows one to offer new and interesting descriptions of this otherwise much described construction. The present study has also showed that taking an integrated CxG as the theoretical framework allows one to empirically observe various uses and details regarding the progressive construction which have previously been overlooked or imprecisely described.

I suggested that the progressive predicator, and all other central predicator types, evokes a matrix of various conceptual structures by tapping into those areas of cognition having to do with deictic temporal conceptualization, inner phasal structure of processes, actional categorization of processes and their inner mechanics, as well as specific force dynamics of processes and modality judgments of their truth values. This verbal domain matrix was hypothesized to consist of at least a temporal frame, an aspectual frame, a schematic force dynamic frame, a set of actional features specifying the actional category that the process in question belongs to, and a modal frame. Depending on the predicator type and its realization, the verbal domain matrix is subjected to various patterns of profiling and other construal operations so as to reach the final tense-aspect-modality construal. Rather than being the sum or result of the combination of elements making up the form of the individual instance of the construction in question, profiling patterns are often semiotically related to the constructional configuration, such that some profiling patterns come prefabricated, as it were, with the construction regardless of which lexemes appear in it. The progressive thus comes prefabricated with the MIDDLE PHASE(S) of the aspectual frame profiled and

the actional features of DURATIVITY and PROCESS, and implicitly the process is modally judged in terms of high probability. These are the primary ingredients of the imperfective aspect, and they are themselves embedded in the verbal domain matrix. In an integrated CxG perspective, the progressive construction is thus semantically embedded in encyclopaedic knowledge. This is of course not a new idea, as embedding of semantics in encyclopaedic knowledge has been a principle since the early days of CL; however, it has not really been applied in the study of the English progressive construction.

One of the basic tenets of CxG, adopted here as well, is that all linguistic signs, from bound morphemes (perhaps even phonemes) to complex syntactic structures, are semiotic pairings of form and conventionalized semantico-pragmatic content, and are organized into constructional networks which are arranged in accordance with the same principles that govern conceptual categories; these principles are essentially experientially based, which translates into usage-based in relation to the organization of linguistic knowledge. This allows one to hypothesize that the progressive construction has not one specific but a primary prototypical use as well as less central uses. The fact that the progressive construction has more than one use has been observed several times in various reference grammars of English. However, an integrated CxG that incorporates prototype categorization and also takes language use into consideration as a factor in the creation, maintenance, and change of both the socio-communicative and individual cognitive aspects of language competence, allows for the identification of previously unattested uses as well as the unearthing of previously overlooked details pertaining to already attested uses. It does so because it offers a rich framework for empirical investigations of corpora and the like. The present investigation, conducted on part of the BNC corpus did result in the identification of previously overlooked or ignored aspects of the use of the progressive construction, including several item- and item-class-based ones as well as context-based factors.

We saw that the use of the progressive construction to construe ongoing processes appears to be the most frequent and prototypical one. This is not surprising, given what has been already observed in the literature. The ongoing uses of the progressive appeared to form a continuum of scale where two subuses, namely the local process use and the extended use, both of which where contextually indicated, serve as poles. It was also found that there appear to be a number of non-prototypical subconstructions of the progressive construction, many of which are not possible to address in isolated grammar models, as they involve communicative, socio-interpersonal, and cognitive factors. For instance, the use of the progressive to express future events extends into a

directive imperative-like utterance construing an unequal power relation between listener and speaker such that the speaker has authority over the listener. This extension is mainly due to an exploitation of the modality of the probable future process marking use by extending it into the deontic-directive domain from the epistemic domain, thus adding an interpersonal social aspect which cannot be described satisfactorily in an isolated grammar framework. Also, frequency patterns observed in the present investigation indicate that the probable future use appears most often with operators in the present tense, and that in addition there are restrictions in the subject in the directive extended use. These observations are usage-based and they, too, would not be possible to account for, let alone identify, in an isolated grammar perspective.

In addition, several item-based and item-class-based subconstructions were uncovered which have not previously been discussed, such as many of the stative and habitual subconstructions, which are based mainly on the principles of usage-based storage of language information in constructional networks. Many of these also appear to have contextual factors associated with them such as specifications of the argument structure constructions they occur with. While deemed irrelevant in isolated grammars, these factors are considered integral to language knowledge in an integrated grammar model.

Other uses not warranted in an isolated grammar but observed here are the modal state and wish-marking subconstructions which have interpersonal deontic aspects to them, while the doubt-marking and annulled process expressing subconstructions have, or may have, metacommunicative and discourse structuring properties of stance and possibly repair initiation.

Frequent coercion patterns were also observed, such as iteration of punctual processes and summativization of irreversible punctual ones. These seem to involve the respective conversion processes as integrated entrenched elements of the constructions such that one may actually talk about coercing subconstructions of the progressive, which involve construal operations such as melding. That is, actional conversion is described in terms of cognitive structures and processes rather than abstract formal and logical rules which would be difficult to justify in a communicative functional descriptive framework.

These cognitive factors appear to be reflected in patterns of language use, as indicated by the collostructional analysis, in that those verbs that are semantically most compatible with the progressive construction appear to be the most attracted to it. This is probably because the verb and the construction overlap in some of the frames they evoke, thus requiring less mental simulation and effort than those that require the activation of coercive operations.

Construal and mental simulation appear tp be so central elements in the progressive construction and predicator constructions in general that it would make sense to include paradigmatics into integrated grammar. This implies that certain sets of constructions offer different construals of the core content of the message, in the case of predicators the event, so that the speaker can choose the construction that suits their communicative purpose the best. This enables the speaker to manipulate the listener into making specific construals and simulations benefitting the cause of the speaker. We saw this to be the case in, for instance, the directive use of the progressive, the modal state use, and the wish marking use, which had obvious manipulative purposes, but also the more mondane uses serve such interpersonal manipulative communicative functions, albeit less "political" ones.

The present study has shown that if one wants to describe the progressive construction functionally in the perspective of human communication and cognition, then an integrated CxG approach like the one presented here will provide the framework for comprehensive and, in many ways, descriptively satisfactory analyses. I have also focused on the advantages and pitfalls of corpus-based analysis. This study is far from definitive as it is based on just one portion of a corpus, which is cannot obviously be representative of the whole English speaking community (which is particularly large and diverse). More similar studies will have to be made, involving other corpora so the results can be checked against one another. Moreover, other types of predicator constructions will have to be analyzed and described in a similar way so as to find the overlaps and contrasts in use and construal between them and the progressive predicator construcion.

The present study shows that there is still much more to be said about the progressive construction. We have seen that there are many cognitive and socio-communicative factors associated with the construction which may said to be integral parts of the construction itself that cannot be left out if one wants to know how the construction works in a functional perspective. While the present study presents one of the initial steps towards an integrated CxG description of the progressive construction, more work is to be done. The theoretical constructs presented here should be worked into a more systematic and consistent terminology, and the entire integrated CxG framework could be developed much further so that it may be applied to any linguistic phenomenon (in many ways it is developing in that direction through the recent developments of CxG itself which is becoming more and more like an integrated grammar model). I do believe to have unearthed some previously unknown, or ignored, or unaccounted for, interesting uses and details of the progressive construction, there is still a long way to go in the establishment of an

integrated CxG description of the progressive, and for some time yet the unveiling of the secrets of the progressive construction will remain an ongoing process.

Glossary of terms

Abstract construction: prototypical constructional template at the center of a constructional category.
Accommodation: see syntactic accommodation.
Action: in propositional act theory, the relation, often a (force-)dynamic one, between two entities; also the actional categorization of a process.
Actional potential: potential for actional categorization of the processes associated with a given verb.
Aspectual frame: frame based on the conceptualization of processes into phases.
Aspectual profile: highlighted component in the aspectual frame.
Association patterns: aspects of context, discursive or otherwise, that a linguistic sign frequently co-occurs with.
Atelic (process): self-contained process.
Auxiliary: any part of a predicator that is not the main verb or operator; the functions of auxiliaries vary from predicator construction to predicator construction.
Behavioral state: stative relation construed as the result of certain patterns of behavior, or vice versa.
Binding: correspondence between parts of different frames in a domain matrix.
Biuniqueness: interstructural one-to-one correspondence.
Blend: metaphor that combines elements from two or more different domains.
Bounded(ness): when an entity is clearly separated from its environment by a boundary.
Bounded extent: extended entity or process which is bounded.
Category: class of related concepts.
Category boundary: border area between two categories.
Categorization: the processes involved when humans classify experiences into categories based on commonalities (and differences); the study thereof.
Causal cross-event relation: see causally related processes.
Causally related processes: when two processes are construed as being in a cause-effect relationship.
Coarse granularity: construal of an entity ignoring its details.
Coercing construction: construction obligatorily involving coercion of one of its parts.
Coercion: type-shifting of a lexeme to adapt it semantically or functionally to the construction it appears in.
Cognitive linguistics: a set of theories of language dealing with the intersection of language and cognition, encyclopaedic knowledge, and processes of conceptualization, and more recently communication and social relations.
Cognitive model: complex structure of concepts and their interrelations.
Collostruction (strength): the strength of attraction of a lexeme to a construction, and the method developed for the study thereof.
Command: expression of directive modality judging the speaker to be more powerful than the listener.
Competence: in generative linguistics, the aspect of language having to do with the individual's capacity for forming grammatical sentences.
Complete inheritance (model): model of information storage based on maximal generality.
Completion (point): natural endpoint of a telic process.
Component: part of a content structure of a construction.
Compositionality: when smaller parts contribute to the meaning of a complex construction.

Concept: any cognitive entity.
Conceptualization: see construal.
Conceptual metaphor: metaphor in which the structure of one domain is mapped onto another domain.
Condition slot: that part of a causally cross-event relating construction construing one of the processes as the condition.
Consequence slot: that part of a causally cross-event relating construction construing one of the processes as the consequence.
Construal: interpretation of stimuli and the thought processes involved therein.
Construal operation: mental process involved in conceptualization.
Construction: pairing of form and conventionalized meaning serving one or more specific or general communicative purposes in a speech community.
Construction grammar: a set of theories in which it is held that the primary unit of grammar is the grammatical construction and not dynamic rules of combination and movement.
Content (structure): semantic and pragmatic aspects of a construction.
Context (of language use): the environment in which a linguistic unit is uttered.
Continuous (process): uniplex process.
Control: the degree of responsibility an agentive role has over a situation.
Corpus: database of instances of naturally occurring language.
Corpus linguistics: empirical research method based on the use of corpora.
Cross-event relation: when two events are related to each other through sepecific grammatical constructions.
Default inheritance (model): model of information storing which is based on subset-based generality.
Degree of prototypicality: the degree to which a concept or entity is considered a good or bad member of a prototype category.
Deictic motion verb: verb expressing motion from or towards a deictic viewpoint.
Directive modality: type of modality prompting the listener to perform the propositional act, based on judgments of power relations between speaker and listener.
Deontic modality: modality having to do with psycho-social judgment of the proposition expressed by the clause or sentence, in terms of factors such as permission or obligation.
Distributed process: similar processes unified into one super process.
Domain: see semantic frame.
Domain matrix: collection of frames evoked by the same linguistic sign.
Durative (process): process taking up a conceivable timespan.
E-site: see elaboration site.
Elaboration: the specification of a schematic slot in a conceptual, or semantic, structure.
Elaboration site: schematic part of a conceptual or semantic structure.
Element: part of a formal constructional structure.
Embodiment: the idea that all aspects of cognition, including language, are based on bodily experience and perception.
Encyclopaedic knowledge: knowledge of the world; the total of an individuals cognitive structures and models.
Entreaty: expression of directive modality judging the speaker to be less powerful than the listener.
Entrenchment: the storing of a form-meaning pairing as a units in one's linguistic knowledge.
Epistemic modality: speaker's judgment of the certainty or truth of the proposition expressed by the clause or sentence.

Evaluation: evluation of propositional content in a cross-event relating construction.
Evocation: see frame evocation.
Excessive process: process that has proceeded beyond an expanded completion or termination point.
Extended ongoing process: imperfectively construed process taking place at a large scale.
Extension: less prototypical member of a category, often related via metaphor or specific context-influenced use.
External properties: the external discursive context of a construction.
External syntax: see external properties.
Figure: salient entity in a figure-ground relation.
Figure-ground (organization/alignment/relation): the relation between a salient entity and the entity, or entities, serving as its background.
Figure-slot: part of a cross-event relating construction that construes one of the events as the figure in relation to the other event.
Flexible adaptability: the principle of cognitive structures being flexible enough for the language user to keep up with an ever-changing exterior world.
Form(al structure): formal aspects of a construction.
Formal blend: blend which informs integration at the formal and the semantic level.
Frame: see semantic frame.
Frame evocation: the activation of a frame or doman matrix associated with a linguistic sign.
Frame semantics: semantic theory in which access to relevant encyclopaedic knowledge is required in the understanding of a linguistic sign.
Frequency: the quantitative aspect of the usage of a given linguistic sign.
Full-entry (model): model of information storage operating with full redundancy.
Fuzzy boundary: category boundary which is not fully discrete.
Generative linguistics: formal theory in which it is held that syntax, being the central aspect of language, is governed by mathematico-logical rules of combination and movement.
Generic process: state-of-affairs construed as a process so as to compress it into a human scale.
Gestalt: non-reducible whole.
Global participant: participant in a large-scale process; typically a group or organization, or a non-tangible entity.
Grammatical construcion: see construction.
Ground: non-salient entity in a figure-ground relation.
Ground-slot: part of a cross-event relating construction that construes one of the events as the ground in relation to the other event.
Habit: process which is repeated such that it may be perceived as an inherent attribute of the agent.
Hybrid category: category or subcategory which inherits from two or more other categories.
Idealized cognitive model: cognitive model that does not necessarily correspond to the objective relations in the exterior world.
Idiomatically combining expression: compositional complex idiomatic expression in which each part is assigned a delimited idiomatic meaning.
Image schema: the simplest kind of cognitive model based on bodily experience and perception.
Imperfective (aspect): profiling of the middle phases and gapping of the inceptive and terminal phases in the aspectual frame.
Informational density: the economy-based principle of storing as much information as possible under the same category.
Inheritance: the passing on of feature from the superordinate and prototypical elemtents in a category taxonomy to subordinate ones.

Input space: domain providing concepts for a blend.
Instruction: expression of directive modality judging the speaker to be slightly more powerful that the listener.
Instructional semantics: theory stating that linguistic signs instruct listeners to make certain construals.
Integrated grammar: a grammatical theory in which cognition and communication are considered to have an impact on the grammar of a language.
Interactive function (of language): the communicative function of language.
Internal properties: the internal morpho-syntactic make-up of a construction.
Internal syntax: see internal properties.
Irrealis assertion: degree of modality expressing doubt regarding the truth of the propositional content.
Irreversible (process): process whose resultant state cannot be reversed to the initial state.
Isolated grammar: a grammatical theory in which syntax is held to be the only true and relevant component of grammar.
Item-based construction: construction, or set of constructions, based a specific substantival part.
Item-class-specific construction: construction, or set of constructions, based on the class of its primary part.
Iterative (process): melded durative process consisting of a series of similar or identical punctual processes.
Langue: in Saussurean linguistics, the aspect of language functioning as a social system of signs.
Large scale semantics: semantic components of a global character rather than a local one.
Lexicon-syntax continuum: in construction grammar, the idea that syntax and lexicon are governed by the same semiotic principles.
Licensing: when usage-event is based on one or more constructions, it is licenced by those constructions.
Local ongoing process: imperfectively construed process taking place as a small scale.
Local participant: participant in a small-scale process.
Melding: conceptualization process in which similar individual entities are construed as forming one super entity.
Mental simulation: when the mind simulates the situation expressed by a linguistic sign, possibly through activation of the same neurons that would be activated if one was physically part of or witness to the situation.
Mental space: conceptual patterns activated through discurse.
Mental state: stative relation pertaining to an animate's opinions, emotions, or mind.
Metaphor: the conceptualization of something in terms of something else.
Metonymy: the conceptualization of a part in terms of the whole, or vice versa.
Mini-construction: argument structure construction associated with a specific sense of a polysemous verb.
Mismatch: when there is no biunique relation between form and meaning, or when there is semantic incompatibility between lexeme and construction.
Modification: in propositional act theory the function that allows the language user to identify a relation between an attribute and the attibuted, or to set up a construal involving such a relation.
Monadic: bi-unique relation between form and meaning.
Multiple parenting: when a construction or subconstruction inherits from two or more superordinate constructions.
Negative assertion: degree of modality negating the truth of the propositional content.
Non-behavioral state: state not involving behavior or dynamicity.

Non-monadic: non-bi-unique relation between form and meaning.
Non-reductionism: the idea that parts are functionally derived from wholes.
Object: in propositional act theory, a semantic class pertaining to entities or 'things'.
Onomasiological blend: blend taking place at the semantic level but not the formal level.
Onomasiology: the relation of form and meaning in the perspective of the meaning.
Operator: finite part of a predicator
Paradigm: set of constructions that offer different construals among which that speaker may select one in accordance with the communicative effect the speaker wants to have on the listener.
Parole: in Saussurean linguistics, the aspect of language having to do with laguage-use.
Perfective (aspect): inclusion of terminal phases in the aspectual profile.
Performance: in generative linguistics, the aspect of language having to do with language use.
Point: non-extented entity, or punctual process.
Polysemy: a linguistic form having multiple possible meanings.
Pragmatic point: when a construction serves a specific function in a specific context, or a specific kind of context.
Predication: in propositional act theory the function of a linguistic form that allows the language user to predicate or construe a relation between entities.
Predicator: that aspect of a clause that predicates, or refers to, a situation, using a verbal form.
Progressive (construction): typically a predicator construction expressing imperfectivity by profiling the MIDDLE PHASES of the aspectual frame and gapping the INCEPTIVE and TERMINATIVE PHASES; in English this is done with the [OP:BE MV_{pcp1}]-construction.
Presupposition: expression of modality in which the truth of the propositional content is taken for granted.
Probable future process: process modally judged to be likely to take place in the future.
Process: dynamic action type.
Profile: that concept within a frame which is directly expressed by the linguistic sign in question.
Profiling: construal operation focussing one's attention on one or more parts of a frame or cognitive model.
Property: in propositional act theory, the attribute of an entity.
Propositional act (function): the relation between form and the basic semantic category that the content belongs to.
Propositional frame: force dynamic structure associated with a process.
Protean meaning: reference to the dynamicity and non-fixedness of linguistic meaning.
Prototype: most common or most likely or most typical member of a category.
Prototype category: asymmetrically structured category in which some members are considered better members than others.
Punctual (process): abrupt process.
Purport: in construal-and-constraints, the conceptual substance of a word to be specified in actual use.
Radial structure: center-periphery structure of a category, such that the most prototypical members are placed towards the center, and the least ones towards the periphery.
Realis assertion: modal expression construing fairly high degree of probability.
Reference: in propositional act theory the function of linguistic forms allowing the language user to pick out, identify, or set up and object or an object-like construal of a non-object.
Relation: relation among parts within a constructional structure.
Request: expression of directive modality judging the listener and speaker to be equal powerwise.
Resultative construction: construction expressing a cause-effect relationship.
Reversible (process): process whose resultant state may be reversed to the initial state.

Role: relation between a part and a whole in a constructional structure.
Runup (process): punctual irreversible telic process construed such that the events leading up to it are considered part of it.
Schematicity: when a constructional element maybe subject to paradigmatic change.
Semantic bleaching: in grammaticalization theory, when a unit loses its semantic content and replaces it with grammatical content.
Semantic compatibility: the semantic relationship between a lexeme and a construction.
Semantic frame: that portion of encyclopaedic knowledge which is required in the understanding of a given linguistic sign.
Semantic overlap(ping): when two or more constructions share one or more aspects of meaning.
Semantic relation: relation among components in a semantic constructional structure.
Semantic role: relation between a semantic component and a semantic whole.
Semasiology: the relation between form and meaning in the perspective of the form.
Semiological function (of language): the naming or labeling function of language.
Sequential scanning: construal operation involving the construal of something unfolding over time.
Simultaneous cross-event relation: when two processes are construed as taking place simultaneously.
Small-scale semantics: semantic components of a local rather than a global character.
Social system: language as a system of signs combining form and meaning, which have been 'agreed' upon, via concention, by the members of the community in which the language is spoken.
Source domain: domain providing the conceptual structure in a conceptual metaphor.
State: non-dynamic situation.
State-of-affairs: aspect of the content of a predicator construction having to do with the semantics of the expressed process itself.
Strict compositionality: the theory that the meanings of complex linguistic expressions may be fully reduced to the meanings of their parts.
Structural stability: the principle of cognitive structure retaining enough stability for them to be recognizable to the language user.
Subcategorization: see transitivity.
Subcategory: a category within a category.
Subconstruction: a constructional network within a constructional network.
Subset: see subcategory.
Substantivity: when a constructional element is fixed.
Summary scanning: construal operation involving the interpretation of something as a non-relational entity.
Summativity principle: the principle stating that partial completion of a whole process equals full completion of part of the process.
Symbolic function (of language): the function of language allowing language users to pair physical, auditory (or visual) forms with conceptual content.
Symbolic link: symbolic relation between form and meaning in a symbolic unit.
Symbolic unit: symbolic pairing of an element of form with a component of meaning.
Syntactic accommodation: when elements in a syntactic complext adapt semantically to each other.
Syntactic relation: relation among elements in a syntactic constructional structure.
Syntactic role: relation between an element and a whole syntactic structure.
Target domain: domain onto which the conceptual structure is mapped in a conceptual metaphor.

Telic (process): process with an endpoint.
Temporal frame: semantic frame having to do with the conceptualization of time into past, present, and future.
Temporal profile: highlighted component of the temporal frame.
Temporary state: non-permanent stative relation.
Termination (point): interruption point of telic or atelic process.
Transition zone: zone in which one category graduates into another.
Transitivity: the number and types of arguments a verbal form typically co-occurs with.
Unbounded(ness): when an entity is not clearly delimited.
Unbounded extent: extended entity or process which is not bounded.
Usage-based (model of language): theory in which it is held that language competence is based on language use; model of information storage allowing for the storage of information at all relevant levels.
Usage-event: instance of use of a linguistic expression.
Verbal domain matrix: the domain matrix typically evoked by predicator constructions in English.
Verb-specific construction: construction, or set of constructions, based on a specific verb
Verb-class-specific construction: construction, or set of constructions, based on a specific verb class.

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Summary

The English progressive construction (i.e. [BE + V-*ing*], as in 'They *are eating* right now') is among one of the most written about phenomena of English grammar, and one should think that there is not much left to write about it. In this dissertation, *A Construction-based Study of English Predicators*, however, it is argumented that many further important details of the construction can be uncovered within the framework of an empirical model of description based on the philosophy of grammar referred to as *integrated grammar* (as opposed to what is called *isolated grammar*, which is characteristic of many Chomskian formal models). The dissertation offers a corpus-based description of the progressive construction and is based on an *integrated construction grammar*. It uncovers some otherwise overlooked or underdescribed aspects of the progressive construction, and alredy known aspects of the construction are described in a different perspective. The purpose of the dissertation is twofold: 1) to show that an integrated construction grammar model may enrich language descriptions, making them more realistic and relevant and 2) to set up a constructionist empirically based model of the progressive construction, implementing the priciples of integrated grammar (something which has not been explored much yet) – in this model prototypical and non-prototypical, more pragmatically specific or metaphorically extended, functions of the construction are mapped out.

Integrated grammar builds on the notion that language is created, developed, and changed in tandem with the socio-cognitive contexts that language exists in; language is seen as an integrated part of the cognitive system of humans. The introduction of the dissertation lists the basic features of the integrated grammar approach:

- *language is a social semiotic system*: language is a system of signs and construction which have socio-interactive functions in a speech community;
- *language is an individual cognitive system*: language is part of the individual's cognition and subject to mental processes;
- *language is usage-based*: language use and language competence are mutually influential;
- *language is not autonomous*: language is an integrated part of general cognition and subject to generl mental processes which also apply elsewhere in human cognition (such as encyclopaedic knowledge).

These principles stem from disciplines like *cognitive linguistics*, *pragmatics*, *functional linguistics*, and *the usage-based model*. An integrated grammar model, mostly based in principles from cognitive linguistics, construction grammar, gestalt research, and the usage-based model is proposed in the present study. The model is mainly a type of construction grammar, since its primary principle is that constructions as holistic signs, rather than atomic units and linear rules of

combination, are the basic elements of grammar.

In chapters 2 to 4, cognitive linguistics, construction grammar (including the usage-based model) as well as the principles of gestalt research. Chapter 2 introduces principles from cognitive linguistics which are used the in drscription in the present study. *Encyclopaedic knowledge* and *categorization* are among the most important of these and each has its own subsection. The section on encyclopaedic knowledge describes *frame semantics* (and similar theories), which is one of the main semantic principles of the present study. In frame semantics, linguistic signs – be it words or constructions – evoke conceptual structures, or *semantic frames*, within encyclopaedic knowledge. A semantic frame is a cognitive model of interrelated concepts; the individual concept cannot be understood without access to the entire frame. A linguistic form evokes one or more frames related to its semantic conceptual content and profiles the concept against the frame(s). When several frames are evoked we speak of a *domain matrix*. The chapter on categorization describes the *prototype theory* which is embraced in both cognitive linguistics and construction grammar. According to this theory, categories evolve around prototypes, causing categories to have asymmetrical *radial structures*. Categorization is also argumented to involve three economy-based principles: 1) *informational density*, 2) *structural stability*, and 3) *flexible adaptability.* Frame semantics and prototype theory are the most important principles of integrated construction grammar alsong with construal operations, metaphor, and polysemy which are described in the remainder of chapter 2. Chapter 3 introduces construction grammar. Construction grammar is an approach to syntax in which linguistic competence consists of holistic structures called *(grammatical) constructions*. Technically, there is no difference between complex grammatical constructions and lexemes since both are regarded conventional semtiotic pairings of form and meaning. Constructions are categories which are organized in accordance with the prototype principle and which are formed through language use. This means that it is not just knowledge of form and semantic content that constitute the linguistic knowledge about a construction, but also knowledge about the pragmatic or discursive context that the construction is used in, and which functions it has in the context. Since construction grammar is *nonreductionalist* (but not noncompositional), one can assume that construction grammar in principle is an application of the principles of gestalt psychology which are discussed in chater 4. A gestalt is a complex figure which is perceived as a functional whole rather than a mosaic built from atomic units. Gestalt theory operates with a set of perception and construal principles which are also applicable in linguistic description (especially within construction grammar). Among other things, the gestalt

principle of closed figures, which stand out against a ground, may be used in the definition of the form of a construction, and the notion of a gestalt as a functional whole in which the parts are derived from the whole and not vice versa, may be used in the description of grammatical units and their functions within complext grammatic structures. Chapter four also provides a discussion of linguistic gestalts and the relation between gestalts and construction grammar.

This is followed by a discussion of the gestalt features of the progressive construction in which it is argued that it constitutes a closed figure such that cases of [BE + V-*ing*] being an instance of the progressive construction ('They *were swimming*') that is separable from the rest of the discourse, which functions as a ground (as opposed to 'Among his favorite activities *were swimming*, bicycling and surfing', in which 'were' and 'swimming' cannot be separated from the syntactic context as forming one unit). It is also argumented that the progressive form of the construction is a functional whole in which 'BE' and 'V-*ing*' are assigned the final definitions as operator and main verb (this may be applied to most finite predicators). Moreover, imperfictivity, which is arguably not the result of the atomic meanings of the two units, is expressed by the entire progressive construction; thus, the progressive may be classified as an idiomatically combining expression. Chapter 5 also contains a discussion of the possible grammaticalization paths of the construction in the perspective of gestalt principles.

The verbal domain matrix is set up in chapter six and the possible construal operations involved in the processes of the construction of the semantics of the progressive are suggested. The progressive construction typically expresses imperfectivity, or ongoing processes. The verbal domain matrix is a terminological framework to be used in constructionist descriptions, not only of the progressive construction, but also predicator constructions in general, so as to offer a deeper cognitive linguistic description of predicator semantics. The verbal domain matrix contains the following:

- *temporal frame*: cognitive model for the conceptualization of time, consisting of the concepts of past, present, and future; profiling of the temporal concepts constitute tense semantics (this is called *temporal profiling*);
- *aspectual frame*: cognitive model for the conceptualization of process structure, containing the concepts inceptive, middle and teminative phases; profiling of the phases censtitutes aspectual semantics (this is called *aspectual profiling*);
- *force dynamic frame*: cognitive model for the conceptualization of force dynamic structure of a process; the force dyanmic domain is specified by the main verb and the argument structure construction;
- *actional specification*: specification, or choice, or action type, which is seen as a question of categorization in the present study;
- *modality domain*: complex domain for the modal judgment of the propositional content of the

utterance.

The middle phase is typically part of the aspectual profile while the inceptive and terminal phases are not un focus. This is what constitutes imperfective aspect. The action type is typically durative since punctual processes and states cannot be construed aspectually. Unlike what is the generaly accepted view in traditional grammar, the present dissertation argues that the progressive construction also specifies modality. Modality is not overtly marked, but it is logical to assume that an ongoing process also is subject to modal judgment. It is just that, since it is ongoing, it is judged epistemically as having very high probability. High probability is thus implied in the progressive construction. Chapter 6 also suggests what the symbolic structure of the progressive might be; embrasing the notion of non-monadic symbolic relations.

Chapter 7 describes the empirical corpus-investigation. The advantages and disadvantages of corpus linguistics are outlined and followed by a description of data and method. The investigation was conducted in a 20,200,000 word subcorpus of the British National Corpus. The result of the investigation was approximately 30,000 finite instances of the progressive construction (finites instantiations are not part of this study), where were then classified in types according and sorted quantitatively. The method section discusses among other things the collostruction analytical technique which is a statistical technique used to measure attraction and repulsion between lexemes and constructions.

Chapters 8 to 12 report the results of the investigation, and the identified functional types are set up in a radial network based on frequency of occurrence. The constructional network is divided into, as is normally done in construction grammar, subconstructions. A subconstruction is the function type associated with a specific class of uses of the construction and often subsumes further subconstructions. Chapter 8 lists and discusses what is called the primary subconstructions of the progressive. The investigation confirmed some already known facts about typical and less typical uses of the progressive, but the integrated construction grammar approach allowed for the identification of some until now untouched subconstructions (counting many *item-based* and *item-class-based* subconstructions as well as a number of specialized modal subconstructions), and for the mapping of new details of already known subconstructions. Below are the primary subconstruction identified in the study:

- *ongoing process*: imperfective use, covers two subconstructions;
  - *Local ongoing process*: small scale ongoing process;
  - *extended ongoing process*: large scale ongoing process;
- *probable future process*: process that will probably take place in the future; modal marker

which conceptually blends the implicit high probablitity of the progressive construction with elements from future conception ;
- *directive future process*: deontic imperative-like use of the probable future subconstruction which construes an asymmetric social power relation between speaker and listener;
- *temporal state*: non-permanent state; subsumes several item-class-based subconstructions
  - *behavioral state*: state related to behavioral patterns;
    - *interpretational behavioral state*: verb-specific subconstruction which only occurs with BE as main verb; interprets behavior as the result of a temporary state;
  - *non-behavioral state*: non-permanent non-behavioral state;
  - *mental state*: item-class-specific subconstruction which only occurs with mental verbs; expresses the mental state of an animate entity; subsumes further more specific subconstructions;
  - *modal state*: item-class-specific subconstruction only occuring with quasi-modals and may possibly be a hybrid construction; sobsumes furhter item-specific subconstructions which have various modal and politeness functions;
- *habit*: a process that is repeated so frequently that is is construed as an attribute of the agent; subsumes further item-class-specific subconstructions;
- *doubt-marker*: indicates speaker's stance of doubt towads the validity of the propositional content of the utterance;
- *annulled process*: announces the cancellation of an otherwise planned process;
- *wish*: politeness marker indicating a request for the listener to perform an action.

Each subconstruction is accounted for quantitatively and explained in accordance with the principles that are posed in the integrated grammar approach, which means that cognitive, social, discursive, and other factors are involved in the descriptions. In chapter 9 a set of item-class-specific subconstructions are discussed, called coercive constructions. These are based on *semantic coercion* of lexical units, such that they are converted semantically into a different type from what they normally belong to. In relation to the progressive verbs that are not compatible semantically with the construction a coerced into being semantically compatible (that is, non-durative verbs are converted into expressing durative-like processes). Four types of recurrent coercion patterns were identified, which are based on the type of actionality typically associated with the verb in question, wherefore the patterns may be analyzed as coercive constructions:

- *iterativity*: punctual process verbs are converted semantically into expressing an iterative superprocess consisting of identical punctual processes;
- *runup*: irreversible punctual verbs are semantically converted into expressing runup processes (i.e. the states and processes that lead up to the punctual process itself are construed as part of that process);
- *full to capadity*: verbs normally expression the breaching of the boundary of a container are semantically converted to expressing that the container is full to capacity;
- *temporary state*: stative verbs are converted semantically into expressing temporary states.

Chapter 10 discusses some secondary functions of the progressive which cannot be assigned to the

cosntruction alone but rather to the syntactic contexts it appears in. Moreover, these functions are not unique to he progressive but functions that may be assigned to all of the central predicator construction in English. One interesting function, which may be developing into a subconstruction proper of the progressive construction, is what could be called the *evaluative* use. It occurs in cross-event relating constructions in which two clauses are juxtaposed. The clause that contains the progressive functions as an interpretation or evaluation of the other process expressed by the other clause. The results of the collostructional analyses are discussed. Not surprising, the collostructional analysis shows that among the most attracted verbs are mainly durative verbs, while among the repelled verbs are mainly non-duratives, and especially stative verbs. There are a few unexpected elements though, such as stative verbs among the 50 most attracted items and process verbs among the 50 most repelled items. In addition there are some punctual verbs that rank higher in attraction than what could be expected. These are discussed in an integrated grammar perspective. Finally, a model of the constructional network of the progressive construction is set up, drawing on the qualitative and quantitative results of the corpusinvestaigation.

In chapter 13, the progressive construction is compared to other predicator constructions which also express imperfectivity or other types of unbounding of processes. The differences among the constructions consist, among other things, in the communicative and conceptualizing processes which are associated with each of the constructions. Pradigmatics is also discussrd this chapter in terms of whether it is feasible to introduce paradigms into construction grammar. Since constructions are associated with different construals and construals operations allowing for the communicative construal of the same propositional content in many different ways, construction grammar could benefit from operating with paradigms in one form or another.

In chapter 14 some more procedural and interpersonal aspects of semantics are discussed, such as the proteanism of meaning and instructional semantics, and whether it is feasible to apply these to the progressive construction and to the integrated grammar framework. Potential procedural aspects of the progressive construction are also discussed in this chapter.

Resumé

Den engelske progressiv-konstruktion (dvs. [BE + V-*ing*], som i 'They *are eating* right now') er blandt de mest beskrevne grammatiske fænomener i det engelske sprog, og man skulle mene, at der ikke kan skrives ret meget mere derom. I denne afhandling, *A Construction-based Study of English Predicators*, argumenteres og påvises det dog, der i en empirisk beskrivelsesmodel der er baseret på den grammatikfilosofi, der kan kaldes *integreret grammatik* (i modsætning til det, der kaldes *isoleret grammatik*, som kendetegner mange formelle modeller af Chomskiansk ophav) er mulighed for at afdække mange flere aspekter af konstruktionen. Afhandlingen præsenterer et bud på en korpusbaseret beskrivelse af den progressive konstruktion, som er baseret på en *integreret konstruktionsgrammatik*, og som afslører nogle hidtil oversete eller underbeskrevede aspekter af den progressive konstruktion, og anerkendte aspekter of konstruktionen beskrives i et nyt lys. Formålet er tofoldingt: 1) at påvise at en integreret konstruktionsgrammatisk model er i stand til at berige sprogbeskrivelser samt at gøre sprogbeskrivelser mere realistiske og relevante og 2) at opstille en konstruktionsgrammatisk empirisk baseret model over den progressive konstruktion, hvilket ikke hidtil er blevet gjort, som implementerer principperne fra integreret grammatik – i denne model redegøres det blandt andet for hvilke af konstruktionens funktioner, der er prototypiske, og hvilke, der er mere pragmatisk og metaforiske specifikke udevidelser heraf.

Integreret grammatik er baseret på en erkendelse af, at sproget skabes, udvikles og ændres i samspil med de socio-kognitive kontekster, sproget eksisterer i; sproget ses som en integeret del af menneskets kognitive system. I afhandlingens indledning udridses de basale træk hos den integrerede grammatiske tilgang, disse op stilles i det følgende:

- *sproget er et social-semiotisk system*: sproget er et system af tegn og konstruktioner, der tjener socialt-interaktive formål i et sprogsamfund;
- s*proget er et individuelt mentalt-kognitivt system*: sproget er en del af individets kognition og er underlagt mentale processer;
- *sproget er brugsbaseret*: sprogbrug og sprogkompetence står i gensidig indflydelse til hinanden;
- *sproget er ikke autonomt*: sproget er integreret is generel kognition og underlagt generelle mentale processer, der også findes andetsteds i menneskelig kognition (blandt andet encyklopædisk viden).

Disse principper er indhentet fra discipliner som *kognitiv lingvistik*, *pragmatik*, *funktionel lingvistik* og *den brugsbaserede model*. I afhandlingen foreslås en integreret grammatik-model, der hovedsageligt trækker på principper fra kognitiv lingvistik, konstruktionsgrammatik, gestalt-

forskning samt den brugsbaserede model. Modellen er hovedsageligt konstruktionsgrammatisk, da dens grundpille er ideen, at konstruktioner som holistiske tegn, snarere end atomiske enheder of linære kombinationsregler, udgør de basale elementer i grammatikken.

I afsnit 2 til 4 gennemgås kognitiv lingvistik, konstruktionsgrammatik (herunder den brugsbaserede model), samt gestalt-forskningens grundprincipper. I afsnit 2 gennemgås principper fra den kognitive lingvistik, som bruges i beskrivelsen i denne afhandling. Blandt de vigtigste af disse er *encyklopædisk viden* og *kategorisering*, der hver har fået deres egne subsektioner. I sektionen om encyklopædisk viden beskriver *rammesemantik* (og lignende teorier), som fungerer som et af afhandlingens primære semantiske grundprincipper. I rammesemantik antages det, at sproglige tegn – det være sig ord eller konstruktioner – fremkalder konceptuelle strukturer, eller *semantiske rammer*, i den encyklopædiske viden. En semantisk ramme er en kognitiv model bestående af interrelaterede koncepter, og det enkelte koncept kan ikke forstås uden tilgang til hele rammen. En sproglig form fremkalder en eller flere rammer, som dets konceptuelle semantiske indhold relaterer til, og profilerer konceptet i den ramme. Når der fremkaldes flere rammer, kaldes det for en *domæne-matriks*. I afsnittet om kategorisering gennemgås *prototype-teorien*, som er underliggende i både kognitiv lingvistik og konstruktionsgrammatik. Ifølge denne teori er kategorier baserede omkring prototyper, hvorfor kategorier har asymmetriske *stjernenetværksstrukturer*. Der argumenteres også, at kategoriesering involverer tre økonomiske principper: 1) *informationstæthed*, 2) *strukturel stabilitet* og 3) *fleksibel tilpasningsævne*, hvilket gør, at kategorier både er stabile of fleksible. Rammesemantik og prototype-teori udgør de vigtigste semantiske principper i integreret konstruktionsgrammatik sammen med koncpetualiserings-processer, metafor og polysemi, der besrives i resten af afsnit 2. Afsnit 3 introducerer konstruktionsgrammatikken. Konstruktionsgrammatik er en tilgang til syntaks, hvori sprolig kompetence udgøres af holistiske skematiske strukturer, der kaldes *(grammatiske) konstruktioner*. I princippet er der ingen forskel på komplekse grammatiske konstruktioner og leksemer, da begge anses for konventionelle semiotiske form-indholdspar. Konstruktioner udgør kategorier, der er organiseret efter prototypeprincippet, og som formes efter sprogbrug. Dette betyder, at det ikke kun er form og semantisk indhold, der er del af den sproglige viden omkring konstruktionen, men også viden om den pragmatiske eller diskursive kontekst, konstruktionen bruges i, og hvilke funktioner den har i denne kontekst. Da konstruktionsgrammatik har en *nonreduktionistisk* (dog ikke nonkompositionel) karakter, må man antage, at konstruktionsgrammatikken i princippet er en applikation af gestalt-psykologiens principper, hvilke gennemgås i afsnit 4. En gestalt er en

kompleks figur, der opfattes some en funktionel helhed snarere end en mosaik, der er bygget op af atomiske enheder. Gestalt-teori opererer med et sæt opfattelses-, sanse- og fortolkningsprincipper, der også kan anvendes i sprogbeskrivelse (specielt i konstruktionsgrammatisk sprogbeskrivelse). Blandt andet kan gestaltprincippet om lukkede figurer, der udskilles fra en grund, anvendes i definitionen på en konstruktions form, og ide'en om en gestalt som en funktionel helhed, hvor delene defineres af helheden og ikke omvendt, kan bruges i beskrivelsen af gramatiske enheders funktioner i større grammatiske komplekser. Udover en diskussion af gestaltprincipperne, indeholder afsnit 4 en diskussion af sproglige gestalter, som diskuterer forholdet mellem gestalter og konstruktionsgrammatik nærmere.

Dette efterfølges i afsnit 5 af en gennemgang af gestalttrækkene hos den progressive konstruktion, hvor det blandt andet argumenteres, at den udgør en lukket figur, således at i tilfælde, hvor [BE + V-*ing*]-sekvensen er et tilfælde af den progressive konstruktion (som 'They *were swimming*'), kan den adskilles fra resten af diskursen, der fungerer som grund (i modsætning til 'Among his favorite activities *were swimming*, bicycling and surfing', hvor 'were' og 'swimming' jo ikke kan siges at være en lukket figur). Der argumenteres også for den progressive konstruktions form som en funktionel helhed, hvor 'BE' og 'V-*ing*' får deres endelige definitioner som operator og hovedverbum (hvilket kan applikeres til de fleste andre finitte verbalstrukturer). Derudover kan imperfektivitet, som jo er den progressive konstruktions hovedfunktion, ikke siges at være resultatet af de to elementers atomiske betydninger, men snarere noget, der udtrykkes af den progressive konstruktion som helhed, og at den progressive konstruktion kan betegnes som et idiomatisk kombinerende udtryk. Afsnit 5 indeholder også en diskussion af konstruktionens mulige grammatikaliseringsforløb i lyset af gestaltprincipperne.

I afsnit 6 sættes den verbale domæne-matriks op, og en teori fremstilles verørende hvilke konceptualiseringsprocesser der tænkes at være involveret i den progressive konstruktions semantiks generelle konstruering. Den progressive konstruktion udtrykker imperfektivitet, eller igangværende processer. Den verbale domæne-matriks er en terminologiramme, der kan anvendes til en konstruktionsgrammatisk beskrivelse, ikke blot af den progressive konstruktion, men også andre verbalkonstruktioner til en dybere kognitiv lingvistisk beskrivelse af verbalstrukturers semantik. Den verbale domænematriks består af følgende elementer:

- *temporal ramme*: kognitiv model for tidsopfattelse bestående af koncepterne fortid, nutid og fremtid; profilering af tidskoncepterne udgør tempussemantik (dette kaldes *temporal profilering*);
- *aspektuel ramme*: kognitiv model for process struktur, baseret på opfattelsen af, at processer

har en begyndelses-, midt- og slutfase; profilering af faserne udgør aspektuel semantik (dette kaldes *aspektuel profilering*);
- *kinetisk domæne*: kognitiv model for processens kinetiske opbygning, så som antallet af participanter og det kinetiske forhold mellem dem; det kinetiske domæne specificeres i det enkelte tilfælde af hovedverbet og argumentstrukturen;
- *aktionsartspecifikation*: specifikation, eller valg, af aktionsart, der her ses som et spørgsmål om kategorisering af processer;
- *modalitetsdomæne*: komplekst domæne for modal bedømmelse af processen.

I den progressive konstruktion er midtfasen typisk del af den aspektuelle profil, mens begyndelses- og slutfaserne ikke er i fokus, hvilket er det, der konstituerer imperfektivitet. Derudover er aktionsartsspecifikationen typisk durativ, da punktuelle processer samt tilstande ikke kan fortolkes aspektuelt. Modsat den traditionelle holdning inden for engelsk grammatik argumenteres det her, at den progressive konstruktion også specificerer modalitet. Modalitet er ganske vist ikke markeret, men man må slutte, at en igangværende situation også kan probablilitetsbedømmes. Det er blot sådan, at fordi den er igangværende, så bedømmes den epistemisk som havende en meget høj probabilitet. Høj probabilitet er således implicit i den progressive konstruktion. Afsnit 6 afsluttes med et bud på den progressive konstruktions symbolske struktur, som opstilles ikke-monadisk.

Afsnit 7 beskriver den empiriske korpusundersøgelse. Fordelene og ulemperne ved kospuslingvistikken trækkes kort op og efterfølges af en beskrivelse af data og metode. Undersøgelsen blev foretaget i et 20200000-ords subkorpus af British National Copus. Resultatet af korpusforespørgelsen var ca. 30000 finitte forekomster af den progressive konstruktion (infinitte realiseringer medgår ikke i denne undersøgelse), der derefter blev klassificeret i typer of redegjort for kvantitativt. I metodedelen gennemgås blandt andet kollostruktionsteknikken, som er en statistisk teknik, der kan bruges til måling af tiltrækkelses- og frastødningsforhold mellem leksemer og konstruktioner.

I afsnit 8, 9, 10, 11 og 12 rapporteres resultaterne af undersøgelsen og de identificerede funktioner sættes op i et konstruktionsstjernenetværk baseret på frekvens. Konstruktionsnetværket deles op, som der er for vane i konstruktionsgrammatikken, i subkonstruktioner. En sub-konstruktion er den enkelte funktionstype, og råder ofte over yderligere subkonstruktioner. I afsnit 8 redegøres der for det, som i dette studie betegnes som de primære subkonstruktioner. Undersøgelsen bekræftede nogle allerede velkendte fakta vedrørende typiske og mindre typiske funktioner, men den konstruktionsgrammatiske tilgang, der er baseret på integreret grammatik gjorde også, at hidtil urørte subkonstruktioner kunne redegøres for (blandt andet en del såkaldte *enhedsspecifikke* og *endhedsklassespecifikke* subkonstruktioner samt et par specialiserede modale

subkonstruktioner), samt at der kunne redegøres for nye detaljer hos de allerede anerkendte subkonstruktioner. Her følger en liste over de overordnede primære subkonstruktioner, der identificeredes i undersøgelsen med frekvens for de mest :

- *iganværende process*: imperfektiv brug, dækker over to subkonstruktioner;
  - *lokal iganværende process*: igangværende process på lille skala;
  - *udvidet iganværende process*: igangværende process på stor skala;
- *sandsynlig fremtidig process*: process der sandsynligt vil finde sted i fremtiden; modalmarkør, der konceptuelt integrerer den implicitte høje probabilitet fra den progressive konstruktion med elementer fra koncptuelle fremtidstemporalitet;
  - *beordrende fremtidig process*: illokutionært specifik deontisk imperativ-agtig brug af ovennævnte subkonstruktion, der opbygger et ulige socialt magtforhold mellem taler og lytter;
- *foreløbig tilstand*: ikke-permanent tilstand; dækker over flere enhedsklassebaserede subkonstruktioner;
  - *behavioral tilstand*: tilstand, der er forbundet med behaviorale mønstre;
    - *interpretation af behavioral tilstand*: verbspecifik subkonstruktion, der kun forekommer med BE som hovedverbum; fortolker behaviorale mønstre som forårsagede af en non-permanent tilstand;
  - *ikke-behavioral tilstand*: ikke-permanent ikke-behavioral tilstand;
  - *mental tilstand*: enhedsklassespecifik subkonstruktion, der kun forekommer med mentale verber; udtrykker en animeret enheds mentale tilstand; dækker over yderligere specifikke subkonstruktioner;
  - *modal tilstand*:enhedsklassespecifik subkonstruktion, der kun forekommer med semi-modale verber og muligvis er en hybridkonstruktion; dækker over yderligere enheds-specifikke subkonstruktioner, der har forkellige modal- og høflighedsfunktioner;
- *vane*: en process, der gentages så hyppigt, den fotolkes som en attribut hos agenten; dækker over yderligere enhedsklassespecifikke subkonstruktioner;
- *tvivlmarkør*: indikerer talerens tvivl verørende det propositionelle indholds validitet;
- *annulleret process*: annoncerer en annulleret process, og har muligvis konversationsstrukturerende subfunktioner;
- *ønske*: høflighedsmarkerende udtryk for at får lytteren til at udføre en handling.

Hver subkonstruktion redegøres for kvanititativt og forklares udfra principper, der indgår i integreret grammatik-tilgangen, hvilket vil sige, at kognitive, sociale, diskursive og andre faktorer indgår i beskrivelserne. I afsnit 9 redegøres der for et set enhedsklassespecifikke subkonstruktioner, der kaldes fremtvingende konstruktioner. Disse konstruktioner er baserede på semantisk omlægning, eller *fremtvingning* af en ny semantisk klasse, af verber, der ikke aktionelt passer ind i den progressive konstruktion; hvilket vil sige verber, hvis aktionsart ikke er durativ. I korpusundersøgelsen identificeredes fire gennemgående fremtvingningsmønstre. Disse mønstre baseres på den aktionsart, som et verbum typisk hører til, og kan derfor analyseres som enhedsklassespecifikke konstruktioner:

- *iterativitet*: punktuelle processverber konverteres semantisk til at udtrykke en iterativ

superprocess bestående af identiske punktuelle processer;
- *opløb*: ikke-omstødelige punktuelle verber konverteres semantisk til at opløbningsprocesser (dvs. de tilstande og processer, der fører op til den punktuelle process iregnes som en del af processen);
- *fuld kapacitet*: verber, der normalt udtrykker nedbrydning af en beholder's barriere konverteres semantisk til at udtrykke, at beholderen er fyldt til bristepunktet;
- *forløbig tilstand*: verber, der udtrykker tilstande og forhold konverteres semantisk til at udtrykke foreløbig tilstande.

Afsnit 10 diskuterer sekundære funktioner af den progressive konstruktion, der ikke kan tilskrives den alene, men snarere de syntaktiske kontekster, den forekommer i. Ydermere er disse funktioner ikke unikke progressivfunktioner, men funktioner, der kan tilskrives alle de centrale verbalstrukturer i engelsk. En interessant brug, der muligvis kan være igang med at udvikle sig til en egentlig subkonstruktion under den progressive konstruktion er det, der kan kaldes den *evaluerende* brug. Den forekommer i tværsprocess-relaterende konstruktioner, hvor to sætninger sidestiller to processer. Den sætning med den progressive konstruktion fungerer som en fortolkning eller evaluering af den anden sætning. I afsnit 11 gennemgås resultaterne fra kollustruktionsundersøgelserne, som viser, af durative verber hovedsageligt er titrukkede af den progressive konstruktion, mens verber, der er mindre semantisk kompatible med konstruktionen er mindre tiltrukkede eler frastødte. Ikke overraskende er der flest tilstandsverber blandt de frastødte verber. Der er dog enkelte uventede elementer, så som tilstandsverber blandt de 50 mest tiltrukkede verber samt processverber blandt de 50 mest frastødte. Derudover er der enkelte punktuelle verber, der rangerer højere i tiltrækgning end man ellers kunne forvente. Disse diskuteres i et integreret grammatik-perspektiv. Slutteligt præsenteres et overblik over den progressive konstruktions konstruktionsnetværk i afsnit 12, trækkende på de kvalitative og kvantitative resultater fra korpusundersøgelsen.

I afsnit 13 sammenlignes den progressive konstruktion med andre verbalkonstruktioner, der også udtrykker imperfektivitet eller uafgrænsede processer. Det sluttes, at forskellene blandt andet udgøres i de kommunikative og konceptualiserende processer, der associeres med hver konstruktion, og muligheden for at introducere paradigmebegrebet i konstruktionsgrammatik undersøges også.

Slutteligt, i afsnit 14 diskuteres mere procedurale og interpersonelle aspekter af semantik, så som semantisk proteanisme of instruktionssemantik, og hvorvidt disse kan og bør applikeres til den progressive konstruktion og i integreret grammatik. Potentielle procedurale aspekter af den progressive konstruktion diskuteres også.