EXPLORING DIVERGENT VIEWS ON WORD STRUCTURE: CHALLENGING THE CONCEPT OF THE MORPHEME

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DOI
https://doi.org/10.14195/0870-4112_3-9_13

Texto recebido em / Text submitted on: 27/06/2023
Texto aprovado em / Text approved on: 03/11/2023

Biblos. Número 9, 2023 • 3.ª Série
pp. 277-299

ABSTRACT

How the meaning of a word is expressed through its form is one of the central questions in linguistics and one which has been responsible for conflicting views of word structure. In this paper we discuss some of the ways in which this question has been approached by providing an overview and understanding of two competing perspectives in morphological thinking within the context of Generative Grammar. These perspectives, known as the morpheme-based model and the word-based model, will be discussed to show how they deal with the form-meaning correspondence. With this paper, I offer a critical analysis of the approaches, highlighting their implications for our understanding of word structure.

Keywords: word structure; morpheme; realisation; paradigms; inflection.

RESUMO

A relação entre a forma e o significado de uma palavra constitui uma das questões centrais da linguística e está na origem de conflitos teóricos que têm condicionado o debate sobre a estrutura da palavra. Neste artigo, iremos discutir dois modelos teóricos distintos: o modelo baseado no morfema (*morpheme-based*) e o modelo baseado na palavra (*word-based*). O objetivo consiste em demonstrar, no contexto da Gramática Gerativa, o modo distinto como os dois modelos analisam a correspondência entre forma e significado. Será feita uma análise crítica das duas abordagens, destacando as suas implicações para o estudo da estrutura interna da palavra.

Palavras-chave: estrutura das palavras; morfema; realização; paradigma; flexão.

INTRODUCTION

Students are often unaware of the contentious debate surrounding the study of word structure. Linguistics textbooks typically instruct them to decompose words into smaller meaningful parts, introducing the morpheme as "(t)he most important component of word structure" (O'Grady and Dobrovolsky, 1996: 112) or as "the most elemental unit" (Fromkin et al., 2010: 81). Despite such common practice in Linguistics textbooks, there is a growing consensus among morphologists that the segmentation of words into morphemes is largely untenable within the field of inflectional morphology (Blevins, 2016).

Some word forms can be intuitively broken down into smaller units and seem to have a transparent additive structure, others do not exhibit any obvious boundaries between units but are nonetheless highly systematic, diverse and abundant cross-linguistically. Such diversity affects how word forms express morphosyntactic meaning. If word forms can undergo segmentation, it may seem plausible to hold that each unit conveys its own meaning and that there is a one-to-one relation between form and meaning. However, in the case of words without obviously discreet internal parts, it is much less straightforward to pinpoint exactly which segment expresses which unit of meaning. Meaning and form can be associated in more complex ways: form may be meaningless; meaning can have no form; one form can have several meanings, and one meaning can be expressed by multiple sets of form. So, contrary to the sometimes oversimplified view contained in textbook exercises, empirical diversity poses significant challenges to morphemes.

The wide-ranging diversity observed in morphology naturally leads to the question "How should morphological theory be formulated to account for these seemingly contradictory phenomena?" (Anderson, 2017). This question is of central concern to morphology and has shaped morphological thinking over time. Different morphological theories and frameworks have emerged formulating hypotheses and generalizations to accommodate the observed phenomena. Two competing perspectives, in particular, have shaped and influenced morphological thinking: the morpheme-based view and the word-based view. They differ in terms of which unit they take as primary

and where in the grammar morphology takes place. While morpheme-based theories focus on the analysis of the internal structure of words in terms of morphemes, word-based theories focus on the relationship between the underlying form and the form of words.

The goal of this paper will be to shed some light on the development of morphological thinking surveying how these two competing views have shaped existing theories of inflectional morphology and contributed to our current understanding of word structure and the meaning-form correspondence. My perspective will be framed within the context of Generative Grammar, with a focus on inflectional morphology. This paper will show that there has been a growing trend towards rejecting the existence of discrete form-meaning units in favour of a more holistic analysis, exemplified by viewing *cats* as 'the plural of CAT' rather than as the combination of two separable segments. Empirical evidence will be examined which demonstrates that despite the historical presence of the morpheme as a concept in Linguistics textbooks, it does not adequately reflect the current understanding and developments in the field of inflectional morphology.

This paper is organized as follows: it starts with an overview of the scientific context surrounding the morpheme-based view of word structure, surveying some of the factors that led to the enduring impact of the morpheme (2.1). It then examines classical morphemic analyses within Generative Grammar that have embraced the concept of the morpheme (2.2). Next, I show that there is evidence beyond concatenation and isomorphism, and present a different view of word structure, known as word-based view (3.1). Following that, the paper provides an overview of the word-based approach to word structure, illustrating the realisation approach within Paradigm-Function Morphology (Stump, 2001) (3.2). I conclude the paper with an overview of the prevailing key areas of disagreement in inflectional morphology (4).

1. THE MORPHEME-BASED VIEW

This section offers a concise historical overview of the scientific context that contributed to the enduring impact of the morpheme (2.1). We then illustrate

how classical phrase-structure models, within Generative Grammar, have formalized the morpheme and integrated it into their linguistic analysis (2.2).

1.1. SOME BACKGROUND

In recent years, there has been a growing interest in the emergence and development of the morpheme concept as a fundamental unit of linguistic analysis. Scholars such as Anderson (2016), Blevins (2016), and Goldsmith (2019) have shed light on this topic, generating significant interest within the field. However, the renewed attention to the morpheme is primarily driven by its contentious nature. In fact, while the morpheme has had a lasting impact on linguistic theory, it has been subject to continuous scrutiny since its introduction in the early 20th century (Stewart, 2019).

The morpheme was originally introduced into American Linguistics, by Leonard Bloomfield, who defined it as "a recurrent (meaningful) form which cannot in turn be analysed into smaller recurrent (meaningful) forms." (Bloomfield, 1926: 155). The kind of evidence that motivates the need for such a concept can be found in word forms with an isomorphic and concatenative structure, that is, word form containing easily segmentable units that can be associated to easily identifiable meaning. Such properties can be found across languages, but most especially in agglutinating languages such Turkish, as in (1).

(1) Turkish (Bassarac and Jendraschek, 2004)
evlerimin

ev-	ler	-im	-in
house	PLURAL	POSSESSIVE	GENITIVE

'of my houses'

Native American languages are known for their multiple sequences of individual segments, as shown in (2), with an example from Cree (Oxford 2020). For American Structuralist Linguists, who took it on themselves to document

Native American languages, this evidence played a crucial role in establishing the morpheme as a central unit of analysis (Fought, 2010; Leu, 2020).

(2) Plains Cree (Algonquian) (Dahlstrom, 1991)
sâkihisosihkâsoskiw
sâkih -iso -isi -hkâso -iski -w
love -self -DIM -pretend -habitual -3SG
'He's in the habit of pretending to love himself a little bit.'

While the morpheme concept resonated with the academic spirit of the newly established science of Linguistics, it also received severe criticism from Bloomfield's contemporaries and successors. As noted by Harris (1942), Hockett (1947) and Nida (1948), the morpheme was too rigid and limited in its ability to account for more complex word structure, even for a language like English. For example, while *cats* and *baked* may be easily divided into minimal units of form and meaning, there are no units that specifically express 'past' in *put* or 'plural' in *fish* (Robins, 1959).

This criticism effectively marked the beginning of a continuous debate about the adequacy of the concept. To account for instances where no identifiable form is available, scholars postulated the existence of 'zero' morphs, namely units of form without meaning (Bloch, 1947). This is illustrated in (3a), where $Ø_{past}$ is a variant of the regular past tense markers /-d/, /-t/ and /-id/ and, in (3b), *where* $Ø_{pl}$ is a variant of the regular plural markers /-s/, /-z/ and /-iz/ (Stump, 2019a).

(3) a. *put*
/pʌt/+ $Ø_{past}$,
b. *fish*
/fiʃ/+$Ø_{plural}$

Such an abstract form however served to highlight one of the major weaknesses of the concept, namely that it fails to capture the complexity

and variability of word structure (see also Chomsky, 1965: 173). Further empirical challenges will be discussed in section 3.

1.2. OVERVIEW OF CLASSICAL MORPHEMIC MODELS

Generative Grammar, in the 1950s and 1960s, incorporated the morpheme into its syntactic formalism, alongside zero morphs. Despite its well-known limitations in explaining the diversity of word structure, it became one of the foundational elements in phrase structure models (Aronoff, 2000).

During the Transformational Generative period, morphemes are primarily regarded as building blocks of syntax, rather than as units of word structure. Typical rewrite rules, as in (5), introduce morphemes (bound and free), as terminal nodes within phrase structure (Hacken, 2019). In essence, Morphology functions as a sub-field of syntax and morphemes are syntactic primitives governed by syntactic operations.

(4) rewrite rules introducing words and their endings as terminal nodes (cf. Chomsky, 1957)

a. Verb → Aux + V

b. Aux → C (M) (have + en) (be + ing) (be + en)

In the 1970s, it became evident that the properties of complex words cannot be explained by the principles governing syntactic structure (Chomsky, 1970). A new component was added to Generative Grammar, namely the Lexicon (Halle, 1973). The idea of deriving word structure in the Lexicon was explored by Selkirk (1982) and Lieber (1980), who assign lexical entries to free and bound morphemes, as shown in (5). Bound morphemes, such as plural *-s*, are represented as discreet units with phonological, semantic, and syntactic properties, as well as displaying an isomorphic alignment between form and meaning. Subcategorisation frames specify their linear attachment to a base.

(5) (cf. Lieber 1980:66)

sit	*-s*
phonological representation	phonological representation
semantic representation: …	morphosyntactic representation: …
category: V[_]V	subcategorisation: [V_]V

As to the principles governing the internal structure of words, these models analyse word structure as a hierarchical organisation of morphemes based on the phrase-structure principles of generative grammar current at the time (Anderson, 2015). Selkirk (1982) extends the X-bar theory (Chomsky, 1970) to word structure. In (6), rewrite rules similar to phrase structure rules produce trees into which affixes and stems are inserted. The idea is to explicitly maximise the similarities between syntax and morphology (Lieber, 1980: 38; Selkirk, 1982: 10-11).

(6) Selkirk (1982), where X is a lexical category and s is the stem/root.

a. Prefixation

$X_S \rightarrow$ (aff) Y_S

b. Suffixation

$X_S \rightarrow Y_S$ (aff)

1.3. SUMMARY

Our survey of classical implementations of the morpheme within phrase structure models has focused on word structure and the correspondence between form and meaning. The key ideas can be summarised as follows:

- Phrase structure models break down the word into smaller units (morphemes), effectively disregarding the word as a whole.
- Each morpheme is treated as a discreet entity and is associated with a lexical entry that specifies its meaning, thus maintaining the isomorphic correspondence between meaning and form.
- The linear ordering of morphemes within a word is determined by their respective lexical entries, suggesting an agglutinative word structure.

2. THE WORD-BASED VIEW

The diversity of morphological structure presents cases where the boundaries between morphemes are blurred, and the meaning-form relationships cannot be adequately captured on a 1:1 analysis alone. To gain a more comprehensive understanding of how morphology deals with the diversity and complexity of word structure, we will expand our discussion beyond the morpheme boundaries. We will shift our focus to a word-based perspective of word structure, one in which emphasis is placed on the word, rather than on its individual constituents. I will begin by providing a broad overview of the wide range of meaning-form deviations in word structure that extend beyond mere concatenation and isomorphism (3.1). I then present the realisational approach to word structure, as a variant of the Word-and-Paradigm model, and illustrate key realisational insights (3.2).

2.1. DEVIATIONS FROM CONCATENATION AND ISOMORPHISM

Within the literature, numerous classical types of mismatch between form and morphosyntactic content have indeed been extensively documented. These mismatches pose a challenge to the notion of a direct one-to-one correspondence between morphemes and meaning. Prominent morphologists, including Robins (1959) and Matthews (1965), highlighted the problem, but it was Hockett (1947) who provided a seminal list of morphological patterns (and their names) that go beyond superficial concatenation and isomorphism. These phenomena cannot be dismissed as incidental or irregular, rather they form an integral part of the diversity of word structure (Anderson, 2015; Hippisley and Stump, 2016).

Table 1 presents some of the classical types of mismatch between form and content that have been identified in the literature.

Deviations from one-to-one	Corresponding phenomena
MANY-TO-ONE: several forms express one meaning	MULTIPLE EXPONENCE: A word form can have more than one exponent expressing the same feature content.
ONE-TO-MANY: one form expresses several meanings	CUMULATIVE EXPONENCE: In a given word, different categories (e.g., number and case), which are typically expressed on separate exponent, may be expressed by one exponent.
ONE-TO-ZERO: one form can have no meaning	EMPTY MORPHS: Morphological form that do not correspond to any morphosyntactic property.
ZERO-TO-ONE: one meaning can have no form	ZERO EXPONENCE: A given feature may have no marking in some word forms.

Table 1

One type of deviation is the 'many-to-one' phenomenon, in which several different forms can express the same meaning. This is known as MULTIPLE EXPONENCE, where a word form can have multiple exponents that convey the same feature content. This attested, for example, in German nominal plurals such as *Bücher* 'books' (7a), which combine affixation with a (morphologically conditioned) process called of umlaut (7b) (Crysmann and Sailer, 2021) or in English participle verb forms (8) (Stump 2019a):

(7) German
a. *Bücher* 'plural of BOOK'
b. PLURAL } -er
/u/ → /ü/

(8) English
a. *written* 'participle of WRITE'
b. PLURAL } -en
/ai/ → /i/

Conversely, the 'one-to-many' deviation occurs when a single form expresses multiple meanings. This is referred to as CUMULATIVE EXPONENCE, where one exponent conveys categories, such as tense and agreement or number and case, which are usually expressed separately. The contrasts between single exponence (1:1) and cumulative exponence is in (9). Finnish is a classical agglutinating language where plural is typically realised by a single marker, as illustrated in (9a) and (9b) above. In the plural nominative form, however, the marker *-t* expresses both plural and case (9c):

(9) Finnish

a. *taloissa*			b. *talossa*			c. *talot*		
talo	-i	-ssa	talo	-saa		talo	-t	
house	PLURAL	INESSIVE	house	INESSIVE		house	PLURAL.NOMINATIVE	
'in the houses'			'in the house'			'houses'		

Another type of deviation involves a 'one-to-zero' mapping. This phenomenon can be observed when a given form is meaningless or 'empty' (note that this does not mean that they don't have a function within the paradigm). Theme vowels in Romance, such as *-a* in the paradigm of first conjugation verbs, are commonly-cited as typical examples of markers without meaning, despite the fact that they preserve their function as conjugation class markers (Hockett, 1947: 337; Anderson, 1992: 54).

Finally, there is the 'zero-to-one' deviation, where a particular morphosyntactic content has no corresponding form. This is a very common deviation from the one-to-one correspondence. An example from German shows that in the paradigm of the noun *Rechner* 'computer', numerous case and number combinations are expressed by the absence of any inflectional marker (Crysmann and Sailer, 2021):

(10) German

	SINGULAR	PLURAL
NOM	Rechner	Rechner
GEN	Rechner-s	Rechner
DAT	Rechner	Rechner
ACC	Rechner	Rechner-n

Table 2

Having addressed each type of deviation separately, let us now see how they can combine within one given word form. The Classical Greek verb form *elýlekete* 'you had unfastened' (Matthews, 1991:174) serves as an illustrative example that showcases the associations that can hold between properties

and formatives. It demonstrates the phenomenon of multiple exponence and cumulative exponence:

(11) Classical Greek (Matthews 1991:174)
elelýkete 'you had unfastened' {past, perfective, active, indicative, 2nd, plural}

Past	Perfective	Perfective	Perfective	Indicative	Active
			Active	Past	2nd Plural
				Active	
e	le	ly (root)	k	e	te

Table 3

The properties of past, perfective and active voice are realised by multiple exponents, that is, these features are expressed in more than one part of the word: perfectivity is expounded by the prefix *le-*, the root and the suffix *-k*; past is expressed by the prefix *e-* and the suffix *-e*, while active voice is realised by three suffixes, namely *-k*, -e and *-te*.

Additionally, all affixes ,except the prefixes *e-* and *le-*, exhibit cumulative exponence, as they simultaneously express two or sometimes three properties. So, the active voice is indicated by the suffix *-k* and the past tense by *e-*. However, the vowel *-e* before the suffix *-te* also functions as a marker for both active voice and past tense. Moreover, the suffix *-te* not only indicates active voice but also cumulatively expresses second person and plural number, which cannot be deduced from other parts of the word form. So, within a word form such as *elelýkete*, none of the inflectional markers are the main exponent for each property.

Another illustration of the complex combination of deviations from isomorphism is provided by conditional verb forms in Portuguese. A form such as *sentiria* 'I would feel' contains the 1/3sg agreement ending *-ia* which is homophonous with the 'imperfect indicative marker' for 2nd/3rd conjugation verbs in (12). This means that the *-ia* endings does not express the conditional features on its own but it does so in combination with the

stem form in *-ir*, as in (13) (see also the discussion of Italian *cantarrebbero* 's/he would sing' in Matthews 1970: 107, and Matthews (1991), on 'priscianic' stems).

(12) Portuguese *sentia* 'I felt'

FEEL	THEME VOWEL	IMPERFECT (2/3 CL)
		1st singular
sent	(-i)	ia

Table 4

(13) Portuguese *sentiria* 'I would feel'

FEEL	THEME VOWEL	CONDITIONAL	CONDITIONAL
	Conditional		1ST SINGULAR
sent	-i	-r	ia

Table 5

In sum, the key point highlighted by these examples is that the relationship between inflectional markings and morphosyntactic categories is characterised by a complex network of patterns. It is worth noting that the verb forms in (11) – (13) are not exceptional cases within the inflectional system of Greek or Portuguese, but reflect typical regularities.

If these deviations were infrequent or limited to highly suppletive cases, one could argue that they would not significantly undermine the concept of the morpheme. However, the reality is that such cases are easily found, and many of them are widespread also in agglutinating languages. Other kinds of deviations from the one-to-one relationship between form and meaning in morphology include morphological processes where meaning is expressed through phonological changes. These processes involve alterations in the sound patterns of words, such as umlaut, subtraction, metathesis, consonant mutations, and various others, as illustrated in detail by Matthews (1991: 131f) and Anderson (2015).

2.2. THE REALISATIONAL APPROACH

The recognition that word forms are not solely composed of easily segmentable parts has paved the way for exploring alternative perspectives to the morpheme-based approach. One notable alternative is the (inferential-) realisational approach to inflectional morphology, which has been extensively developed by morphologists such as Matthews (1972), Anderson (1982), Zwicky (1985), Corbett and Fraser (1993), Stump (2001), and Brown and Hippisley (2012).

In what follows, we will showcase realisational concepts and demonstrate their application, by sketching informal analyses within Paradigm Function Morphology (Stump, 2001).

a. One fundamental idea in realisational morphology is that a word's morphosyntactic features and its corresponding form are defined separately. An inflectional rule system will capture the association between morphosyntactic content and forms for each language, by examining the existing patterns (see 3.3.2 and 3.3.3 below). The Paradigm Function (PF) in (14) specifies that the pair consisting of the lexeme SING and the complete feature set 'present 3rd singular' is phonologically realised as *sings* /sɪŋz/. The right hand-side of the equation captures the intuition that /sɪŋz/ is a fully formed cell in the paradigm of SING.

(14) Paradigm Function for *sings* (Stump 2019b)
PF(⟨SING, {present, 3rd, singular}⟩) = ⟨/sɪŋz/, {present, 3rd, singular }⟩

This view of word structure is in marked contrast with the morpheme-based view, which segments word forms into parts and assumes that each part carries its own meaning and form. In contrast, the realisational approach allows for a flexible mapping between morphosyntactic features and their realisation.

b. The output of a PF is generally determined by rules of exponence, which derive each individual marker (or map subsets of features to their specific inflectional exponents). In English, for example, rule (15) realises the suffix *s* (/z/) as the exponent of the property set {present, 3rd, singular}.

(15) RR (⟨SING, {present, 3rd, singular}⟩) = ⟨Xs⟩

In Portuguese, *-va* systematically expresses 'imperfect, active, class1' and *-mos* realises '1st plural' marker systematically. Both regularities can be captured as in (16a) and (16b): the exponence rule in (16a) associates the features 'imperfect, active, class1' to the suffix *-va*, while the exponence rule in (16b) specifies that the features '1st plural' are realised by the suffix *-mos*.

(16) a .RR (⟨LAVAR, {imperfect, active, class1}⟩) = ⟨Xva⟩
b. RR (⟨LAVAR, {1st, plural}⟩) = ⟨Xmos⟩

The correspondence between meaning and form is defined by the cyclical application of realisation rules: in the case of *falávamos* 'we talked', the RR in (16a) applies to the first conjugation stem *fala-*, whereas the RR in (16b) takes as input the derived stem *falava-* and yields the fully inflected form (or paradigm cell) *falávamos*.

c. Another property of exponence rules is that they must apply in an ordered sequence. To capture this intuition, RRs are grouped into 'rule blocks' (Anderson 1982, 1992; Stump 2001), and the order in which exponence rules apply depends on the rule block they belong to. In (17a') and (17b'), we assume that the RR deriving *-va* belongs to Rule Block 1 and that the RR deriving *-mos* belongs to Rule Block 2:

(17) a′. RR_{I} (⟨LAVAR, {imperfect, active, class1}⟩) = ⟨Xva⟩
b′. RR_{II} (⟨LAVAR, {1st, plural}⟩) = ⟨Xmos⟩

d. Inside the same rule block, exponence rules compete for the same 'position' in the verb form and, therefore, rules belonging to the same block are mutually exclusive in their application. If, in a given language, the exponence rules realising the features '2nd singular' and '1st plural' agreement are contained within Block II, as in (18), then all these rules will be in complementary distribution (Anderson, 1986, 1992).

(18) disjunctively ordered RR within Block_{II}

RR_{II}

RR_{IIb} (⟨LAVAR, {2nd, singular}⟩) = ⟨Xs⟩

RR_{IIa} (⟨LAVAR, {1st, plural}⟩) = ⟨Xmos⟩

A paradigm function, then, defines how a sequence of ordered RRs relates the form of words to their underlying morphosyntactic features. Based on the rule block in (17) and (18), we can now (informally) define the PF of the Portuguese verb form *lavávamos* as in (19).

(19) where σ= {imperfect, active, class1, 1st plural}

$\text{PF}(\langle \text{LAVAR}, \sigma \rangle) =_{\text{def}} \text{RR}_{\text{IIa}} (\text{RR}_{\text{Ib}} (\langle \text{LAVAR}, \sigma \rangle) =_{\text{def}} \langle \text{lavávamos}, \sigma \rangle$

2.3. ANALYSING INFLECTION

Having laid out some of the key principles of realisational morphology (by adopting a simplified version of PFM), we will now illustrate how mismatches between form and meaning can be meaningfully captured.

2.3.1. EXTENDED EXPONENCE

One classical example of extended exponence examined in Stump (2001) is the Swahili past negative verb forms, shown in (20). In this verb form, 'negation' is realised both by the negative-past prefix *ku-* (which attaches directly to the stem) and by the negative prefix *ha-* (which is realised after the agreement marker *tu*).

(20) Swahili (Stump 2001: 141f)

ha-tu-ku-taka

NEG-I.PL-NEG.PAST-WANT

'We did not want'

To capture the multiple exponence of negation, Swahili defines two RRs expressing negation, namely RR_{Ib} and RR_{IIIc}, as sketched below:

(21) Informal representation of RRs for Swahili (based on Stump 2001:142)

a.RR_{Ib} (⟨TAKA, {negation, past}⟩) = ⟨ku-X⟩

b.RR_{IId} (⟨TAKA, {1pl}⟩) = ⟨tu-X⟩

c.RR_{IIIc} (⟨TAKA, {neg}⟩) = ⟨ha-X⟩

2.3.2. CUMULATIVE EXPONENCE

In Swahili, multiple features may also be cumulatively associated with a single exponent. For example, the past feature is generally associated to one exponent, namely the prefix *li-* in (22). However, the prefix *ku-* expresses both past and negative:

(22) Swahili past markers

a.RR_{Ia} (⟨TAKA, {past}⟩) = ⟨li-X⟩

b.RR_{Ib} (⟨TAKA, {negation, past}⟩) = ⟨ku-X⟩

Another example of cumulative exponence is illustrated in (13), for Finnish. To capture the insight that case and number are realised separately, as in (23a), we propose one Rule Block for number, as given in (24a), and another Rule Block for case, as in (24b). However, to capture the plural nominative form, illustrated in (23b), the RR in (25) is inserted into Rule Block 1 realising both nominative and plural, pre-empting the more general rule in (24a) (Spencer 2004).

(23) Finnish nouns

a.talo-i-ssa 'in the houses' (inessive plural)

b.talo-t 'houses' (nominative plural)

(24) RRs for number and case

a.RR_{Ia} (⟨TALO, {plural}⟩) = ⟨X-*i*⟩

b.RR_{IIc} (⟨TALO, {inessive}⟩) = ⟨X-*ssa*⟩

(25) RR realising cumulative exponence

RR_{Ib} (⟨TALO, {plural, nominative}⟩) = ⟨X-*t*⟩

2.3.3. ZERO EXPONENCE

A morphosyntactic feature contained in the feature set of a given word may not trigger the application of a rule of exponence. When this happens, the feature is not overtly expressed. Examples of zero exponence include English nouns like *sheep* which express 'plural' but do not exhibit a plural marker, unlike *cats*. Likewise, the German plural noun *Mädchen* 'girls' does not contain a plural marker unlike *Blumen* 'flowers'. Nonetheless, plural forms such as *sheep* and *Mädchen* correspond to a distinctive cell in the paradigm of SHEEP and MÄDCHEN.

In PFM, zero exponence simply reflects the possibility that properties may not to receive any expression by any realisation rule. This phenomenon, which is quite frequent in language, is captured by the Identity Function Default rule (Stump 2001). This specific rule 'realises' a given feature without making any changes or modifications to the base: RR (⟨X, {σ}⟩) = ⟨X, σ⟩. In more familiar terms, this rules expresses meaning by doing nothing.

As has been shown, the rejection of the morpheme does not imply a denial of the existence or importance of smaller units (such as affixes) within words. Rather, it suggests that the morpheme is not regarded as the building block of word structure.

2.3.4. SUMMARY

The key features of the realisational approach to word structure can be summarised as follows:

- The morphosyntactic content of a word form is treated independently of its specific formal realisation, allowing for a flexible mapping between content and form.
- The correspondence between morphosyntactic content and inflectional forms is established through a system of exponence rules (a subtype of realisation rules).
- Exponence rules determine how morphosyntactic features are mapped onto their corresponding inflectional forms. The order

in which exponence rules apply is determined by the Rule Block they belong to.

- The systematic relations between words within a paradigm help uncover the regularities and patterns in the correspondence between meaning and form.

3. SUMMARY

Linguistics textbooks commonly depict the internal structure of words by segmenting word forms into morphemes. A word form like *cats* is divided into two strings, *cat* meaning 'cat' and *-s* meaning 'plural', and the meaning of the whole word is derived from the sum of the meaning of its parts. However the segmentation of words, referred to as the "chopping off process", by Matthews's (1974: 15), is not unanimously accepted among morphologists. If we examine systematic patterns across languages, it becomes evident that, even for a language like English, there is no intuitive way in which discrete, isolated strings can be associated with individual meanings.

In this paper, I have attempted to go beyond the simplistic segmentations of words into morphemes that are commonly found in Linguistics textbooks. My aim has been to demonstrate that a) the morpheme is not simply a tool, but is couched within a model of morphology and b) that there are competing theories challenging the concept and its underlying assumptions.

The two models of word structure discussed in this paper are built on a set of mutually exclusive assumptions that can be seen as dichotomies (Hippisley and Stump 2016, Stump, 2019a):

a. In morpheme-based theories, the association between a word form's morphosyntactic properties and their exponents is lexically listed, and complex word forms acquire their morphosyntactic properties at the same time as they acquire their exponents. Word-structure is hierarchical. Non-concatenative and non-isomorphic patterns require additional mechanisms, intermediate levels or more elaborate notions of the morpheme.

b. In word-based theories, the association between a word form's morphosyntactic properties and their exponents is specified by rules for the definition of complex word forms, and a complex word form's association with a particular property set logically precedes its inflectional realisation. The morphology is autonomous. Inferential rules define an inflected word form independently of its isomorphic or concatenative structure.

Before I finish, it is essential to point out that this paper has only scratched the surface of the debate. Different models and theoretical variants exist beyond what has been discussed here. Within the morpheme-based tradition, there have been theoretical variants that have responded to the complexities of word structure by developing 'richer' notions of the morpheme. Approaches such as Autosegmental Morphology (McCarthy, 1981) and Prosodic Morphology (McCarthy and Prince, 1990) and have introduced intermediate levels to capture non-concatenative phenomena, while Distributed Morphology (Halle and Marantz, 1993) has drastically reconceptualised the notion of the morpheme redefining the mapping between morphosyntactic content and exponence. Additionally, constraints-based theories such as Lexical-Functional Grammar (Kaplan and Bresnan, 1982), which have traditionally adopted a morphemic model of morphology, have partially shifted towards a word-based view. Overall, these developments reflect a growing recognition of the limitations of a purely morphemic approach and recognise the autonomy of morphology.

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