The construction of words: Introduction and overview

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Abstract In Construction Morphology, morphological patterns are expressed by constructional schemas that motivate properties of existing complex words, and state how new complex words can be formed. This article briefly summarizes a number of theoretical assumptions of Construction Morphology, and how they play a role in the various contributions to this volume on advances in Construction Morphology. Key features of this theory are that morphology is word-based, that morphological patterns are interpreted as constructions (form-meaning pairs), and that there is no strict separation of grammar and lexicon. Paradigmatic relationships play an essential role in structuring lexical and grammatical knowledge. These ideas can be applied fruitfully to the study of sign language, visual language, language change, language acquisition, and language processing.

Keywords: constructicon, construction morphology, motivation, paradigmatic relations, word-based morphology

1 Introduction

The word *construction* in the title of this volume, *The construction of words*, has both an action and a result interpretation. When used as an action noun, *the construction of words* denotes the formation of words. In its result interpretation, the phrase *the construction of words* denotes the morphological structure of existing words. Both interpretations of this word are relevant in the articles in this volume on advances in Construction Morphology, because morphology has to account for the properties of existing complex words, as well as for the formation of new ones.

Construction Morphology is a theory of linguistic morphology in which the notion 'construction' plays a crucial role. A linguistic construction is a systematic pairing of form and meaning, and this notion applies to the analysis of both syntactic and morphological phenomena. The constructional approach is referred to as Construction Grammar (Hoffmann & Trousdale (2013), and its application to the analysis of words as Construction Morphology (Booij 2010), abbreviated as CxM.

The model of CxM uses constructional schemas to account for the systematic form-meaning relations between words. For instance, there is a systematic form-meaning relationship between the following two sets of corresponding English words (data from Bauer et al. 2013: 304):

(1)

noun	*adjective*
art	arty
bitch	bitchy
girl	girly
rust	rusty

The meaning of the adjectives can be paraphrased as 'possessing characteristic properties of N, where N denotes the meaning of the corresponding noun'. This systematic paradigmatic relationship can be captured by the following morphological constructional schema:

(2) form: $[[x]_{Ni}\ y]_{Aj}$
meaning: [possessing characteristic properties of $SEM_i]_{SEMj}$

An alternative formalization that is common in Construction Morphology is (3):

(3) $[[x]_{Ni}\ y]_{Aj} \leftrightarrow$ [possessing characteristic properties of $SEM_i]_{SEMj}$

The double arrow stands for the form-meaning correspondence. The variable x stands for the phonological form of the noun. By means of co-indexation it is indicated that the meaning (SEM) of the noun is a component of the meaning of the corresponding adjective. This schema presupposes that the meaning of the noun is specified separately. Hence, this schema is based on paradigmatic relations between words.

The function of such a constructional schema is primarily to provide motivation for the properties of English denominal adjectives ending in *-y*. In other words, the form and meaning of such adjectives are not completely arbitrary. Thus, it is a primarily declarative approach to morphological knowledge. However, such schemas also indicate how new words can be formed. By replacing the variable in schema (3) with a noun, for instance the noun *perfume*, we derive a new adjective, *perfumy*.

The basic ideas of CxM have been explicated and defended in Booij (2010), and in a number of introductory chapters on CxM in various linguistic handbooks (Booij 2013, 2014, 2016, 2017). The present volume aims to show the relevance and fruitfulness of the model of CxM in various domains of linguistic research.

CxM is word-based morphology. That is, complex words are not seen primarily as a concatenation of morphemes, but as independent meaningful units within which certain subcomponents (morphemes) may be distinguished on the basis of paradigmatic relations with other words. That is, morphology is not to be equated with the 'syntax of morphemes'. Morphological schemas characterize the 'Gestalt' of complex words and their holistic properties. This view of the nature of linguistic signs is also fundamental for a proper analysis of sign language and visual language, as the articles in this volume by Lepic & Occhino (American Sign Language) and Cohn (visual language) argue in detail.

The articles in this volume are organized as follows. First, a number of articles argue that the CxM model can deal with various phenomena that pose theoretical challenges for models of grammatical organization such as non-concatenative morphology, partial and multiple motivation of words, discontinuous lexical items, the interface between morphology and phonology, sign language, and visual language (Part 1). Secondly, various articles show how CxM can be fruitfully applied in the description of the morphology of individual languages. The morphological analyses of these languages lend empirical support to various theoretical concepts of CxM (Part 2).

An important criterion for the adequacy of linguistic models is that of 'graceful integration' (Jackendoff 2011). Graceful integration means that the model of grammar that one assumes should allow for the incorporation of, or be in harmony with relevant findings in related subdomains of linguistics, such as psycholinguistics and historical linguistics. This position is similar to what is referred to as 'the cognitive commitment': "a promise to build linguistic descriptions and postulate theoretical concepts which are at least informed, if not fully justified, by what is now known about the

human brain and human cognition" (Dancygier 2017: 2).Therefore, this volume also contains studies that deal with the relevance of CxM for historical linguistics (Part 3) and psycholinguistics: language acquisition and language processing (Part 4).

Two articles deal with the application of CxM to languages conveyed in a modality other than speech such as sign languages and visual languages, and show how some concepts of CxM are enlightening in these domains of linguistic research as well.

Lepic & Occhino propose that American Sign Language utterances should be analyzed as constructions, as they draw on conventional patterns of meaning and form exhibiting fixed and variable slots. They show that the CxM approach leads to a uniform analysis of "monomorphemic" lexical signs and "multimorphemic" classifier signs. They show that the CxM analysis can then be extended to the analysis of multimodal spoken English utterances, as well.

Cohn argues for the relevance of the concepts of Construction Morphology for the analysis of visual languages. Just as structured mappings between phonology and meaning make up the lexicons of spoken languages, structured mappings between graphics and meaning comprise lexical items in visual languages. Such representations may also involve combinatorial meanings that arise from affixing, substituting, or reduplicating bound and self-standing visual morphemes. Hence, they show a striking parallelism with the way that morphological constructions are created in ordinary language.

2 Schemas and subschemas

Constructional schemas for complex words generalize over sets of existing complex words. They can account for holistic properties of morphological constructions, properties that cannot be derived from those of their constituents. A prototypical example of such a holistic property is that the meaning of words formed by means of total reduplication is evoked by the copying configuration as such. For instance, in may languages, the meaning component of intensity of an action is expressed by doubling the verb that denotes the relevant action. Reduplication in Italian is discussed in Masini & Iacobini. Holistic properties of constructions are also discussed by Lepic & Occhino (American Sign Language), visual language (Cohn), and by Amiot & Tribout (French deadjectival nouns).

A second fundamental property of schemas is that they are output-oriented, as has also been stressed in Bybee's work (Bybee 1995). They specify output forms, and language users make generalizations based on these output forms. This is important for understanding the interaction of morphology and phonology (Caballero & Inkelas), for the description of prosodic morphology (Davis & Tsujimura, Tsujimura & Davis) and for understanding morphological change (Norde & Van Goethem, Van de Velde).

The declarative nature of schemas makes it possible to express generalizations over sets of words even when the morphological pattern involved is no longer productive. This is shown in Booij & Audring (this volume), an article that deals with Dutch verbs with stems ending in *-el* and *-er*. The constructions with these suffixes are not productive anymore. Yet, verbs of these form exhibit recurrent semantic properties such as the expression of attenuation and repetition of an event. In some cases, these verbs can even be linked to more than one schema, and thus receive motivation from more than one source. Tsujimura & Davis (this volume) observes the same for Japanese: reduplicated adverbs that express intensity may not have a corresponding base word, and yet they convey the meaning component of intensity that is linked to reduplication.

The possibility of schema unification is another advantage of the use of schemas. It has often been observed that multiply complex words may have a base that does not exist as a word by itself. Many Dutch *on*-adjectives ending in the suffix *-elijk*, for example do not have a base word that exists on its own:

(4)

negative adjective	*base word*
on-beschrijf-elijk ‘un-describable’	beschrijf-elijk
on-doorgrond-elijk ‘un-fathomable’	doorgrond-elijk
on-verget-elijk ‘un-forgettable’	verget-elijk
on-verzett-elijk ‘un-compromising’	verzette-lijk

The base words (positive adjectives) do not exist by themselves. They are potential words, as they are well-formed. The formation of these negative adjectives can be accounted for by a unified schema, the unification of the schema for *on-A* adjectives and that for deverbal adjectives in *-elijk*.

(5) $[\textit{on}\ [x]_A]_A + [[y]_V\ \textit{elijk}]_A = [\textit{on}\ [[y]_V\ \textit{elijk}]_A]_A$

The co-occurrence of two word formation processes in the formation of multiply complex words can thus be expressed straightforwardly, whereas it would be a problem for a rule-based account of word-formation processes. In Kempf & Hartmann (this volume), this type of co-occurrence of word formation processes is discussed in detail for German, and these authors provide diachronic evidence for the necessity of unified schemas.

It is important to be able to express generalizations about complex words on different levels of abstraction, since a set of complex words may consist of subsets with properties of their own. For instance, for Chinese, a language with massive compounding, we need, in addition to a general schema for compounding in Chinese, subschemas for left-headed and right-headed compounds (Arcodia & Basciano). Therefore, we may represent the knowledge of complex words as a hierarchy with the most abstract schemas at the top, and the concrete individual complex words at the bottom, with intermediate schemas that express generalizations about subpatterns. This is the idea of a hierarchical lexicon.

Subschemas can be used to solve a classic problem in morphology, the existence of a gray area between compounding and derivation (Booij 2005). The phenomenon involved is that words embedded in compounds may have specific meanings that they do not have when used as words by themselves. This phenomenon may be referred to as ‘bound meaning’. An example is the use of the Dutch noun *pracht* ‘beauty, glamour’ as a word of positive evaluation, as in:

(6) pracht-baan ‘great job’
pracht-cadeau ‘great gift’
pracht-dag ‘great day’
pracht-kerel ‘great guy’

The question then arises: should we call this use of *pracht* an affix, because it has a meaning tied to its appearance on complex words, just like affixes have? This classification would not do justice to the fact that the link to the noun *pracht* is still there, also because there is a related denominal adjective *pracht-ig* ‘beautiful’. It is here that subschemas can be used. The bound meaning of *pracht* can be specified in a subschema for Dutch right-headed NN compounds:

(7) $[[\text{pracht}]_{Ni}\ [x]_{Nj}]_{Nk} \leftrightarrow [\text{beautiful}_i\ \text{SEM}_j]_{SEMk}$

Such a schema, with at least one position specified lexically, is called a constructional idiom. It is an instantiation of the general schema for Dutch NN compounds, but is more specific in nature. Words with a bound meaning are also referred to as affixoids.

The necessity of such constructional idioms for a proper account of affixoids, words with a bound meaning when forming parts of compounds such as Dutch *reuze-* 'giant', and English *top-* 'excellent', and the possible category change of words with such bound meaning is discussed in Norde & Van Goethem (this volume). Van Huyssteen (this volume) argues that the pronoun *hulle* 'they' of Afrikaans, when used to express the associative plural (as in *pa-hulle* 'father and his family/friends') is also best interpreted as an affixoid. That is, the word *hulle* has a specific meaning bound to its occurrence in the right position of a compound. This requires a constructional idiom of the type [x-*hulle*].

In Chinese there are many compounds with constituents that do not appear as words by themselves, even though they have a lexical meaning. These roots can be specified as constructional idioms that define the class of compounds with that root, and the corresponding meaning (Arcadio & Basciano). This implies the existence of compounding subschemas with one slot lexically fixed.

3 Non-concatenative morphology

Non-concatenative morphology denotes the kind of morphological operations that are used to form words that do not consist of the concatenations of words and bound morphemes. The general problem is that the signer part of a complex word is not always a linear representation of sounds, as discussed in detail in the contribution to this volume by Jeff Good. A complex sign is not always a linear concatenation of simplex signs. Morphological structure may deviate from this canonical type of word formation, and it is in these cases that, as Good argues, Construction Morphology offers the formal means to account for such more complicated types of relationship between form and meaning, between signifier and signified. These includes the absence of a formal marker of a meaning component, the use of suprasegmental morphology, prosodic morphology, and morphological templates. In addition, signifiers may consist of discontinuous parts as in circumfixation, and in particle verbs. Masini & Iacobini (this volume) present several cases of discontinuity, which can be captured by constructional schemas.

Semitic languages are well-known examples of languages that make extensive use of non-concatenative morphology, in particular the combination of vocalic and consonantal patterns. In Davis & Tsujimura (this volume) is it shown how CxM schemas can account for this kind of morphology in Arabic.

Words may formed by imposing specific prosodic forms on them. This is called prosodic morphology. The morphological operation may consist of reduction of the base word to a shorter form with a specific prosodic shape, or a combination of a prosodic shape and adding certain sounds. This means that output forms of words have to be specified in terms of prosodic templates. The CxM analysis of this kind of word formation in Japanese is given in Tsujimura & Davis (this volume). This CxM analysis makes use of schemas that specify phonological form (PHON), morpho-syntactic form (SYN), and semantic/pragmatic properties (SEM). Thus, we see how constructional schemas require the tripartite Parallel Architecture of grammar proposed in Jackendoff (2002).

The relation between CxM and Parallel Architecture is also discussed in Booij & Audring (2017), who discuss various types of non-concatenative morphology that require schemas with these three levels. An important presupposition of such CxM analyses is that constructions may be related paradigmatically. The importance of paradigmatic relations is discussed in more detail in section 5.

The phonological exponence of morphological constructions is also dealt with by Caballero & Inkelas (this volume), who focus on the phenomenon of multiple exponence, a form of mismatch between phonological form and morpho-syntactic information. They focus on the computation of the proper phonological form of morphological constructions with multiple exponence, and show how this can be dome by combining Optimality Theory with a constructionist approach to word structure.

4 The demarcation of morphology and syntax

The demarcation of morphology and syntax has been an important topic of debate for decades in discussions of the architecture of grammar. In Construction Grammar and Construction Morphology, there is no strict separation of grammar and lexicon. The 'constructicon' of a languages comprises both abstract syntactic and morphological schemas, and their fully or partially lexicalized instantiations, words and phrases (Booij 2010, Culicover et al. 2017). Lepic & Occhino (this volume) demonstrate, for example, that the strict separation of grammar and lexicon leads to unintuitive analyses of morphosyntactic constructions in American Sign Language.

Note, however, that in CxM the distinction between words and phrases is maintained. Words are islands for syntactic operations. However, complex words do not differ from phrases in that phrases, unlike complex words, are always created anew, and normally not stored: both complex words and phrases can be stored. Therefore, we need morphological and phrasal schemas that specify the predictable properties of stored instantiations of these schemas. Moreover, syntax and morphology interact in that certain types of phrase can be embedded in complex words.

Phrasal lexemes in various languages illustrate this conception of grammar. Phrasal lexemes are lexemes that are stored in the lexicon but have a phrasal form. In this volume, Cetnarowska (this volume) gives an analysis of phrasal A+N lexemes in Polish, and Masini & Iacobini (this volume) discuss Italian phrasal lexemes. Particle verbs in Germanic languages form another class of phrasal lexemes. In some Germanic languages, these lexemes can even be discontinuous (Good, and Masini & Iacobini, this volume). In CxM, both complex words and phrasal lexical items can be listed, and at the same time their recurrent properties are specified by abstract schemas.

For some languages it is even hard to determine of a certain type of construct is a word or a phrase, as pointed out in this volume by Baker for Australian languages, and by Arcodia & Basciano for Chinese. The advantage of CxM is that we are not forced to make an arbitrary decision in such cases, because the fact that such constructs are lexemes does not necessarily require a choice between morphology and syntax. Moreover, the Parallel Architecture approach which is part of CxM (Booij & Audring 2017) makes it possible to account for constructs which may be more than one word on the level of phonology. whereas they are one word on the morpho-syntactic level. Baker (this volume) argues that this architecture is necessary for a proper account of words in a number of Australian languages which exhibit this asymmetry between the phonological and the morpho-syntactic level.

Another type of interaction between morphology and syntax is the phenomenon of construction-dependent morphology (Booij 2010, Booij & Audring to appear): a syntactic construction may require words of a certain morphological make-up to appear. For instance, in phrases of the following type in Dutch, the adjective must be suffixed exclusively with *-e* in order to be used as a noun in the *op het* [A-e]$_N$ *af*-construction with the meaning 'almost A':

(8) op het smerig-e af 'almost dirty'
op het gemen-e af 'almost mean'
op het komisch-e af 'almost comical'

The choice between a morphological and a syntactic account of category change pops up in cases of conversion of words into another word class. In French, for instance, adjectives can be used as nouns as in *un gagnant* 'a winner'. If we consider phrases as constructions, we can say that in this case the NP construction coerces a noun interpretation of the adjective *gagnant* 'winning'. Constructions, whether phrasal or morphological, have coercion power (Audring & Booij 2016, Booij & Audring to appear). In the French case, discussed in Amiot & Tribout (this volume), where deadjectival human

nouns are created, conversion is neither a morphological nor a syntactic operation. Instead, it is a case of coercion. The holistic properties of the syntactic construction [*le A*]$_{NP}$ as a whole impose a nominal interpretation on adjectives. The role of coercion is also illustrated in the article by Tsujimura & Davis on Japanese. In this language, nouns can be coerced into use as prenominal adjectives. The construction 'N-*na* N' imposes a "property" interpretation on the first noun.

5 Paradigmatic relationships and bracketing paradoxes

The analysis of words as having complex morphological structure primarily depends on a systematic form-meaning relationship with a corresponding, less complex word. However, there are also cases where the interpretation of complex words depends on a paradigmatic relationship with complex words of the same degree of complexity. A stock example is the relation between English nouns in *-ist* and in *-ism* such as:

(9)	atheist	atheism
	anarchism	anarchist
	autism	autist
	Bolshevist	Bolshevism
	Calvinist	Calvinism

The meaning of the nouns in *-ist* can be described as a compositional function of the meaning of the corresponding noun in *-ism*, even though the noun in *-ism* is not completely present as a subconstituent of the noun in *-ist*. For instance, an atheist is someone who adheres to atheism, and an autist issomeone who suffers from autism.

Such paradigmatic relationships can be accounted for in CxM by means of a second order schema, that is, a schema of schemas (Booij & Masini 2015):

(10)	[x -ism]$_{Ni}$	↔	SEM$_i$	≈
	[x -ist]$_{Nj}$	↔	[Person related to SEM$_i$]$_{SEMj}$	

where ≈ symbolizes the paradigmatic relationship between the two schemas that is formally expressed by means of co-indexation of a semantic variable in the two constructional schemas. Hüning (this volume) shows that paradigmatic relationships play a crucial role in deriving German words and in the integration of foreign words into the German lexicon. Second order schemas, that is, schemas of schemas, serve to express these systematic paradigmatic relationships.

As argued in Masini & Iacobini (this volume), second order schemas can be used to solve bracketing paradoxes of the type *flautist barocco* 'baroque flutist' derived from the noun *flauto barocco* 'baroque flute'. Here, the suffix *-ist* has semantic scope over *flauto barocco*, but is not attached to the last word of the noun phrase, but to its head noun *flauto*. Similar mismatches are observed for Polish in Cetnarowska (this volume).

The formal expression of paradigmatic relationships is crucial for a proper account of various forms of prosodic morphology and abbreviatory morphology in which words are coined by means of reduction of the base word. Due to reduction, the base word is not fully present as subconstituent of the derived word, while the meaning of that base word is part of the meaning of the reduced word, thus leading to form-meaning asymmetries. The meaning of the derived word can therefore only be computed by referring to its paradigmatic relation with the base word. This is amply illustrated in the contribution on Japanese by Tsijimura & Davis (this volume).

Paradigmatic relationships and second order schemas play a crucial role in the analysis of inflectional systems as well. After all, both word formation and inflection concern lexical relatedness, systematic relations between words and word forms (Spencer 2013, Jackendoff & Audring 2016). In the present volume, focus is on word formation. The CxM approach to inflection is discussed in Booij (2016: 439-44, 2017: 243-44), and in Van der Spuy (2017).

6 The interface of morphology and phonology

A proper account of the interface of morphology and phonology is a continuous challenge for the adequacy of models of the architecture of grammar (see Trommer ed. 2012). The CxM model starts from the assumption of a tripartite Parallel Architecture (PA) (Jackendoff 2002, Booij & Audring 2017). An overview of the ways in which phonology interacts with morphology is given in Inkelas (2014), who shows that phonological properties of words are often exponents of specific morphological constructions. One type of interface is that of Prosodic Morphology, the formation of words by means of prosodic templates. That is, there may be prosodic constraints on morphological constructions. As mentioned above, this also implies that paradigmatic relationships play a crucial role, because words that are truncated in accordance with a prosodic template do not contain their base words completely, and yet are a compositional function of the semantics of these base words. The templatic morphology of Semitic languages, as discussed by Davis & Tsujimura (this volume) can also be accounted for insightfully in a CxM model with PA.

The application of phonological processes is often conditioned by specific morphological structures. In other words, there is a lot of construction-specific phonology (Inkelas 2014). In this volume, Caballero & Inkelas broach the topic of multiple exponence, the multiple marking of morpho-syntactic properties in a complex word. They argue that certain types of multiple exponence can be accounted for by combining a constructionist approach to word structure with an Optimality Theoretical approach to phonology: the phonological form of a morphological construction can be computed by a system of ranked constraints in a number of steps that reflect the steps in the morphological construction of words. For this purpose, they combine a constructionist approach to morphology with the output-oriented phonological model of Optimality Theory, a combination referred to as Optimal Construction Morphology.

7 Diachronic Construction Morphology

Three articles in this volume deal specifically with the relevance of CxM for understanding language change. Drawing on corpus analyses of data from the Early New High German period (1350−1650) and from the early stages of New High German, Kempf & Hartmann (this volume) show how the developments of the complex patterns created by unification of word formation schemas diverge from the developments of their building blocks. Furthermore, the unified schema [*un* -V- *lich*]$_{ADJ}$ ‘un-V-able’ is shown to have remained productive for a longer period of time than its simplex parent schema [V- *lich*]$_{ADJ}$. This shows that the concept of unified schemas serves to explain important differences in the development of the individual subpatterns in terms of morphological productivity and in terms of semantic aspects of the word-formation constructions.

Norde & Van Goethem (this volume) argue that debonding of prefixoids is a productive process of lexical innovation in Germanic languages, which may lead to the creation of new intensifying adverbs or evaluative adjectives. In addition, they explore whether debonding of prefixoids can be fruitfully analysed from a constructional perspective, and they discuss a number of alternatives. Van Huyssteen’s study of the associative plural in Afrikaans shows how a word (the

pronoun *hulle* 'they') has grammaticalized into a marker of the associative plural, and became part of a constructional idiom with a bound meaning for *hulle*.

Van de Velde's diachronic study deals with exaptation, a process of linguistic change where obsolescent morphology is refunctionalized. Two case studies of Proto-Indo-European morphology are looked at in depth, showing how they underwent iterated exaptation in Germanic, namely the nominal stem-building *-n-* affix and the *ŏ*-grade of the verbal ablaut system.

Van de Velde argues that exaptation is the consequence of word-based morphology and the central role of output forms of words, a basic tenet of CxM. As Van de Velde (this volume) summarizes it: "The motivation for exaptation is to be sought in the way morphology works: rather than concatenations of morphemes, language users are confronted with words that are sanctioned by one or more construction schemata […]. Crucially, these construction schemata are output-oriented: morphemes are not independent carriers of meaning, but obtain their meaning by occurring in a paradigmatically related set of words. Language users may or may not see structure in those words, and associate certain recurring parts on the formal side with regularities on the semantic side. […] Diachronically, this allows for morphological change, especially when under the influence of sound change or of a break in the regular transmission of language over generations, an original motivation gets obscured".

8 Psycholinguistics

An important criterion of adequacy for models of the architecture of grammar is that they are in harmony with findings in other domains of linguistic research. This volume features three articles on this topic. As mentioned above, morphological schemas characterize the 'Gestalt' of complex words. CxM is therefore a word-based approach to morphology

As to acquisition, the basic assumption of CxM general is that abstract morphological schemas are acquired in the course of time on the basis of knowledge of individual complex words that are stored in the mental lexicon. Storage of complex words is therefore an essential assumption of CxM.

Kapatsinski (this volume) gives a detailed overview of the role of constructions, i.e. form-meaning pairings, in the acquisition of morphological knowledge, and discusses what this implies for our view of language learning mechanisms.

In CxM, the rule-list fallacy is avoided, as there is no contradiction between being stored and being formed according to an abstract schema. This is in line with psycholinguistics, since experiments with lexical decision tasks show that complex words are stored. Moreover, psycholinguistic experiments have shown that complex words, once stored, do not necessarily lose their internal morphological structure. Their structure may remain accessible. In CxM the lexicon is seen as a hierarchy, in which abstract schemas are linked to individual complex words. Thus, the predictable properties of stored complex words are captured by schemas. The schemas motivate properties of complex words, and this reduce the arbitrariness of the form-meaning correspondence in complex words. This view of the organization of the grammar is fully in line with the psycholinguistic results reported in Zwitserlood (this volume) and Giraudo & Dal Maso (this volume)..

Zwitserlood (this volume) provides a survey of the relevant psycholinguistic findings with respect to the processing and production of complex words. The debate centers around the issue whether and how the internal morphological structure of words play a role in perception and production. Zwitserlood concludes that complex words must be listed as such, whereas at the same time their internal morphological structure must also be accessible. The assumptions of CxM concerning the representation of words and the nature of the lexicon appear to be in line with these psycholinguistic findings (the "cognitive commitment" mentioned in Section 1). However, the processing aspects of CxM need to be further developed.

Giraudo & Dal Maso (this volume) give an overview of studies of the processing of complex words by L2 speakers. These results indicate that there is no sharp distinction between inflection and derivation in lexical processing, and that both inflected and derived words may be stored as whole words, whereas at the same time their internal structure is still accessible. These conclusions are in line with the assumptions of CxM about the lexicon and the balance between storage and computation.

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