CHAPTER

1 What Is Morphology?

CHAPTER OUTLINE

KEY TERMS

morpheme
word
simplex
complex
type
token
lexeme
lexeme (word)
formation
word form
inflection

In this chapter you will learn what morphology is, namely the study of word formation.

- We will look at the distinction between words and morphemes, between types, tokens, and lexemes, and between inflection and derivation.
- We will also consider the reasons why languages have morphology.

1.1 Introduction

The short answer to the question with which we begin this text is that morphology is the study of word formation, including the ways new words are coined in the languages of the world, and the way forms of words are varied depending on how they're used in sentences. As a native speaker of your language you have intuitive knowledge of how to form new words, and every day you recognize and understand new words that you've never heard before.

Stop and think a minute:

- Suppose that *splinch* is a verb that means 'step on broken glass'; what is its past tense?
- Speakers of English use the **suffixes** *-ize* (*crystallize*) and *-ify* (*codify*) to form verbs from nouns. If you had to form a verb that means 'do something the way Donald Trump does it', which suffix would you use? How about a verb meaning 'do something the way Joseph Biden does it'?
- It's possible to *rewash* or *reheat* something. Is it possible to *relove, reexplode*, or *rewiggle* something?

Chances are that you answered the first question with the past tense *splinched* (pronounced [splintʃt]),[1] the second with the verbs *Trumpify* and *Bidenize*, and that you're pretty sure that *relove, reexplode,* and *rewiggle* sound rather weird, if not downright unacceptable. Your ability to make up these new words, and to make judgments about words that you think could never exist, suggests that you have intuitive knowledge of the principles of word formation in your language, even if you can't articulate what they are. Native speakers of other languages have similar knowledge of their languages. This book is about that knowledge, and about how we as linguists can find out what it is. Throughout this book, you will be looking into how you form and understand new words, and how speakers of other languages do the same. Many of our examples will come from English – since you're reading this book, I assume we have that language in common – but we'll also look beyond English to how words are formed in languages with which you might be familiar, and languages which you might never have encountered before. You'll learn not only the nuts and bolts of word formation – how things are put together in various languages and what to call those nuts and bolts – but also what this knowledge says about how the human mind is organized.

The beauty of studying morphology is that even as a beginning student you can look around you and bring new facts to bear on our study. At this point, you should start keeping track of interesting cases of new words that you encounter in your life outside this class. Look at the first Challenge box.

1. In this text I presuppose that you have already learned at least that part of the International Phonetic Alphabet (IPA) that is commonly used for transcribing English. You'll find an IPA chart at the beginning of this book, if you need to refresh your memory.

Challenge: Your Word Log

Keep track of every word you hear or see (or produce yourself) that you think you've never heard before. You might encounter words while listening to the radio, watching TV, surfing the internet, or reading, or someone you're talking to might slip one in. Write those new words down, take note of where and when you heard/read/produced them, and jot down what you think they mean. What you write down may or may not be absolutely fresh new words – they just have to be new to you. We'll be coming back to these as the course progresses and putting them under the microscope.

Of course, if the answer to our initial question were as simple as the task in the box, you might expect this book to end right here. But there is of course much more to say about what makes up the study of morphology. Simple answers frequently lead to further questions, and here's one that we need to settle before we go on.

1.2 What's a Word?

Ask anyone what a word is and … they'll look puzzled. In some sense, we all know what words are – we can list words of various sorts at the drop of a hat. But ask us to define explicitly what a word is, and the average nonlinguist is flummoxed. One person might say that a word is a stretch of letters that occurs between blank spaces. But another is bound to point out that words don't have to be written for us to know that they're words. And in spoken (or signed) language, there are no spaces or pauses to delineate words. Yet we know what they are. Still another person might at this point try an answer like this: "A word is a small piece of language that means something," to which a devil's advocate might respond, "But what do you mean by 'a small piece of language'?" This is the point at which it becomes necessary to define a few specialized linguistic terms.

Linguists define a **morpheme** as the smallest unit of language that has its own meaning. Simple words like *giraffe*, *wiggle*, or *yellow* are morphemes, but so are prefixes like *re-* and *pre-* and suffixes like *-ize* and *-er*.[2] There's far more to be said about morphemes – as you'll see in later chapters of this book – but for now we can use the term morpheme to help us come up with a more precise and coherent definition of word. Let us now define a **word** as one or more morphemes that can stand alone in a language. Words that consist of only one morpheme, like the words in (1), can be termed **simple** or **simplex** words. Words that are made up of more than one morpheme, like the ones in (2), are called **complex words**:

2. In Chapter 2 we will give a more formal definition of prefix and suffix. For now it is enough to know that they are morphemes that cannot stand on their own, and that prefixes come before, and suffixes after, the root or main part of the word.

(1) *Simplex words*
giraffe
fraud
murmur
oops
just
pistachio

(2) *Complex words*
opposition
intellectual
crystallize
prewash
repressive
blackboard

We now have a first pass at a definition of what a word is, but as we'll see, we can be far more precise.

1.3 Words and Lexemes, Types and Tokens

How many words occur in the following sentence?

My friend and I walk to class together, because our classes are in the same building and we dislike walking alone.

You might have thought of at least two ways of answering this question, and maybe more. On the one hand, you might have counted every item individually, in which case your answer would have been 21. On the other hand, you might have thought about whether you should count the two instances of *and* in the sentence as a single word and not as separate words. You might even have thought about whether to count *walk* and *walking* or *class* and *classes* as different words: after all, if you were not a native speaker of English and you needed to look up what they meant in the dictionary, you'd just find one entry for each pair of words. So when you count words, you may count them in a number of ways.

Again, it's useful to have some special terms for how we count words. Let's say that if we are counting every instance in which a word occurs in a sentence, regardless of whether that word has occurred before or not, we are counting word **tokens**. If we count word tokens in the sentence above, we count 21. If, however, we are counting a word once, no matter how many times it occurs in a sentence, we are counting **word types**.

Counting this way, we count 20 types in the sentence above: the two tokens of the word *and* count as one type. A still different way of counting words would be to count what are called **lexemes**. Lexemes can be thought of as families of words that differ only in their grammatical endings or grammatical forms; singular, plural, and possessive forms of a noun (*class*, *classes*, *class's*, etc.), present, past, and participle forms of verbs (*walk*, *walks*, *walked*, *walking*), different forms of a pronoun (*I*, *me*, *my*, *mine*) each represent a single lexeme. One way of thinking about lexemes

is that they are the basis of dictionary entries; dictionaries typically have a single entry for each lexeme. So if we are counting lexemes in the sentence above, we would count *class* and *classes*, *walk* and *walking*, *I* and *my*, and *our* and *we* as single lexemes; the sentence then has 16 lexemes.

1.4 But Is It *Really* a Word?

In some sense we now know what words are – or at least what word types, word tokens, and lexemes are. But there's another way we can ask the question "What's a word?" Consider the sort of question you might ask when playing Scrabble: "Is *aalii* a word?" Or when you encounter an unfamiliar word: "Is *bouncebackability* a word?" What you're asking when you answer questions like these, is really the question "Is *xyz* a REAL word?" Our first impulse in answering those questions is to run for our favorite dictionary; if it's a real word it ought to be in the dictionary.

But think about this answer for just a bit, and you'll begin to wonder if it makes sense. Who determines what goes in the dictionary in the first place? What if dictionaries differ in whether they list a particular word? For example, the *Official Scrabble Player's Dictionary* lists *aalii* but not *bouncebackability*. The *Oxford English Dictionary Online* doesn't list *aalii*, but it does list *bouncebackability*. So which one is right? Further, what about words like *paralpinism*, *eruptionist*, or *schlumpadinka* that don't occur in any published dictionary yet, but can be encountered in the media? According to Word Spy (www.wordspy.com) *paralpinism* is a sport involving first climbing a mountain and then using a paraglider to get down; an *eruptionist* is a person who believes that the world will end in a huge volcanic explosion; and *schlumpadinka* is an adjective meaning 'unkempt'. And what about the word *schlumpadinkahood*, which I just made up? Once you know what *schlumpadinka* means, you have no trouble understanding my new word. If it consists of morphemes, has a meaning, and can stand alone, doesn't it qualify as a word according to our definition even if it doesn't appear in the dictionary?

What all these questions suggest is that we each have a **mental lexicon**, a sort of internalized dictionary that contains an enormous number of words that we can produce, or at least understand when we hear them. But we also have a set of word formation rules which allows us to create new words and understand new words when we encounter them. In the chapters to follow, we will explore the nature of our mental lexicon in detail, and think further about the "Is it really a word?" question. In answering this question we'll be led to a detailed exploration of the nature of our mental lexicon and our word formation rules.

1.5 Why Do Languages Have Morphology?

As native speakers of a language we use morphology for different reasons. We will go into both the functions of morphology and means of forming new words in great depth in the following chapters, but here, I'll just give you a taste of what's to come.

One reason for having morphology is to form new lexemes from old ones. We will refer to this as **lexeme formation**. (Many linguists use the term **word formation** in this specific sense, but this usage can be confusing, as all of morphology is sometimes referred to in a larger sense as 'word formation'.) Lexeme formation can do one of three things. It can change the part of speech (or category) of a word, for example, turning verbs into nouns or adjectives, or nouns into adjectives, as you can see in the examples in (3):

(3) *Category-changing lexeme formation*[3]
V → N: amuse → amusement
V → A: impress → impressive
N → A: monster → monstrous

Some rules of lexeme formation do not change category, but they do add substantial new meaning:

(4) *Meaning-changing lexeme formation*

A → A: 'negative A'	happy → unhappy
N → N: 'place where N lives'	orphan → orphanage
V → V: 'repeat action'	wash → rewash

And some rules of lexeme formation both change category and add substantial new meaning:

(5) *Both category- and meaning-changing lexeme formation*

V → A: 'able to be Ved'	wash → washable
N → V: 'remove N from'	louse → delouse

Why have rules of lexeme formation? Imagine what it would be like to have to invent a wholly new word to express every single new concept. For example, if you wanted to talk about the process or result of amusing someone, you couldn't use *amusement*, but would have to have a term like *zorch* instead. And if you wanted to talk about the process or result of resenting someone, you couldn't use *resentment*, but would have to have something like *plitz* instead. And so on. As you can see, rules of lexeme formation allow for a measure of economy in our mental lexicons: we can recycle parts to come up with new words. It is probably safe to say that all languages have some ways of forming new lexemes, although, as we'll see as this book progresses, those ways might be quite different from the means we use in English.

On the other hand, we sometimes use morphology even when we don't need new lexemes. For example, we saw that each lexeme can have a number of **word forms**. The lexeme WALK has forms like *walk*, *walks*, *walked*, *walking* that can be used in different grammatical contexts. When we change the form of a word so that it fits in a particular grammatical context, we are concerned with what linguists call **inflection**. Inflectional word formation is word formation that expresses grammatical distinctions like number (singular *vs.* plural); tense (present *vs.*

3. The notation V → N means 'changes a verb to a noun'.

past); person (first, second, or third); and case (subject, object, possessive), among others. It does not result in the creation of new lexemes, but merely changes the grammatical form of lexemes to fit into different grammatical contexts (we will look at this in detail in Chapter 6).

Interestingly, languages have wildly differing amounts of inflection. English has relatively little inflection. We create different forms of nouns according to number (*wombat*, *wombats*); we mark the possessive form of a noun with *-'s* or *-s'* (*the wombat's eyes*). We have different forms of verbs for present and past and for present and past participles (*sing*, *sang*, *singing*, *sung*), and we use a suffix *-s* to mark the third person singular of a verb (*she sings*).

However, if you've studied Latin, Russian, ancient Greek, or even Old English, you'll know that these languages have quite a bit more inflectional morphology than English does. Even languages like French and Spanish have more inflectional forms of verbs than English does.

But some languages have much less inflection than English does. Mandarin Chinese (Sino-Tibetan), for example, has almost none. Rather than marking plurals by suffixes as English does, or by prefixes as the Niger-Congo language Swahili does, Chinese does not mark plurals or past tenses with morphology at all. This is not to say that a speaker of Mandarin cannot express whether it is one giraffe, two giraffes, or many giraffes that are under discussion, or whether the sighting was yesterday or today. It simply means that to do so, a speaker of Mandarin must use a separate word like *one*, *two* or *many* or a separate word for *past* to make the distinction.

(6) Wo jian guo yi zhi chang jing lu.
I see PAST one CLASSIFIER giraffe[4]

(7) Wo jian guo liang zhi chang jing lu.
I see PAST two CLASSIFIER giraffe

The word *chang jing lu* 'giraffe' has the same form regardless of how many long-necked beasts are of interest. And the verb 'to see' does not change its form for the past tense; instead, the separate word *guo* is added to express this concept. In other words, some concepts that are expressed via inflection in some languages are expressed by other means (word order, separate words) in other languages.

1.6 The Organization of This Book

In what follows, we'll return to all the questions we've raised here. In Chapter 2, we'll revisit the question of what a word is, by further probing the differences between our mental lexicon and the dictionary, and look further into questions of what constitutes a "real" word. We'll look at the ways in which word formation goes on around us all the time,

4. We will explain in Chapter 6 what we mean by classifier. For now it is enough to know that classifiers are words that must be used together with numbers in Mandarin.

and consider how children (and adults) acquire words, and how our mental lexicons are organized so that we can access the words we know and make up new ones. In Chapter 3, we'll get down to the work of looking at some of the most common ways that new lexemes are formed: by adding prefixes and suffixes, by making up compound words, and by changing the category of words without changing the words themselves. In this chapter we'll concentrate on how words are structured in terms of both their forms and their meanings. Many of our examples will be taken from English, but we'll also look at how these kinds of word formation work in other languages. Chapter 4 takes up a related topic, productivity: some processes of word formation allow us to form many new words freely, but others are more restricted. In this chapter we'll look at some of the determinants of productivity, and how productivity can be measured. Chapter 5 will also be concerned with lexeme formation, but with kinds of lexeme formation that are less familiar to speakers of English. We'll look at forms of affixation that English does not have (infixation, circumfixation), processes like reduplication, and templatic morphology. Our focus will be on learning to analyze data that might on the surface seem to be quite unfamiliar. In Chapter 6 we will turn to inflection, looking not only at the sorts of inflection we find in English, but also at inflectional systems based on different grammatical distinctions than we find in English, and systems that are far more complex and intricate. Chapter 7 will be devoted to the subject of typology, different ways in which the morphological systems of the languages of the world can be classified and compared to one another. We'll look at some traditional systems of classification, as well as some that have been proposed more recently, and assess their pros and cons. Chapters 8 and 9 will explore the relationship between the field of morphology and the fields of syntax on the one hand and phonology on the other. Chapter 10 will introduce you to some of the interesting theoretical debates that have arisen in the field of morphology over the last two decades. Finally, Chapter 11 introduces you to six current theoretical frameworks; learning about these will prepare you to do more advanced work in morphology.

Summary

Morphology is the study of words and word formation. In this chapter we have considered what a word is and looked at the distinction between word tokens, word types, and lexemes. We have divided word formation into derivation – the formation of new lexemes – and inflection, the different grammatical word forms that make up lexemes.

Exercises

1. Are the following words simple or complex?
   a. members
   b. prioritize
   c. handsome
   d. fizzy
   e. dizzy
   f. grammar
   g. writer
   h. rewind
   i. reject
   j. alligator
   If you have difficulty deciding whether particular words are simple or complex, explain why you find them problematic.
2. Do the words in the following pairs belong to the same lexeme or to different lexemes?
   a. revolve revolution
   b. revolution revolutions
   c. revolve dissolve
   d. go went
   e. wash rewash
3. Count word tokens, types, and lexemes for this sentence and answer the questions below.
   I've just replaced my old printer with a new one that prints much faster.

   tokens _____
   types _____

   a. Is *I've* one lexeme or two? Explain.
   b. Do *printer* and *print* belong to the same lexeme?
4. For the sentence below, first count word tokens and word types, and then answer the two questions below:
   I will say now, just as I said yesterday, that the price of pickles is high but the price of pickled string beans is higher.

   tokens _____
   types _____

   a. Are *pickles* and *pickled* members of the same lexeme? Explain your answer.
   b. Is *string bean* one lexeme or two? Explain your answer.
5. What words belong to the same word family or lexeme as *sing*?