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***WORD FORMATION IN ENGLISH LANGUAGE***

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Умумтаълим ва касб-хунар инглиз тили ўқитувчилари ҳамда малака ошириш курси тингловчилари учун услубий кўлланма.-Самарқанд, 2020. 70 бет.

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| **Тақризчилар:** | Ш.Кутбиддинова | - | Самарқанд вилояти ХТХҚТМО ҳудудий маркази тилларни ўқитиш методикаси кафедраси ўкитувчиси  |
|  | Г.Матязова | - |  Сам ДЧТИ ўқитувчиси |

Мазкур услубий кўрсатма умумтаълим мактаблари, академик лицей ва касб-ҳунар коллежлари ўқитувчиларига ва малака ошириш курси тингловчиларига мўлжалланган бўлиб,ўкиш кўникмаларини ошириш максадида усуллардан фойдаланилган.

 Самарқанд давлат университети ҲХТХҚТМО ҳудудий маркази илмий-услубий кенгашининг 2020 йил 3 мартда бўлиб ўтган йиғилишида муҳокама этилган ва -cонли қарори нашрга тавсия этилган.

 Introduction

What this book is about and how it can be used

The existence of words is usually taken for granted by the speakers of a language. To speak and understand a language means -among many other things -knowing the words of that language. The a verage speaker knows thousands of words, and new words enter our minds and our language on a daily basis. This book is about words.

More specifically, it deals with the internal structure of complex words, i.e. words that are composed of more than one meaningful element. Take, for example, the very word meaningful, which could be argued to consist of two elements, meaning and -ful , or even three, mean, -ing, and -ful . We will address the question of how such words are related to other words and how the language allows speakers to create new words. For example, meaning ful seems to be clearly related to colorful , but perhaps less so to awful or plentiful . And, given that meaning ful may be paraphrased as ‘having (a definite) meaning’, and colorful as ‘having (bright or many different) colors’, we could ask whether it is also possible to create the word coffee ful , meaning ‘having coffee’. Under the assumption that language is a rule-governed system, it should be possible to find meaningful answers to such questions.

##  Word Formation

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This area of study is traditionally referred to as word-formation and the present book is mainly concerned with word -formation in one particular language, English. As a textbook for an undergraduate readership it presupposes very little or no prior knowledge of linguistics and introduces and explains linguistic terminology and theoretical apparatus as we go along.

The purpose of the book is to enable the students to engage in (and enjoy!) their own analyses of English (or other languages’) complex word s. After having worked with the book, the reader should be familiar with the necessary and most recent methodological tools to obtain relevant data (introspection, electronic text collections, various types of dictionaries, basic psycholinguistic experimen ts, internet resources), should be able to systematically analyze their data and to relate their findings to theoretical problems and debates. The book is not written in the perspective of a particular theoretical framework and draws on insights from various research traditions.

Word-formation in English can be used as a textbook for a course on word formation (or the word -formation parts of morphology courses), as a source-book for teachers, for student research projects, as a book for self -study by more advanced students (e.g. for their exam preparation), and as an up-to-date reference concerning selected word -formation processes in English for a more general readership.

For each chapter there are a number of basic and more advanced exercises, which are suitable for in-class work or as students’ homework. The more advanced exercises include proper research tasks, which also give the students the opportunity to use the different methodological tools introduced in the text. Students can control their learning success by comparing their results with the answer key provided at the end of the book. The answer key features two kinds of answers. Basic exercises always receive definite answers, while for the more advanced tasks sometimes no ‘correct’ answers are given. Instead, methodological problems and possible lines of analysis are discussed. Each chapter is also followed by a list of recommended further readings.

Those who consult the book as a general reference on English word -formation may check author, subject and affix indices and the bibliography in order to quickly find what they need. Chapter 3 introduces most recent developments in research methodology, and short descriptions of individual affixes are located in chapter 4

As every reader knows, English is spoken by hundreds of millions speakers and there exist numerous varieties of English around the world. The variety that has been taken as a reference for this book is General American English. The reason for this choice is purely practical, it is the v ariety the author knows best. With regard to most of the phenomena discussed in this book, different varieties of English pattern very much alike. However, especially concerning aspects of pronunciation there are sometimes remarkable, though perhaps minor, differences observable between different varieties. Mostly for reasons of space, but also due to the lack of pertinent studies, these differences will not be discussed here. However, I hope that the book will enable the readers to adapt and relate the findings presented with reference to .

American English to the variety of English they are most familiar with.

The structure of the book is as follows. Chapters 1 through 3 introduce the basic notions needed for the study and description of word -internal structure (chapter 1), the problems that arise with the implementation of the said notions in the actual analysis of complex words in English (chapter 2), and one of the central problems in word -formation, productivity (chapter 3). The descriptively oriented chapters 4 through 6 deal with the different kinds of word -formation processes that can be found in English: chapter 4 discusses affixation, chapter 5 non -affixational processes, chapter 6 compounding. Chapter 7 is devoted to two theoretical issues, the role of phonology in word -formation, and the nature of word -formation rules. The author welcomes comments and feedback on all aspects of this book, especially from students. Without students telling their teachers what is good for them (i.e. for the students), teaching cannot become as effective and enjoyable as it should be for for both teachers and teachees (oops, was that a possible word of English?)

1. What is a word?

It has been estimated that average speakers of a language know from 45,000 to 60,000 words. This means that we as speakers must have stored these words somewhere in our heads, our so-called mental lexicon. But what exactly is it that we have stored?

What do we mean when we speak of ‘words’?

In non -technical every-day talk, we speak about ‘words’ without ever thinking that this could be a problematic notion. In this section we will see that, perhaps contra our first intuitive feeling, the ‘wor d’ as a linguistic unit deserves some attention, because it is not as straightforward as one might expect.

If you had to define what a word is, you might first think of the word as a unit in the writing system, the so-called orthographic word. You could say, for example, that a word is an uninterrupted string of letters which is preceded by a blank space and followed either by a blank space or a punctuation mark. At first sight, this looks like a good definition that can be easily applied, as we can see in the sentence in example (1):

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We count 5 orthographic words: there are five uninterrupted strings of letters, all of

which are preceded by a blank space, four of which are also followed by a blank

space, one of which is followed by a period. This count is also in accordance with

our intuitive feeling of what a word is. Even without this somewhat formal and

technical definition, you might want to argue, you could have told that the sente nce in (1) contains five words. However, things are not always as straightforward.

Consider the following example, and try to determine how many words there are:

(2) Benjamin’s girlfriend lives in a high-rise apartment building

Your result depends on a number of assumptions. If you consider apostrophies to be punctuation marks, Benjamin's constitutes two (orthographic) words. If not,

Benjamin's is one word. If you consider a hyphen a punctuation mark, high-rise is two (orthographi c) words, otherwise it's one (orthographic) word. The last two strings, apartment building, are easy to classify, they are two (orthographic) words, whereas girlfriend must be considered one (orthographic) word. However, there are two basic problems with o ur orthographic analysis. The first one is that orthography is often variable. Thus, girlfriend is also attested with the spellings <girl -friend>, and even

<girl friend >(fish brackets are used to indicate spellings, i.e. letters). Such variable spellings are rather common (cf. word-formation, word formation, and word formation, all of them attested), and even where the spelling is conventionalized, similar words are often spelled differently, as evidenced with grapefruitvs. passion fruit. For our problem o f defining what a word is, such cases are rather annoying. The notion of what a word is, should, after all, not depend on the fancies of individual writers or the arbitrariness of the English spelling system. The second problem with the orthographically defined word is that it may not always coincide with our intuitions.

Thus, most of us would probably agree that girlfriendis a word (i.e. one word) which consists of two words ( girland friend), a so-called compound. If compounds are one word, they should b e spelled without a blank space separating the elements that together make up the compound. Unfortunately, this is not the case. The compound apartment building, for example, has a blank space between apartment and building.

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To summarize our discussion ofpurely orthographic criteria of wordhood, we must say that these criteria are not entirely reliable. Furthermore, a purely orthographic notion of word would have the disadvantage of implying that illiterate speakers would have no idea about what a word might be. This is plainly false.

What, might you ask, is responsible for our intuitions about what a word is, if not the orthography? It has been argued that the word could be defined in four other ways: in terms of sound structure (i.e. phonologically), in terms of its internal integrity, in terms of meaning (i.e. semantically), or in terms of sentence structure

(i.e. syntactically). We will discuss each in turn.

You might have thought that the blank spaces in writing reflect pauses in the spoken language, and that perhaps one could define the word as a unit in speech surrounded by pauses. However, if you carefully listen to naturally occurring speech you will realize that speakers do not make pauses before or after each word.

Perhaps we could say that words can be surrounded by potential pauses in speech. This criterion works much better, but it runs into problems because speakers can and do make pauses not only between words but also between syllables, for example for emphasis.

But there is another way o f how the sound structure can tell us something about the nature of the word as a linguistic unit. Think of stress. In many languages (including English) the word is the unit that is crucial for the occurrence and distribution of stress. Spoken in isolation, every word can have only one main stress, as indicated by the acute accents (´) in the data presented in (3) below (note that we speak of linguistic ‘data’ when we refer to language examples to be analyzed).

(3) cárpenter téxtbook

wáter análysis

féderal sýllable

móther understánd

The main stressed syllable is the syllable which is the most prominent one in a word.

Prominence of a syllable is a function of loudness, pitch and duration, with stressed syllables being pronounced louder, with higher pitch, or with longer duration than

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the neighboring syllable(s). Longer words often have additional, weaker stresses, so called secondary stresses, which we ignore here for simplicity’s sake. The words in now show that the phonologically defined word is not always identical with the orthographically defined word.

 Bénjamin's

gírlfriend

apártment building

While apártment building is two orthographic words, it is only one word in terms of stress behavior. The same would hold for other compounds like trável agency, wéather forecast, spáce shuttle, etc. We see that in these examples the phonological definition of ‘word‘ comes closer to our intuition of what a word should be.

We have to take into c onsideration, however, that not all words carry stress.

For example, function words like articles or auxiliaries are usually unstressed (a cár, the dóg, Máry has a dóg) or even severely reduced ( Jane’s in the garden, I’ll be there).

Hence, the stress criterion is not readily applicable to function words and to words that hang on to other words, so-called clitics (e.g. ‘ve,‘s, ‘ll ).

Let us now consider the integrity criterion, which says that the word is an indivisible unit into which no intervening material may be inserted. If some modificational element is added to a word, it must be done at the edges, but never inside the word. For example, plural endings such as -sin girls, negative elements

such as un- in uncommon or endings that create verbs out of adjectives (such as -ize in colonialize) never occur inside the word they modify, but are added either before or after the word. Hence, the impossibility of formations such as \* gi-s-rl, \*com-un-mon, \*col-ize-onial(note that the asterisk indicates impossiblewords, i.e. words that are not formed in accordance with the morphological rules of the language in question).

However, there are some cases in which word integrity is violated. For example, the plural of son-in-law is not \*son-in-laws but sons-in-law . Under the assumption that son-in-law is one word (i.e. some kind of compound), the plural ending is inserted inside the word and not at the end. Apart from certain

compounds, we can find other words that violate the integrity criterion for words.

For example, in creations like abso-bloody-lutely, the element bloody is inserted inside the word, and not, as we would expect, at one of the edges. In fact, it is impossible to add bloody before or after absolutely in order to achieve the same effect. Bloody would mean something completely different, and \* bloody absolutely seems utterly strange and, above all, un interpretable.

We can conclude that there are certain, though marginal counterexamples to the integrity criterion, but surely these cases should be regarded as the proverbial exceptions that prove the rule.

The semantic definition of word states that a word expresses a unified semantic concept. Although this may be true for most words (even for son-in-law , which is ill-behaved with regard to the integrity criterion), it is not sufficient in order to differentiate between words and non -words. The simple reason is that not every unified semantic concept corresponds to one word in a given language. Consider, for example, the smell of fresh rain in a forest in the fall. Certainly a unified concept, but we would not consider the smell of fresh rain in a forest in the falla word. In fact, English simply has no single word for this concept. A similar problem arises with phrases like the woman who lives next door. This phrase refers to a particular person and should therefore be considered as something expressing a unified concept. This concept is however expressed by more than one word. We learn from this example that

although a word may always express a unified concept, not every unified concept is expressed by one word. Hence the criterion is not very helpful in distinguishing between words and larger units that are not words. An additional problem arises from the notion of ‘unified semantic concept’ itself, which seems to be rather vague.

For example, does the complicated word conventionalization really express a unified concept? If we paraphrase it as ‘the act or result of making something conventional’,

 it is not entirely clear whether this should still be regarded as a ‘unified concept’.

Before taking the semantic definition of word seriously, it would be necessary to define exactly what ‘unified concept’ means.

This leaves us with the syntactically-oriented criterion of word hood. Words are usually considered to be syntactic atoms, i.e. the smallest elements in a sentence.

Words belong to certain syntactic classes (nouns, verbs, adjectives, prepositions etc.), which are called parts of speech, word classes or syntactic categories. The position in which a given word may occur in a sentence is determined by the syntactic rules of a language. These rules make reference to words and the class they belong to. For example, the is said to belong to the class called articles, and there are rules which determine w here in a sentence such words, i.e. articles, may occur (usually before nouns and their modifiers, as in the big house). We can therefore test whether something is a word by checking whether it belongs to such a word class. If the item in question, for example, follows the rules for nouns, it should be a noun, hence a word. Or consider the fact that only words (and groups of words), but no smaller units can be moved to a different position in the sentence. For example, in ‘yes/no’ questions, the auxiliary v erb does not occur in its usual position but is moved to the beginning of the sentence ( You can read my textbook vs. Can you read my textbook?).

Thus syntactic criteria can help to determine the wordhood of a given entity.

To summarize our discussion of t he possible definition of word we can say that, in spite of the intuitive appeal of the notion of ‘word’, it is sometimes not easy to decide whether a given string of sounds (or letters) should be regarded as a word or not. In the treatment above, we have concentrated on the discussion of such problematic cases. In most cases, however, the stress criterion, the integrity criterion and the syntactic criteria lead to sufficiently clear results. The properties of words are summarized in (5):

(5) Properties of words

-words are entities having a part of speech specification

-words are syntactic atoms

-words (usually) have one main stress

-words (usually) are indivisible units (no intervening material possible)

Unfortunately, there is yet another problem with the word worditself, namely its

ambiguity. Thus, even if we have unequivocally decided that a given string is a

word, some insecurity remains about what exactly we refer to when we say

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2. Studying word-formation

As the term ‘word-formation’ suggests, we are dealing with the formation of words, but what does that mean? Let us look at a number of words that fall into the domain of word-formation and a number of words that do not:

(7) a. employee b. apartment building c. chair

inventor greenhouse neighbor

inability team manager matter

meaningless truck driver brow

suddenness blackboard great

unhappy son-in-law promise

decolonialization pickpocket discuss

In columns (7a) and (7b) we find words that are obviously composed by putting

together smaller elements to form larger words with more complex meanings. We

can say that we are dealing with morphologically complex words. For example,

employee can be analyzed as being composed of the verb employ and the ending -ee, the adjective un happy can be analyzed as being derived from the adjective happy by the attachment of the element un-, and decolonialization can be segmented into the smallest parts de-, colony, -al, -ize, and -ation. We can thus decompose complex words into their smallest meaningful units. These units are called morphemes.

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In contrast to those in (7a) and (7b), the words in (7c) cannot be decomposed into smaller meaningful units, they consist of only one morpheme, they are mono morphemic. Neighbor,for example, is not composed of neighb-and -or, although the

word looks rather similar to a word such as inventor. Inventor (‘someone who invents (something)’) is decomposable into two morphemes, because both invent-and -or are meaningful elements, whereas neither neighb-nor -orcarry any meaning in neighbor(a neighbor is not someone who neighbs, whatever that may be...).

As we can see from the complex words in (7a) and (7b), some morphemes can occur only if attached to some other morpheme(s). Such morphemes are called

bound morphemes, in contrast to free morphemes, which do occur on their own.

Some bound morphemes, for example un-, must always be attached before the

central meaningful element of the word, the so-called root, stem or base, whereas other bound morphemes, such as -ity, -ness, or -less, must follow the root.

Latin-influenced terminology, un-is called a prefix, -ity a suffix, with affixbeing the cover term for all bound morphemes that attach to roots. Note that there are also bound roots, i.e.roots that only occur in combination with some other bound

morpheme. Examples of bound roots are often of Latin origin, e.g. later-(as in combination with the adjectival suffix -al), circul -(as in circulate, circulation, circulatory, circular), approb- (as in approbate, approbation, approbatory, approbator), simul - (as in simulant, simulate, simulation), but occasional native bound roots can also be found

(e.g. hap-, as in hapless).

Before we turn to the application of the terms introduced in this secti on, we should perhaps clarify the distinction between ‘root’, ‘stem’ and ‘base’, because these terms are not always clearly defined in the morphological literature and are

therefore a potential source of confusion. One reason for this lamentable lack of

clarity is that languages differ remarkably in their morphological make-up, so that

different terminologies reflect different organizational principles in the different

languages. The part of a word which an affix is attached to is called base. We will

use t he term root to refer to bases that cannot be analyzed further into morphemes.

The term ‘stem’ is usually used for bases of inflections, and occasionally also for

Chapter 1: Basic Concepts 14bases of derivational affixes. To avoid terminological confusion, we will avoid the use of the term ‘stem’ altogether and speak of ‘roots’ and ‘bases’ only.

The term root is used when we want to explicitly refer to the indivisible central part of a complex word. In all other cases, where the status of a form as

indivisible or not is not at issue,we can just speak of bases or base-words. The

derived word is often referred to as a derivative. The base of the suffix -alin the derivative colonialis colony, the base of the suffix -izein the derivative colonializeis colonial, the base of -ationin the derivative colonializationis colonialize. In the case of colonialthe base is a root, in the other cases it is not. The terminological distinctions are again illustrated in (8):

(8) derivative of -ize/base of -ation

colony -al -ize -ation

root/base of -al

derivative of -al/base of -ize

derivative of -ation

While suffixes and prefixes are very common in English, there are also rare cases of affixes that cannot be considered prefixes or suffixes, because they are inserted not at the boundary of another morpheme but right into another morpheme. Compare again our formation abso-bloody-lutelyfrom above, where -bloody-interrupts themorpheme absolute(the base absolutely consists of course of the two morphemes .

absoluteand -ly). Such intervening affixes are called infixes. Now, shouldn’t we

analyze -alin decolonialization also as an infix (after all, it occurs inside a word)? The answer is “no”. True, -aloccurs insidea complex word, but crucially it does not occur inside another morpheme. It follows one morpheme ( colony), and precedes another one ( -ize). Since it follows a base, it must be a suffix, which, in this particular case, is followed by another suffix.

One of the most interesting questions that arise from the study of affixed

words is which mechanisms regulate the distribution of affixes and bases. That is,

what exactly is responsible for the fact that some morphemes easily combine with

each other, whereas others do not? For example, why can’t we combine de- with

colonyto form \* de-colony or attach -al to -izeas in \* summarize-al? We will frequently return to this fundamental question throughout this book and learn that -perhaps unexpectedly -the combinator ial properties of morphemes are not as arbitrary as they may first appear.

Returning to the data in (7), we see that complex words need not be made up

of roots and affixes. It is also possible to combine two bases, a process we already

know as compounding. The words (7b) ( apartment building, greenhouse, team manager, truck driver) are cases in point.

Sofar, we have only encountered complex words that are created by

concatenation, i.e. by linking together bases and affixes as in a chain. There are,

however, also other, i.e. non-concatenative, ways to form morphologically complex words. For instance, we can turn nouns into verbs by adding nothing at all to the base. To give only one example, consider the noun water, which can also be used as a verb, meaning ‘provide water’, as in John waters his flowers every day. This process is referred to as conversion, zero-suffixation, or transposition. Conversion is a rather wide-spread process, as is further illustrated in (9), which shows examples of verb to noun conversion:

(9) to walk take a walk

to go have a go

to bite have a bite

to hug give a hug

The term ‘zero-suffixation’ implies that there is a suffix present in such forms, only that this suffix cannot be heard or seen, h ence zero-suffix. The postulation of zero elements in language may seem strange, but only at first sight. Speakers frequently leave out entities that are nevertheless integral, though invisible or inaudible, parts of their utterances. Consider the following sentences:

a. Jill has a car. Bob too.

b. Jill promised Bob to buy him the book.

In (10a), Bob too is not a complete sentence, something is missing. What is missing is something like has a car, which can however, be easily recovered by competent speakers on the basis of the rules of English grammar and the context. Similarly, in (10b) the verb buy does not have an overtly expressed subject. The logical subject (i.e. the buyer) can however be easily inferred: it must be the same person that is the

logical subject of the super ordinate verb promise. What these examples show us is that under certain conditions meaningful elements can indeed be left unexpressed on the surface, although they must still be somehow present at a cer tain level of analysis. Hence, it is not entirely strange to posit morphemes which have no overt expression. We will discuss this issue in more detail in section 1.2. of the next

chapter and in chapter 5, section 1.2, when we deal with non -affixational wor dformation.

Apart from processes that attach something to a base (affixation) and

processes that do not alter the base (conversion), there are processes involving the

deletion of material, yet another case of non -concatenative morphology. English

christian names, for example, can be shortened by deleting parts of the base word

(see (11a)), a process also occasionally encountered with words that are not personal names (see (11b)). This type of word -formation is called truncation, with the term clipping also being used.

(11) a. Ron (¬Aaron) b. condo (¬condominium)

Liz (¬Elizabeth) demo (¬demonstration)

Mike (¬Michael) disco (¬discotheque)

Trish (¬Patricia) lab (¬laboratory)

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Sometimes truncation and affixation can occur together, as with formations

expressing intimacy or smallness, so-called diminutives:

(12) Mandy (¬Amanda)

Andy (¬Andrew)

Charlie (¬Charles)

Patty (¬Patricia)

Robbie(¬Roberta)

We also find so-called blends, which are amalgamations of parts of different words, such as smog(¬ smoke/fog) or modem(¬ modulator/demodulator). Blends based on orthography are called acronyms, which are coined by combining the initial letters of

compounds or phrases into a pronouncable new wor d ( NATO , UNESCO, etc.).

Simple abbreviations like UK, or USAare also quite common. The classification of blending as either a special case of compounding or as a case of non -affixational derivation is not so clear. In chapter 5, section 2.2. we will argue that it is best described as derivation.

In sum, there is a host of possibilities speakers of a language have at their

disposal (or had so in the past, when the words were first coined) to create new

words on the basis of existing ones, including the addition and subtraction of

phonetic (or orthographic) material. The study of word -formation can thus be

defined as the study of the ways in which new complex words are built on the basis

of other words or morphemes. Some consequences of such a definition wi ll be

discussed in the next section.

3. Inflection and derivation

The definition of ‘word -formation’ in the previous paragraph raises an important

problem. Consider the italicized words in (13) and think about the question whether kicksin (13a), drinkingin (13b), or studentsin (13c) should be regarded as ‘new words’ in the sense of our definition.

(13) a. She kicks the ball.

b. The baby is not drinking her milk .

c. The students are nor interested in physics.

The italicized words in (13) are certainly complex words, all of them are made up of two morphemes. Kicksconsists of the verb kick and the third person singular suffix -s, drinking consists of the verb drink and the participial suffix -ing, and students consists of the noun student and the plural suffix -s. However, we would not want to consider these complex words ‘new’ in the same sense as we would consider kickera new word derived from the verb kick . Here the distinction between word -form and lexeme is again useful. We would want to say that suffixes like participial -ing, plural -s, or third person singular -screate new word -forms, i.e. grammatical words, but they do not create new lexemes. In contrast, suffixes like -erand -ee (both attached to verbs, as in kickerand employee), or prefixes likere-or un-(as in rephraseor unconvincing) do form new lexemes. On the basis of this criterion (i.e. lexemeformation), a distinction has traditionally been made between inflection(i.e.conjugation and declension in t raditional grammar) as part of the grammar on the one hand, and derivationand compounding as part of word -formation (or rather: lexeme formation).

Let us have a look at the following data which show further characteristics by

which the two classes of morphological processes, inflection vs. word -formation, can be distinguished. The derivational processes are on the left, the inflectional ones on the right.

 a. derivation

worker

useless

untruthfulness

interview

curiosity

passivize

Terrorism

b. inflection

(she) works

(the) worker s

(is) colonializing

(we) picked

(the) children

John’s (house)

Emily’s (job)

As already indicated above, the most crucial difference is that inflectional

morphemes encode grammatical categories such as plural ( workers), person ( works), tense (picked), or case (John’s). These categories are relevant for the building ofsentences and are referred to by the grammar. For example, there is a grammatical rule in English that demands t hat a third person singular subject is followed by a verb that is also marked as third person singular. This is called subject-verb agreement, which is also relevant for plural marking in sentences ( The flowers are/\*is wonderful). The plural and person suf fixes are therefore syntactically relevant, hence inflectional.

One might argue that the suffix -erin worker is also syntactically relevant, in

the sense that it is important for the syntax whether a word is a noun or a verb. That is of course true, but only in a very limited way. Thus, it is not relevant for the syntax whether the noun ends in -er, -ee, -ion, or whether the noun is morphologically complex at all. In that sense, derivational suffixes are not relevant for the syntax.

Let us turn to the next set of properties that unites the words on the left and differentiates them from the words on the right. These properties concern the position of the morphemes: in English derivational morphemes can occur at either end of the base words whereas regular inflection is always expressed by suffixes.

Only irregular inflection makes use of non-affixational means, as for example in mouse -miceor sing -sang. There is no inflectional prefix in English. Furthermore, forms like workers or colonializing indicate that inflectional morphemes always occur outside derivational morphemes, they close the word for further (derivational) affixation (\*workers-hood, \* colonializing-er). As evidenced by derivatives like un-truthful -ness or the famous textbook example dis-establish-ment-arian-ism, derivational suffixes can and do occur inside other derivational suffixes.

Another interesting difference between the words in (14a) and (14b) concerns the part of speech. The suffixes in (14a) change the part of speech of the base w ord.

For instance, the suffixation of -less makes an adjective out of a noun, the suffix -ity makes a noun out of an adjective, and the suffix -ize turns an adjective into a verb.

The inflectional suffixes don’t change the category of the base word. A plur al marker on a noun does not change the category, nor does the past tense marker on the verb.

However, not all derivational affixes are category-changing, as is evidenced, for example, by most prefixes (as e.g. in post-war, decolonialize, non-issue), or by the nominal suffix -ism, which can attach to nouns to form nouns (e.g. Terrorism).

The final property of derivation to be discussed here is exemplified by the two derivatives interview and curiosity in (14a), as against all inflectional forms. Both forms in (14a) show a property that is often found in derivation, but hardly ever in inflection, and that is called semantic opacity. If you consider the meaning of interview and the meaning of the ingredient morphemes inter-and view, you can observe that the meaning of interview is not the sum of the meaning of its parts. The meaning of inter- can be paraphrased as ‘between’, that of (the verb) viewas ‘look at something’ (definitions according to the Longman Dictionary of Contemporary English), whereas the meaning of (the verb) interview is ‘to ask someone questions, especially in a formal meeting’. Thus the meaning of the derived word cannot be inferred on the basis of its constituent morphemes, it is to some extent opaque, or nontransparent . The same holds for curiosity, a noun that has two related meanings: it can refer to a personal attribute ‘the desire to know or learn about anything’, which is transparent, but it can also mean ‘object of interest’ (cf., for example, the definitions given in the OED), which is certainly less transparent. Non -transparent formations are quite common in derivational morphology, but rare in inflection.

Closely related to this generalization is the fact that inflectional categories tend to be fully productive, whereas derivational categories often show strong restrictions as to the kinds of possible combinations. What does ‘fully productive’ mean? A productive morpheme is one that can be attached regularly to any word of

the appropriate class. For example, a morpheme expressing past tense can occur on all regular main verbs. And a morpheme expressing plural on nouns can be said to be fully productive, too, because all count nouns can take plural endings in English (some of these endings are irregular, as in ox-en, but the fact remains that plural morphology as such is fully productive). Note that the ‘appropriate class’ here is the class of count nouns; non -count nouns (such as rice and milk) regularly do not take plural. In contrast to the inflectional verbal and nominal endings just mentioned, not all verbs take the adjectival suffix -ive, nor do all count nouns take, say, the adjectival suffix -al:

(15) a. \*walk-ive exploit ®exploitive

\*read-ive operate ® operative

\*surprise-ive assault ®assaultive

b. \*computer -al colony ®colonial

\*desk-al department ® departmental

\*child-al phrase ®phrasal

The nature of the restrictions that are responsible for the impossibility of the

asterisked examples in (15) (and in derivational morphology in general) are not

always clear, but are often a complex mixture of phonological, morphological and

semantic mechanisms. The point is that, no matter what these restrictions in

derivational morphology turn out to be, inflectional domains usually lack such

complex restrictions.

As a conclusion to our discussion of derivation and inflection, I have

summarized the differences between inflection and derivation in (16):

 derivation inflection

-encodes lexical meaning -encodesgrammatical categories

-is not syntactically relevant -is syntactically relevant

-can occur inside derivation -occurs outside all derivation

-often changes the part of speech -does not change part of speech

-is often semantically opaque -is rarely semantically opaque

-is often restricted in its productivity -is fully productive

-is not restricted to suffixation -always suffixational (in English)

Based on these considerations we can conclude this sub-section by schematically

conceptualizing the realm of morphology, as described so far:

morphology

inflection word-formation

derivation compounding

The formal means employed in derivational morphology and discussed so far can be classified in the following way:

derivation

affixation non-affixation

prefixation suffixation infixation conversion truncation blending

4. Summary

In this chapter we have looked at some fundamental properties of words and the

notion of ‘word’ itself. We have seen that words can be composed of smaller units,

called morphemes, and that there are many different ways to create new words from existingones by affixational, non -affixational and compounding processes.

Furthermore, it became clear that there are remarkable differences between different types of morphological processes, which has led us to the postulation of the distinction between inflection and word -formation.

We are now equipped with the most basic notions necessary for the study of

complex words, and can turn to the investigation of more (and more complicated)

data in order to gain a deeper understanding of these notions. This will be done in the next chapter.

**Conclusion**

 This book includes a lot of information how to form words in teaching English. And how to use correct in language? You may ask why do we need forming? We can use the language without Idioms but it can’t have rich content, if you are able to use idioms it means that you can use the target language effectively and contently.

As above mentioned Idioms can be different. The types of Idioms give the undertone to the language. Idioms are used just like phrasal verbs—anywhere they make sense!

Usually, the verb and preposition in a phrasal verb need to be said together, like in the phrase “fall down.” In some cases, though, you can separate the verb and the preposition by putting other words in between them. The findings of the present study suggest the positive effect of context on learning/teaching L2/FL idiomatic expressions and the positive long term effect of context on participants’ retention as well. The researcher’s findings are in line with those of Liontas (2003) in the sense that the context can effectively facilitate understanding and the learning/teaching of idiomatic expressions. And it further supports the argument that the learning of idiomatic expressions can be enhanced through systematic instruction within the context of meaningful-authentic language use (Liontas, 2003). The investigation carried out by Li (1988) indicated that the participants scored significantly higher on learning and remembering the meaning of unfamiliar words in context. In other words, those participants who learnt the meanings of unfamiliar words through context performed better in remembering the meanings of those words. Additionally, research (Craik & Tulving, 1975) has shown that memory performance enhances to the extent that vocabulary items have been learned through context.

The researcher also argued that a large number of schemata were activated in the longer context. Thus, in the longer context most of the schemata employed in processing the context can also be used while administering the posttests, especially those schemata which turn out to be helpful. In the limited context, however, not enough schemata are available. Therefore, this cannot help learners master the idiomatic expressions in the long term. This finding is not consistent with the findings of Ortony et al.’s (1978) study. There were significant differences between the two context lengths (short vs. long). They have shown that fewer suitable schemata would be activated in the comprehension of the shorter context, consequently not resulting in the mastering of the idiomatic expressions. Meanwhile, in the longer context, learners performed better because of the higher number of activated schemata. This is because context provides many points of reference for the retention of the new words--in the case of the present study, idiomatic expressions. Consequently, it facilitates the retrieval of information from one’s memory.

The findings of the present study, though not generalizable due to the limited number of the participants, indicate the superiority of longer contexts, defined as brief stories in this study, to individual sentences in teaching idioms. This is a point that both teachers and materials writers need to think twice about.

**COMPOUNDING**

This chapter is concerned with compounds. Section 1 focuses on the basic characteristics of compounds, investigating the kinds of elements compounds are made of, their internal structure, headedness and stress patterns. This is followed by descriptions of individual compounding patterns and the discussion of the specific empirical and theoretical problems these patterns pose. In particular, nominal, adjectival, verbal and neoclassical compounds are examined, followed by an exploration of the syntax-morphology boundary.

1. Recognizing compounds

Compounding was mentioned in passing in the preceding chapters and some of its characteristics have already been discussed. For example, in chapter 1 we briefly commented on the orthography and stress pattern of compounds, and in chapter 4 we investigated the boundary between affixation and compounding and introduced

the notion of neoclassical compounds. In this chapter we will take a closer look at compounds and the intricate problems involved in this phenomenon. Although compounding is the most productive type of word formation process in English, it is perhaps also the most controversial one in terms of its linguistic analysis and I must forewarn readers seeking clear answers to their questions that compounding is a field of study where intricate problems abound, numerous issues remain unresolved and convincing solutions are generally not so easy to find.

Let us start with the problem of definition: what exactly do we mean when we say that a given form is a compound? To answer that question we first examine the internal structure of compounds.

 **What are compounds made of?**

**Compounding**

In the very first chapter, we defined compounding(sometimes also called composition) rather loosely as the combination of two words to form a new word.

This definition contains two crucial assumptions, the first being that compounds consist of two (and not more) elements, the second being that these elements are words. As we will shortly see, both assumptions are in need of justification. We will discuss each in turn.

There are, for example, compounds such as those in (1), which question the idea that compounding involves only two elements. The data are taken from a user’s manual for a computer printer:

(1) power source requirement engine communication error communication technology equipment

The data in (1) seem to suggest that a definition saying that compounding involves always two (and not more) words is overly restrictive. This impression is further enhanced by the fact that there are compounds with four, five or even more

members, e.g. university teaching award committee member. However, as we have seen with multiply affixed words in chapter 2, it seems generally possible to analyze poly morphemic words as hierarchical structures involving binary (i.e. two -member) sub-elements. The above-mentioned five-member compound university teaching award committee member could thus be analyzed as in (2), using the bracketing and tree representation s as merely notational variants

According to (2) the five-member compound can be divided in strictly binary compounds as its constituents. The innermost constituent [ teaching award] ‘an award for teaching’ is made up of [teaching] and [award], the next larger constituent [university teaching award] ‘the teaching award of the university’ is made up of [university] and [ teachin g award], the constituent [ university teaching award committee] ‘the committee responsible for the university teaching award’ is made up of [university teaching award] and [ committee], and so on. Under the assumption that such an analysis is possible for all compounds, our definition can be formulated in such a way that compounds are binary structures.

What is also important to note is that -at least with noun -noun compounds -new words can be repeatedly stacked on an existing compound to form a new compound. Thus if there was a special training for members of the university teaching award committee, we could refer to that training as the university teaching award committee member training. Thus the rules of compound formation are able to repeatedly create the same kind of structure. This property is called recursivity, and it is a property that is chiefly known from the analysis of sentence structure. For example, the grammar of English allows us to use subordinate clauses recursively by putting a new clause inside each new clause, as in e.g. John said that Betty knew that Harry thought that Janet believed ... and so on. Recursivity seems to be absent from derivation, but some marginal cases such as great-great-great-grandfather are attested in prefixation. There is no structural limitation on the recursivity of compounding, but the longer a compound becomes the more difficult it is for the speakers/listeners to process, i.e. produce and understand correctly. Extremely long compounds are therefore disfavored not for structural but for processing reasons.

Having clarified that even longer compounds can be analyzed as essentially

binary structures, we can turn to the question what kinds of element can be used to

form compounds. Consider the following forms and try to determine what kinds of

elements can occur as elements in compounds:

a. astrophysics

biochemistry

photoionize

b. parks commissioner

teeth marks

systems analyst

c. pipe-and-slipper husband

off-the -rack dress

over-the-fence gossip

In (3a) we find compounds involving elements ( astro-, bio-, photo-), which are not attested as independent words (note that photo-in photoionizemeans ‘light’ and is not the same lexeme as photo‘picture taken with a camera’). In our discussion of neoclassical formations in chapter 4 we saw that bound elements like astro-, bio-, photo-etc. behave like words (and not like affixes), except that they are bound. Hence they are best classified as (bound) roots. We could thus redefine compounding as the combination of roots, and not of words. Such a move has, however, the unfortunate consequence that we would have to rule out formations such as those in (3b), where the first element is a plural form, hence not a root but a (grammatical) word. To make matters worse for our definition, the data in (3c) show that even larger units, i.e. syntactic phrases, can occur in compounds (even if only as left elements).

Given the empirical data, we are well-advised to slightly modify our above definition and say that a compound is a word that consists of two elements, the first of which is either a root, a word or a phrase, the second of which is either a root or a word.

**More on the structure of compounds: the notion of head**

The vast majority of compounds are interpreted in such a way that the left-hand member somehow modifies the right-hand member. Thus, a film society is a kind of society (namely one concerned with films), a parks commissioner is a commissioner occupied with parks, to deep-fryis a v erb designating a kind of frying, knee-deep in She waded in knee-deep water tells us something about how deep the water is, and so on.

We can thus say that such compounds exhibit what is called a modifier-head structure. The term head is generally used to refer to the most important unit in

complex linguistic structures. In our compounds it is the head which is modified by

the other member of the compound. Semantically, this means that the set of entities

possibly denoted by the compound (i.e. all film societies) is a subset of the entities

denoted by the head (i.e. all societies).

With regard to their head, compounds in English have a very important systematic property: their head always occurs on the right-hand side (the so-called right -hand head rule, Williams 1981a:248). The compound inherits most of its semantic and syntactic information from its head. Thus, if the head is a verb, the compound will be a verb (e.g. deep-fry), if the head is a count noun, the compound will be a count noun (e.g. beer bottle), if the head has feminine gender, the compound will have feminine gender (e.g. head waitress). Another property of the compound head is that if the compound is pluralized the plural marking occurs on the head, not on the non -head. Thus, parks commissioner is not the plural of park commissioner; only park commissioners can be the plural form of park commissioner. In the existing compound parks commissioner, the plural interpretation is restricted to the non -head and not inherited by the whole compound. T his is shown schematically in (4), with the arrow indicating the inheritance of the grammatical features from the head. The inheritance of features from the head is also (somewhat counter -intuitively) referred to as feature percolation:

a. N Singular

parks[Noun, Plural] commissioner [Noun, singular]

a. N Plural

park[Noun, Singular] commissioners [Noun, Plural]

The definition developed in section 1.1. and the notion of head allow us to deal consistently with words such as jack -in-the-box, good-for-nothing and the like, which one might be tempted to analyze as compounds, since they are words that internally consist of more than one word. Such multi -word sequences are certainly words in the sense of the definition of word developed in chapter 1 (e.g. they are uninterruptable lexical items that have a syntactic category specification). And syntactically they behave like other words, be they complex or simplex. For example, jack -in-the-box (being a count noun) can take an article, can be modified by an adjective and can be pluralized, hence behaves syntactically like any other noun with similar properties.

However, and crucially, such multi-word words do not have the usual internal structure of compounds, but have the internal structure of syntactic phrases. Thus,

they lack a right-hand head, and they do not cons ist of two elements that meet the criteria of our definition. For example, under a compound analysis jack -in-the-box is headless, since a jack -in-the-box is neither a kind of box, nor a kind of jack .

Furthermore, jack -in-the-box has a phrase (the so-called prepositional phrase [ in the box]) as its right-hand member, and not as its left-hand member, as required for compounds involving syntactic phrases as one member (see above). In addition, jack in-the-box fits perfectly the structure of English noun phrases (cf. (the) fool on the hill).

In sum, words like jack -in-the-boxare best regarded as lexicalized phrases and not as compounds.

Our considerations concerning the constituency and headedness of

compounds allow us to formalize the structure of compounds as in (5):

The structure of English compounds

a. [ X Y] Y

b. X = { root, word, phrase }

Y = { root, word }

Y= grammatical properties inherited from Y

is a template for compounds which shows us that compounds are binary, and which kinds of element may occupy which positions. Furthermore, it tells us that the right-hand member is the head, since this is the member from which the grammatical properties percolate to the compound as a whole.

We may now turn to another important characteristic of English compounds, their stress pattern.

. Stress in compounds

As already said in chapter 2, compounds tend to have a stress pattern that is different from that of phrases. This is especially true for nominal compounds, and the following discussion of compound stress is restricted to this class of compounds. For comments on the stress patterns of adjectival and verbal compounds see sections 4 and 5 below.

While phrases tend to be stressed phrase-finally, i.e. on the last word, compounds tend to be stressed on the first element. This systematic difference is captured in the so-called nuclear stress rule(‘phrasal stress is on the last word of the phrase’) and the so-called compound stress rule (‘stress is on the left-hand member of a compound’), formalized in Chomsky and Halle (1968:17). Consider the data in for illustration, in which the most prominent syllable of the phrase is marked by an acute accent:

a. noun phrases:

[the green cárpet], [this new hóuse], [such a good jób]

b. nominal compounds:

[páyment problems], [installátion guide], [spáce requirement]

This systematic difference between the stress assignment in noun phrases and in

noun compounds can even lead to minimal pairs where i t is only the stress pattern

that distinguishes between the compound and the phrase (and their respective

interpretations):

(7) noun compound noun phrase

a. bláckboard a black bóard

‘a board to write on’ ‘a board that is black’

b. gréenhouse a green hóuse

‘a glass building for growing plants’ ‘a house that is green’

c. óperating instructions operating instrúctions

‘instructions for operating something’ ‘instructions that are operating’

d. instálling options installing óptions

‘options for installing something’ ‘the installing of options’

While the compound stress rule makes correct predictions for the vast majority of nominal compounds, it has been pointed out (e.g. by Liberman and Sproat 1992,

Bauer 1998b, Olson 2000) that there are also numerous exceptions to the rule. Some of these exceptions are listed in (8). The most prominent syllable is again marked by an acute accent on the vowel.

geologist-astrónomer apple píe

scholar-áctivist apricot crúmble

Michigan hóspital Madison Ávenue

Boston márathon Penny Láne

summer níght aluminum fóil

may flówers silk tíe

How can we account for such data? One obvious hypothesis would be to say that the compound stress rule holds for all compounds, so that, consequently, the above word combinations cannot be compounds. But what are they, if not compounds?

Before we start reflecting upon this difficult question, we should first try an

alternative approach.

Proceeding from our usual assumption that most phenomena are at least to some extent regular, we could try to show that the words in (8) are not really idiosyncratic but that they are more or less systematic exceptions of the compound stress rule. This hypothesis has been entertained by a number of scholars in the past .

Although these authors differ slightly in details of their respective approaches, they all argue that rightward prominence is restricted to only a severely limited number of more or less well-defined types of meaning relationships. For example,

compounds like geologist-astronomer and scholar-activist differ from other compounds in that both elements refer to the same entity. A geologist-astronomer, for example is one person that is an astronomer and at the same time a geologist. Such compounds are called copulative compounds and will be discussed in more detail below. For the moment it is important to note that this clearly definable sub-class of compounds consistently has rightward stress ( geologist-astrónomer), and is therefore a systematic exception to the compounds stress rule. Other meaning relationships typically accompanied by rightward stress are temporal or locative (e.g. a summer níght, the Boston márathon), or causative, usually paraphrased as ‘made of’ (as in aluminum fóil, silk tíe), or ‘created by’ (as in a Shakespeare sónnet, a Mahler sýmphony). It is, however, not quite clear how many semantic classes should be set up to account for all the putative exceptions to the compound stress rule, which remains a problem for proponents of this hypothesis. It also seems that certain types of combination choose their stress pattern in analogy to combinations having the same rightward

constituents. Thus, for example, all street names involving street as their right-hand member pattern alike in having leftward stress, while all combinations with, for example, avenue as right-hand member pattern alike in having rightward stress.

To summarize this brief investigation of the hypothesis that stress assignment

in compounds is systematic, we can say that there are good arguments to treat

compounds with rightward stress indeed as systematic exceptions to the otherwise

prevailing compound stress rule.

Let us, however, also briefly explore the other hypothesis, which is that word combinations with rightward stress cannot be compounds, which raises the question of what else such structures could be. One natural possibility is to consider such forms as phrases. However, this creates new serious problems. First, such an approach would face the problem of explaining why not all forms that have the same superficial structure, for example noun -noun, are phrases. Second, one would like to have independent criteria coinciding with stress in order to say whether something is a compound or a phrase. This is, however, impossible: apart from stress itself, there seems to be no independent argument for claiming that Mádison Street should be a compound, whereas Madison Ávenue should be a phrase. Both have the same internal structure (noun -noun), both show the same meaning relationship between their respective constituents, both are right-headed, and it is only in their stress patterns that they differ. A final problem for the phrasal analysis is the above-mentioned fact that the rightward stress pattern is often triggered by analogy to other combinations

with the same rightward element. This can only happen if the forms on which the

analogy is based are stored in the mental lexicon. And storage in the mental lexicon is something we would typically expect from words (i.e. compounds), but not from phrases.

To summarize our discussion of compound stress, we can say that in English, compounds generally have leftward stress. Counterexamples to this generalization exist, but in their majority seem to be systematic exceptions that correlate with certain types of semantic interpretation or that are based on the analogy to existing compounds.

Given the correctness of the compound stress rule, another interesting problem arises: how are compounds stressed that have more than two members?

Consider the following compounds, their possible stress patterns, and their interpretations.

máil delivery service mail delívery service

stúdent feedback system student féedback system góvernment revenue policy government révenue policy.

The data show that a certain stress pattern seems to be indicative of a certain kind of interpretation. A máil delivery service is a service concerned with máil delivery (i.e. the delivery of mail), whereas a mail delívery service is a delívery service concerned with mail. This is a small semantic difference indeed, but still one worth taking note of. A stúdent feedback system is a system concerned with stúdent feedback , whereas a student féedback system may be a féedback system that has something to do with students was designed by students or is maintained by students). And while the góvernment revenue policy is a policy concerned with the góvernment revenue, the government révenue policyis a certain révenue policy as implemented by the government. The two different interpretations correlating with the different stress patterns are indicated by the brackets in (10):

(10) [ [máil delivery] service ] [ mail [ delívery service] ]

[ [ stúdent feedback] system ] [ student [ féedback system] ]

[ [ góvernment revenue] policy ] [ government [ révenue policy ] ]

Note that the semantic difference between the two interpretations is sometimes so small (e.g. in the case of mail delivery service) that the stress pattern appears easily variable. Pairs with more severe semantic differences (e.g. góvernment revenue policy vs. government révenue policy) show, however, that certain interpretations consistently go together with certain stress patterns. The obvious question is now how the mapping of a particular structure with a particular stress pattern proceeds.

Compounding

Let us look again at the structures in (10). The generalization that emerges from the three pairs is that the most prominent stress is always placed on the left hand member of the compound inside the compound and never on the member of the compound that is not a compound itself. Paraphrasing the rule put forward by Liberman and Prince (1977), we could thus say that in a compound of the structure

[XY], Y will receive strongest stress, if, and only if, it is a compound itself. This means that a compound [XY] will have left-hand stress if Y is not a compoun d itself. If Y is a compound, the rule is applied again to Y. This stress assigning algorithm is given in and exemplified with the example in (12):

Stress assignment algorithm for English compounds

Is the right member a compound?

If yes, the right member must be more prominent than the left member.

If no, the left member must be more prominent than the right member.

bathroom towel designer

[[[bathroom] towel] designer]

‘designer of towels for the bathroom’

Following our algorithm, we start with the right member and ask whether it is a compound itself. The right member of the compound is designer, i.e. not a compound, hence the other member ( [ bathroom towel] ) must be more prominent, so that designer is left unstressed. Applying the algorithm again on [[bathroom]towel] yields the same result, its right member is not a compound either, hence is unstressed. The next left member is bathroom, where the right member is equally not a compound, hence unstressed. The most prominent element is therefore the remaining word bath, which must receive the primary stress of the compound. The result of the algorithm is shown in (12), where ‘w’ (for ‘weak’) is assigned to less prominent constituents and ‘s’ (for ‘strong’) is assigned to more prominent constituents (the most prominent constituent is the one which is only dominated by s’s.

In the foregoing sections we have explored the basic general characteristics of

compounds. We have found that compounds can be analyzed as w ords with binary

structure, in which roots, words and even phrases (the latter only as left members)

are possible elements. We also saw that compounds are right-headed and that the

compound inherits its major properties from its head. Furthermore, compound s

exhibit a regular compound -specific stress pattern that differs systematically from

that of phrases.

While this section was concerned with the question of what all compounds

have in common, the following section will focus on the question what kinds of

systematic differences can be observed between different compounding patterns.

2. An inventory of compounding patterns

In English, as in many other languages, a number of different compounding patterns are attested. Not all words from all word classes c an combine freely with other.

Compounding

Words to form compounds. In this section we will try to determine the inventory of possible compounding patterns and see how these patterns are generally restricted.

One possible way of establishing compound patterns is to classify compounds according to the nature of their heads. Thus there are compounds involving nominal heads, verbal heads and adjectival heads. Classifications based on syntactic category are of course somewhat problematic because many words of English belong to more than one category (e.g. walk can be a noun and a verb, blind can be an adjective, a verb and a noun, green can be an adjective, a verb and a noun, etc.), but we will nevertheless use this type of classifications because it gives us a clear set of form classes, whereas other possible classifications, based on, for example, semantics,

appear to involve an even greater degree of arbitrariness. For example, Brekle sets up about one hundred different semantic classes, while Hatcher has only four.

In the following, we will ignore compounds with more than two members, and we can do so because we have argued above that more complex compounds can be broken down into binary sub-structures, which means that the properties of larger compounds can be predicted on the basis of their binary consituents. Hence, larger compounds follow the same structural and semantic patterns as two -member compounds.

In order to devise an inventory of compounding patterns I have tentatively schematized the possible combinations of words from different parts of speech as in The table includes the four major categories noun, verb, adjective and

preposition. Prepositions (especially those in compound -like structures) are also

referred to in the literature as particles. Potentially problematic forms are

accompanied by a question mark.

There are some gaps in the table. Verb-adjective or adjective-preposition compounds, for example, are simply not attested in English and seem to be ruled out on a principled basis. The number of gaps increases if we look at the four cells that contain question marks, all of which involve prepositions. As we will see, it can be shown that these combinations, in spite of their first appearance, should not be analyzed as compounds.

Let us first examine the combinations PV, PA and VP, further illustrated in

 a. PV: to download, to outsource, to upgrade,

the backswing, the input, the up shift

b. PA: inbuilt, incoming, outgoing

c. VP: breakdown, push-up, rip-off

Prepositions and verbs can combine to form verbs, but sometimes this results in a noun, which is unexpected given the headedness of English compounds. However, it could be argued that backs wing or up shift are not PV compounds but PN compounds (after all, swing and shift are also attested as nouns). Unfortunately such an argument does not hold for input, which first occurred as a noun, although put is not attested as a noun. Thus it seems that such would-be compounds are perhaps the result of some other mechanism. And indeed, Berg (1998) has shown that forms like those in (15a) and (15b) are mostly derived by inversion from phrasal combinations in which the particle follows the base word: load down ® download NOUN/VERB

Compounding

For this reason, such complex words should not be considered compounds, but the result of an inversion process. Similarly, the words in (15c) can be argued to be the result of the conversion of a phrasal verb into a noun (accompanied by a stress shift): In sum, the alleged compound types PV, PA and VA are not the result of a regular compounding processes involving these parts of speech, but are complex words arising from other word -formation mechanisms, i.e. inversion and conversion.

The final question mark in table (14) concerns complex prepositions like into or onto. Such sequences are extremely rare (in fact, into and onto are the only examples of this kind) and it seems that they constitute not cases of compounding but lexicalizations of parts of complex prepositional phrases involving two frequently co occurring prepositions. The highly frequent co-occurrence of two prepositions can lead to a unified semantics that finds its external manifestation in the word hood of the two -preposition sequence. That is, two frequently co-occurring prepositions may develop a unitary semantic interpretation which leads speakers to perceiving and treating them as one word. However, such sequences of two prepositions cannot be freely formed, as evidenced by the scarcity of existing examples and the impossibility of new formations .

**THEORETICAL ISSUES: MODELING WORD-FORMATION**

In this chapter theories are introduced that try to find principled answers to two central problems of morphology. We will first examine the theory of lexical phonology as a theory that tries to model the interaction of phonology and morphology. In the second part of the chapter we discuss how different morphological theories conceptualize the form and nature of word formation rules.

1. Introduction: Why theory?

This chapter is devoted to theory and the obvious question is ‘why?’. Haven’t we so far rather successfully dealt with numerous phenomena without making use of morphological theory? The answer is clearly ‘no’. Whenever we had to solve an empirical problem, i.e. to explain an observation with regard to complex words, we had to make recourse to theoretical notions such as ‘word’, ‘affix’, ‘rule’, ‘alternation’, ‘prosody’, ‘head’ etc. In other words, during our journey through the realm of complex words, we tacitly developed a theory of word -formation without ever addressing explicitly the question of how our theoretical bits and pieces may fit together to form an overall theory of word -formation.

But what is a theory? Webster’s Third defines the term ‘theory’ as “a coherent set of hypothetical, conceptual and pragmatic principles forming the general frame of reference for a particular field of inquiry (as for deducing principles, formulating hypotheses for testing, undertaking actions)” ( Webster’s Third, s. v. theory). In a more restricted sense a certain theory is a “hypothetical entity or structure explaining or relating an observed set of facts” (Webster’s Third, s. v. theory). Thus, a morphological theory would help us not only to understand observed (and yet unobserved) facts concerning complex words, but would also help us to develop hypotheses in order to arrive at general principles of word -formation. In very general terms a theory can help us to understand the world (better). This is also the idea behind the saying that there is nothing as practical as a good theory.

With this in mind, we will take a look at two particular theoretical problems which have been mentioned repeatedly in the preceding chapters, but which we have not solved in a principled manner. The first of these problems is the interaction of phonology and morphology, the second the form and nature of word -formation rules.

As we will see, there are a number of different criteria by which a theory can be judged, the most important of which are perhaps internal consistency, elegance, explicitness and empirical adequacy. With regard to the criterion of internal consistency, it should be evident that a theory should not contradict itself.

Furthermore, a theory should be elegant in the sense that it uses as little machinery (e ntities, rules, principles, etc.) as possible to explain an observed set of facts. And the explanations should be as explicit as possible, so that clear hypotheses can be formulated. This is important because hypotheses must be falsifiable, and only clear hypotheses can be clearly falsified. Finally, the theory should be empirically adequate in the sense that it can account for the observable data.

Equipped with this background information on theories in general, we are now in the position to examine the theory of ‘lexical phonology’, which tries to explain the relationship between phonology and morphology in a principled fashion.

2. The phonology-morphology interaction: lexical phonology

2.1. An outline of the theory of lexical phonology

In the previous chapters we have frequently seen that morphology and phonology interact. For example, we have observed that certain suffixes inflict certain stress

patterns on their derivatives (as in prodúctive -productívity) or are responsible for the deletion of segments (feminine - feminize). We also saw that compounds have a particular stress pattern. However, we have not asked ourselves how this interaction of phonology and morphology can be conceptualized in an overall theory of language.

In order to understand the main ideas of Lexical Phonology, it is helpful to briefly look at the history of the school of linguistic thought called generative grammar. In early generative grammar it was assumed that well-formed sentences as the output of the language system (the ‘grammar’) are generated in such a way that words are taken from the lexicon and inserted into syntactic structures. These structures are then interpreted semantically and pronounced according to the rules of the phonological component. A schematic picture of such an approach is given in

(1). The schema abstracts away from particular details of the various models that

have been proposed and revised over the years .

In this model, phonological processes crucially apply after all morphological and syntactic operations have been carried out, i.e. after all word -formation rules or inflectional rules have been applied and the words have been inserted into syntactic structures. A number of generativists soon realized, however, that, contrary to what the model predicts, there is significant interaction of phonology and morphology in the derivation of complex words, which led to the idea that certain phonological rules must apply before a given word leaves the lexicon and is inserted into a syntactic structure. In other words, parts of the phonology must be at work in the phrase structure rules lexicon sentence structure semantic component phonological component lexicon, and not only post-lexically, i.e. after the words have left the lexicon and are Inserted into a syntactic tree. The theory that wants to account for the application of phonological rules in the lexicon is therefore aptly named lexical phonology.

The basic insight of lexical phonology is that phonology and morphology work in tandem. There are phonological rules that are triggered only by the affixation of a particular morpheme, and which apply in a cyclic fashion. The word ‘cyclic’ means here that whenever a new affix is added in a new derivational cycle, the pertinent rule can apply on that cycle. For example, each time we attach a given stress-shifting suffix to a given base, we must apply the pertinent stress rule (cf. seléctive - selectívity). If more than one affix is attached, cyclic phonological rules reapply at each step in the derivation of a particular word. Before we can see in more detail how this works we need to take a brief look at so-called level-ordering.

The concept of cyclic rule application has built heavily on work by Siegel (1974) and Allen (1978), who assume the existence of two levels or strata in English derivational morphology. English derivational suffixes and prefixes each belong to one of two levels. In (2) I have a listed a number of suffixes according to the level to which they supposedly belong (cf. also Spencer 1991:79):

(2) Level I suffixes: +al,+ate, +ic, +ion, +ity, +ive, +ous

Level I prefixes: be+, con+, de+, en+, in+, pre+, re+, sub+

Level II suffixes: #able, #er, #ful, #hood, #ist, #ize, #less, #ly, #ness, #wise

Level II prefixes: anti#, de#, non#, re#, sub#, un#, semi#

Affixes belonging to one stratum can be distinguished from the affixes of the other

stratum by a number of properties (some of these properties were already discussed

in chapter 4, section 2, but without refere nce to level-ordering).

First, level 1 affixes tend to be of foreign origin (‘Latinate’), while level 2

affixes are mostly Germanic. Second, level 1 affixes can attach to bound roots and to words, while level 2 affixes attach to words. For example, in elec tric the suffix

 attaches to the root electr-, while the adjective-forming level 2 suffix -lyonly attaches to words (e.g. earthly). This difference in the strength of morphological boundaries is expressed by the ‘+’ and ‘#’ notation in (2), with ‘+’ standing for a root boundary and ‘#’ standing for a word boundary. The difference in boundary strength leads to the third difference between the two levels. Level 1 affixes tend to be phonologically more integrated into their base than level 2 affixes, with stratum 1 suffixes causing stress shifts and other morpho -phonological alternations, while stratum 2 suffixes do not affect their bases phonologically. Finally, stratum 1 affixes are generally less productive than stratum 2 affixes.

With reference to the two levels, an interesting property of English derivation can be captured: their combinability with other affixes. According to the so-called level-ordering hypothesis, affixes can easily combine with affixes on the same level, but if they combine with an affix from another level, the level 1 affix is always closer to the base than the level 2 affix. For example, level 1 suffix -(i)an may appear inside level 2 -ism but not vice versa (cf. Mongol-ian-ism, but \*Mongol-ism-ian). Level ordering thus rules out many unattested combinations of affixes on principled grounds.

Coming back to cyclic rule application, the interaction of morphological and phonological rules can be schematized as in (3). The model as presented here is based on different studies in lexical phonology and ignores existing minor differences between the pertinent authors (e.g. Kiparsky 1982, Mohanan 1986) in order to bring out clearly the most important aspect of the theory, the interaction of morphological and phonological rules. For reasons that will become clear shortly, the model also includes regular and irregular inflection.

(3) A model of lexical phonology un derived lexical item

level 1 morphology

‘+’ -derivation (e.g.+(i)an, +ic ) irregular inflection

level1 phonology

e.g. stress shift, tri syllabic

shortening, velar softening

level 2 morphology

‘#’ -derivation (e.g. #ism, #ness),

regular inflection, compounding

level 2 phonology

e.g. compound stress

How does the model work? In the words of Mohanan, lexical phonology can be

compared to a factory, with the levels as individual rooms in which words are

produced: “There is a conveyor belt that runs from the entry gate to the exit gate

passing through each of these rooms. This means that every word that leaves the

factory came in through the entry gate and passed through every one of these

rooms” (1986:47). Let us illustrate this with the derivation of the potential compound word Mongolianism debates. This word would be derived by first subjecting the un derived lexical item Mongolto +(i)ansuffixation. Having attached -ian, the form Mongolian is transferred to the ‘level 1 phonology’ box, where stress is assigned on the syllable immediately preceding the suffix. Mongólianis then, on the next cycle, transferred to level 2 morphology where it receives the suffix -ismand is handed over to level 2 phonology. Not much happens here for the moment, because -ism, like all level 2 suffixes, is stress-neutral. The form is transferred back to level 2 morphology where it is inserted into a compound structure together with the right-hand element debate. The compound goes to level 2 phonology to receive compound stress and is then handed back to become pluralized, i.e. adopt regular inflectional -s. Back in level 2 phonology again, inflectional -sis i nterpreted phonologically (as one of the three possible regular allomorphs). The word is now ready to leave the lexicon and to be inserted into a syntactic structure. Fair enough, you might be tempted to say, but what do we gain with such a model? This is the topic of the next section.

2.2. Basic insights of lexical phonology

To answer the question of what lexical phonology has to offer, we can say that the

model makes interesting predictions about the behavior of morphological units and helps us to explain a number of generalizations that emerge from the data and that

we have dealt with in the previous chapters.

One prediction we have already mentioned above concerns the order of many

affix -affix combinations. According to the level-ordering hypothesis a given level 1 affix must attach before a level 2 affix, because level 2 output cannot feed level 1. Thus, the impossibility of, for example, \*atom-less-ityfollows from the fact that -less is level 2, whereas -ityis level 1. Level 1 affixes inside level2 affixes are fine (cf. curious-ness), and so are combinations within a given level (cf. electr-ic -ity, atom-less-ness).

The model can also explain an interesting interaction between compounding and inflection, and between conversion and inflection. Cons ider, for example, the problem why compounds like walk man and converted nouns like to grandstand do not take irregular inflection, as would be expected on the basis of their right-most elements manand stand(cf. walkmans vs. \* walk men and grand standed vs. \*grandstood).

In the above model these facts fall out automatically: assuming that irregular morphology is a level 1 process and further assuming that compounding and no unto-verb conversion are both level 2 processes, irregular inflectional marking is no longer a possibility for these forms because there is no loop back from level 2 to level

1. Regular inflection (i.e. plural -s and past tense -ed), which, according to the model in (3), operates on level 2, is the only possible way of marking these grammatical categories with these formations.

Talking about conversion, the model can also help us to solve thedirectionality problem of conversion, at least with noun-to-verb and verb-to-noun

conversion. In chapter 5, section 1.1., we have argued that stress s hift in otherwise homonymous verb-noun pairs is an indication of verb-to-noun conversion (e.g. to protést - the prótest). In terms of lexical phonology, verb-to-noun conversion must be a stratum 1 process, because only on this level is there the possibilit y to change the stress of the base word. In contrast, noun -to-verb conversion is stress-neutral, hence a level 2 process. A look at the productivity corroborates this. As we have said above, level 1 processes are generally less productive than level 2 processes, which would lead us to the hypothesis that level 1 verb-to-noun conversion must be significantly less productive than noun -to-verb conversion. And this is exactly what we find.

Finally, the model can account for a phenomenon we discussed in chapter 3, namely the blocking of regular derived forms by existing synonymous forms. In terms of lexical phonology, blocking can be accounted for by the idea that the application of a given rule at one stratum blocks the application of the same rule at a later stratum. For example, the suffixation of the irregular plural to form oxen blocks the application of the more general, regular plural suffix -s. This is an instance of the so-called elsewhere condition, which states that the special rule has to apply first, and the more general rule ‘elsewhere’ (cf. our formulation of morpho -phonological alternations in chapter 2, section 2). Extending this idea to derivational morphology, we could explain why nouns converted from verbs like cook, bore, spyblock synonymous words with the agentive suffix -er(cf. \* cooker, \* borer, \* spyer). Verb-tonoun conversion (e.g. cookVERB ® cookNOUN) is level 1, while -eris attached at level 2.

The application of the rule of agentive formation by verb-to-noun conversion at level 1 preempts the attachment of agentive -eron a later cycle. This does not mean that it is totally impossible to add -er to, for example, cook. The point is that if an agentive meaning is chosen at level one, this meaning is no longer available at level 2. Hence, the form cooker must receive another interpretation (e.g. an instrumental one).

In sum, lexical phonology sheds light on four different problem areas, namely

the serial application of morphological processes and the co-occurring phonological operations, t he productivity of different processes, the direction of conversion, and the phenomenon of blocking. Lexical phonology has, however, been severely criticized on both empirical and conceptual grounds, and we will turn to this criticism in the next section.

 **Problems with lexical phonology**

The obvious empirical problem is that the model does not say anything about possible and impossible combinations within a given stratum, thus leaving large amounts of data unaccounted for. Fabb (1988) finds that the 43 suffixes he investigates are attested in only 50 two -suffix combinations, although stratum restrictions would allow 459 out of the 1849 possible ones. In order to explain combinations within strata, individual selectional restrictions like those discussed in chapter 3, section 5.2, are needed in any case, and, as argued in Plag (1996, 1999), these selectional restrictions then also account for the would-be stratal behavior of sets of affixes. This idea will be further illustrated in section 2.4. below.

Another empirical weakness of level-ordering is that there are a number of attested suffix combinations that are unexpected under the assumption of level ordering. Thus stress-neutral -istappears systematically inside stress-shifting -ic (e.g. romant-ic - romant-ic -ist), or stress-neutral -ize appears systematically inside stress shifting -(at)ion(e.g. colon-iz-ation, see also exercise 3.1. of chapter 3).

One major theoretical drawback of level-ordering is that the two strata are not justified on independent grounds. In other words, it is unclear what is behind the distinction between the two strata, and which property makes a suffix end up on a given stratum. Originally, it has been suggested that the underlying distinction is one of etymology (borrowed vs. native, e.g. Saciuk 1969), but this does not explain why speakers can and do master English morphology without etymological knowledge.

Others have argued that the stratum problem is in fact a phonological one, with differences between different etymological strata being paralleled by phonological differences. For example, Anshen et al. (1986) show that etymology correlates with the number of syllables: Latinate bases tend to be polysyllabic, Germanic bases mono-or disyllabic. This approach has the advantage that it would allow speakers to distinguish between the strata on the basis of the segmental and prosodic behavior of derivatives. However, explaining the nature of the strata as following from underlying phonological properties of suffixes does in fact weaken the idea of strata, because, as shown by Raffelsiefen (1999), not even two of the many suffixes of English trigger exactly the same type of morpho -phonological alternations, so that we would need as many sub-strata as we have suffixes that trigger morpho phonological alternations.

Another serious problem is that a stratum can not be defined by the set of suffixes it contains, because many suffixes must belong to more than one stratum: they show stratum 1 behavior in certain derivatives, whereas in other derivatives

they display stratum 2 behavior. For example, there are forms where -able is stress shifting, hence stratum 1, but in the majority of cases stress-shift is absent. Even doublets exist that show the stratum 1 and stratum 2 behavior: compárable vs. cómparable. Another example of double membership is -ize, which attaches to some roots (e.g. baptize), truncates its bases under certain circumstances (see chapter 4, section 4.2.), and triggers so-called velar softening ( classi[k] -classi[ s]i ze, see answer key, exercise 4.3). All three properties are typical of level 1, but -ize is not stress shifting, attaches mostly to words and is productive, which are all typical of level 2.

Giegerich (1999) discusses many cases of dual membership of affixes in great detail and -as a consequence -proposes a thoroughly revised stratal model, in which the strata are no longer defined by the affixes belonging to that stratum, but by the bases involved. In this revised model, both words and bound roots start out on level 1 as roots, i.e. as morphemes that do not have a part-of-speech specification yet. This can then nicely account for the fact that many affixes attach to bound roots and to words, because these affixes attach at level 1. According to Giegerich, such suffixes can do so because they attach generally to roots, i.e. level 1 morphemes that are not specified for part-of-speech yet. For example, ambiti-ous and courage-ousare both formed at level 1, because -ousattaches to roots. But what about suffixes that only attach to words? In Giegerich’s model, these attach only after the base morphemes have passed on to level 2, where they have received a part-of-speech specification.

There are, however, at least two severe conceptual problems with such a revised model. Giegerich explains the fact that some affixes attach to both bound roots and words by simply stipulating that the words are also roots. There is, however and crucially, no independent motivation for such a move, apart from the fact that it makes the model work. The problem of double membership of affixes is

replaced by the problem of assigning a given word with the same form the status of a root at level 1 and the status of a word at level 2 without independent justification.

This leads us to the second conceptual problem. If we attach a suffix at level 1, the derived word still has no part-of-speech specification, because part-of-speech is only assigned by root-to-word conversion at level 2. In other words, suffixes like –ous would no longer havea part-of-speech specification, but would only receive it after attachment to a root and after having then reached level 2, where the derived form is subjected to the root-to-word conversion rule for which the suffix is specified. In the case of -ous, thi s would be the conversion of the form from a root into an adjective.

This seems like an unnecessary and unjustified complication.

To summarize, there are major empirical and theoretical problems with lexical phonology and the idea of level-ordering. In t he following sub-section, we will therefore explore alternative models.

2.4. Alternative theories

We have frequently seen throughout this book that any given affix or morphological process comes with its particular phonological, morphological, semantic and syntactic properties. Plag (1996, 1999) shows that these diverse properties together are responsible for the possible and impossible combinations of a given affix both with roots and with other affixes. What has been analyzed as would-be stratal behavior automatically falls out from the phonological, morphological and semantic properties of the affix. Since these properties must be stated anyway to account for the particular behavior of a given affix, no further stratal apparatus is necessary.

Plag (1996, 1999) also incorporates the idea of base-driven suffixation to

explain apparent idiosyncrasies in suffix combinations. The idea of base-driven restrictions in suffixation is that it is not only a given suffix that requires, or ‘selects’, a certain kin d of base, but that bases, in particular bases that contain certain suffixes, may select a certain kind of affix. For illustration of this idea, consider the de verbal suffixes in (4), which, according to Fabb (1988), do not to attach to any suffixed word (this would be an affix -driven restriction): (4) deverbal nominal suffixes not attaching to an already suffixed word

-age (as in steerage)

-al (as in betrayal)

-ance (as in annoyance )

-ment (as in containment)

-y (as in assembly)

Why should these suffixes behave in this way? And is this a property that has to be stated in the lexical entry of each of the nominal suffixes? In an approach that only looks at the question of which kinds of base a given affix selects this would be essential. Let us call such an approach ‘affix -driven’. It is, however, possible to look at the problem from a different angle, i.e. from the perspective of the base. Which kinds of affix does a given base select? In such a base-driven approach, the impossibility of the above nominal suffixes to attach to already suffixed words could also be explained in terms of the bases, not only in terms of the nominal suffixes.

The argument with regard to the above nominal suffixes is this: the only suffixed words that could in principle appear before de verbal -age, -al, -ance, -ment and -yare verbs ending in -ify, -ize, -ate, and -en. However, -ify, -ize, and -aterequire (a suffix -particular allomorph of) the nominalizer -(at)ion:

(5) magnification verbalization concentration

\*magnify-ation \*verbalize-ification \*concentrate -ation

\*magnify-ion \*verbalize-ion \*concentrate -ification

\*magnify-ance \*verbalize-ance \*concentrate -ance

\*magnify-al \*verbalize-al \*concentrate -al

\*magnify-age \*verbalize-age \*concentrate -age

\*magnify-y \*verbalize-y \*concentrate -y

\*magnify-ment \*verbalize-ment \*concentrate -ment

These facts suggest that the behavior of verbalizing and nominalizing suffixes is best analyzed as base-driven: combinations of the verbal suffixes -ify, -ize, -ate with -age, -al, -ance, -ment and -yare ruled out because it is the bases (with their particular verbal suffixes) which select their (allomorph of the) nominalizing suffix -ion, and it is crucially not the nominal suffix which selects its base. Of course one could say that -ionselects -ate, -ify and -ize, but this would not explain why the other nominalizing suffixes are systematically excluded. Hence a base-driven approach is superior in its explanatory power.

With -en, affix -driven restrictions are responsible for the (im)possibility of combinations. -enis not attested before -age, -al, -ance, and -y, because -ance and -al only attach to bases that have final stress, and because the distribution of -ageand -y seems to be entirely lexically governed (see again chapter 2, section 3 for the notion of lexical government). Contra Fabb’s claim cited above, the combination X-en-mentis in fact attested, and crucially so in those cases where X-en does not violate the restrictions of -mentsuffixation (see Plag 1999: 70-75 for a detailed analysis).

In sum, the example of de verbal nominal suffixes has shown how base-driven and affix -driven restrictions can account for possible and impossible affix-affix combinations and root-affix combinations. A model that focuses on suffix -particular and base-driven restrictions is empirically more adequate and theoretically more parsimonious, because it can achieve empirical adequacy with the least possible machinery.

A model that relies solely on affix -particular restrictions could be criticized for the lack of generalizations across suffixes. After all, linguists want to believe that language in general and derivational morphology in particular is not just an accumulation of item-specific idiosyncrasies. This is the point where the psycho linguistically informed model of complexity-based ordering comes in.

In this model, developed in Hay (2000, 2001, 2002) morphological complexity is construed as a psycho linguistically real notion which heavily relies on the

Segment ability of affixes. The basic claim concerning the problem of affix ordering is that “an affix which can be easily parsed out should not occur inside an affix which can not” (Hay 2000: 23, 240). For reasons that will sho rtly become clear, I will refer to this approach as complexity-based ordering.

What does it mean for an affix to be “easily parsed out”? Parsingis a term which refers to the segmentation of speech, i.e. words and sentences, in its structural components. Morphological parsing is thus what listeners/readers do when they detect morphological structure (or isolate morphemes) in a string of words in order to make sense of complex words. Morphological parsing is not always easy. As is well known, there are words that are clearly composed of two or more morphemes (e.g. concrete-ness), there are words that are clearly mono morphemic (e.g. table), and there are words whose status as complex words is not so clear, as discussed in chapter 2, section 1.2. (e.g. rehearse, interview, perceive). Hay now shows thatmorphological complexity is a function of the psycholinguistic notion of

morphological pars ability, which in turn is largely influenced by at least two factors, frequency and phono tactics. In order to make things simpler, we will focus here on the role of frequency (considerations on the role of phonotactics can be found in

As already explained in chapter 3, in most current models of morphological processing, access to morphologically complex words in the mental lexicon works in two ways: by direct access to the whole word representation (‘whole word route’) or by access to the decomposed elements (‘decomposed route’). Given that frequency plays a role in determining the resting activation of lexical items, it is clear that every access via the whole word route strengthens the whole word representation, whereas access on the decomposed route reinforces the representation of the decomposed morphemes and the decomposability of the complex word. How do we know which representation will be strengthened with a given word? It is usually assumed that the absolute frequency of a word correlates with its resting activation level. Hay suggests that, with regard to the storage of complex words, the relative frequency of the derived word and its base is significant. Relative frequency is defined as the ratio of the frequency of the derived word to the frequency of the base and measures how frequent the derivative is with respect to its base

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Word formation in English language

Умумтаълим ва касб- ҳунар инглиз тили ўқитувчилари ҳамда

малака ошириш курси тингловчилари учун услубий кўлланма.

 Теришга рухсат берилди:\_\_\_\_\_\_\_

 Босишга рухсат берилди:\_\_\_\_\_\_\_

 Офсет босма қоғози. Қоғоз бичими 60/30

 “Times” гарнитураси.Офсет босма усули.

 4 босма табоқ.

 Адади:25 нусха

 Буюртма №

Самарқанд вилояти халқ таълими ходимларини

қайта тайёрлаш ва уларнинг малакасини ошириш ҳудудий маркази босмахонасида чоп этилди.

Самрқанд шаҳар Обиддинов кўчаси 3-уй.