Morphology

Morphology is the study of the ways in which words are formed and the functions of the parts that make up the whole of the word. In the next part of the course, we will be looking at the morphology of English.

Morphemes

Like phonemes, **morphemes** are distinct grammatical units from which words are formed. But unlike phonemes, morphemes have unique meanings. For instance, the words *seen* /sin/ and *lean* /lin/ are distinguished by one phoneme, but the phonemes /s/ and /r/ have no inherent meanings themselves. On the other hand, when you put the phonemes /dɔg/ together, they form a unit that has a different meaning from the unit formed by /kæt/: *dog* vs. *cat*. A morpheme is not the same thing as a word, though. For instance, the string of phonemes /dɔgz/ (*dogs*) means something different from /dɔgd/ (*dogged*) or /dɔgi/ (*doggy*). Furthermore, the /z/, /əd/, and /i/ seem to mean more or less the same thing in /legz/ (*legs*), /rægəd/ (ragged), and /kɪti/ (*kitty*). But /z/, /əd/, and /i/ are not words. The logical conclusion is that each of these words has two morphemes with meanings like "plural", "having the quality of", and "affectionate diminutive". Likewise, it seems logical to conclude that the words *dogs* and *legs*, *dogged* and *ragged*, and *doggy* and *kitty* share common morphemes.

We can identify a morpheme by three criteria:

1. It is a word or part of a word that has meaning.
2. It cannot be divided into smaller meaningful parts without violation of its meaning or without meaningless remainders.
3. It recurs in differing word environments with a relatively stable meaning.

Take the word *straight* /stret/. It is obviously recognised as a word by English speakers. Although we can divide it up in all sorts of ways (*trait* /tret/, *rate* /ret/, *ate* /et/), they all mean something different and leave us with meaningless remainders like /s-/, /st-/, and /str-/. The unit /stret/ occurs with relatively stable meaning in words like *straighten*, *a straight line*, and *straightedge*. Thus it fits the criteria for a morpheme. Likewise, consider the words *bright* (light) and *brighten* (make light). We might conclude that the *–en* in *brighten* is a morpheme with a causative meaning, and we certainly find that elsewhere in words like *deepen*, *soften*, *stiffen*.

A note on how to represent morphemes: Morphemes are normally represented using their most common English spelling surrounded by curly brackets: for instance, the morpheme in the simple word dog is represented {dog}. This is called **morphemic transcription**. Note that it refers to the meaning, not the pronunciation. What happens when the same morpheme has multiple pronunciations, as with the plural *–s*, pronounced /s/ in words like *cats* and /z/ in words like *dogs*? You use the same transcriptions. So *cats* would be represented as {cat} + {-s pl} and {dogs} would be represented {dog}+ {-s pl}. The "-" and "pl" are not strictly necessary, but they may help clarify the meaning. For instance, consider the word "walks" in "He walks in the park". Here the /s/ does not mean "plural"; it means "present tense". In both cases, the morpheme can only be attached to another morpheme, which is what the "-" indicates. By placing these extra markers in your morphemic transcription, you make it more clear. Often this is necessary because some morphemes sound the same but mean something difference. The "plural" and

"present tense" morphemes are one example. Another is the /ər/ sound in *wider* and *baker*, which has two different meanings: "comparative" and "agent" (i.e. "one who does something"). The words would be transcribed {wide} + {-er comparative} and {bake} + {-er agent} In some cases the same morpheme may have two different spellings, as in *baker* and *actor*. The latter would be transcribed {act} + {-er agent}.When performing morphemic transcriptions, you should include as much information as you feel necessary in order to assure that your reader knows which morphemes you are talking about.

Allomorphs

When a single morpheme takes more than one form, as the {-s pl} morpheme does, each form is called an **allomorph**. Here is another example: the indefinite article *a* also occurs as *an* in certain circumstances. There is only one morpheme {a} with two allomorphs /e/ (or /ə/) and /æn/. Most allomorphs are phonemic variants; that is, they are slightly different pronunciations of the same morpheme. In many cases, the choice of allomorph depends on where the morpheme occurs in the word. For instance, in the present tense verb *talks* the {-s present tense} allomorph is /s/, but in *begs* it is /z/. In many cases the choice of allomorph is determined by the presence of another morpheme. For instance, in the word *pronounce* the allomorph of {nounce} (which means something like "say") is /nauns/, but in *pronunciation* it is /nəns/ because of the morphemes at the end of the word. (Many of my students in fact mispronounce and misspell the word *pronunciation* as *pronounciation*. This is an unconscious simplifying of the morpheme into only one allomorph.) Another example is the change of stress in words like *átom* and *atómic* (the "ˊ" indicates which syllable is stressed). Not only does the stressed syllable change when you add {-ic}, but some of the phonemes change. The morpheme {atom} in fact has two allomorphs: /ˊætəm/ and /ətˊɔm/.

The phenomenon of allomorphy (that is, the existence of multiple allomorphs for a single morpheme) occurs for a large number of reasons. Sometimes the reason is phonological assimilation (as in *cats* and *dogs*). Sometimes allomorphs were created by phonological processes that took place in the past. For instance, {wolf} has the allomorphs /wʊlf/ and /wʊlv/ (in the plural *wolves*). The reason is that sometime around five hundred years ago /f/ became /v/ before the {-s pl} morpheme: hence we have variants like *wife*/*wives* and *leaf*/*leaves*. The process is no longer active, which is why we say the *Toronto Maple Leafs*, not the *Toronto Maple Leaves*. About the same period in history, /e/ and /ɛ/ changed to /i/ in stressed syllables, although we still spell these vowels as if they were pronounced the old way (in words like *see*, *flee*, etc.). However, the change did not occur if the stressed syllable was followed by two more syllables, so we end up with morphemes like {supreme} with two allomorphs /suprim/ and /suprɛm/ (*supreme*/*supremacy*). A similar process also explains the allomorphy in words like *divine*/*divinity* and *pronounce*/*pronunciation*. We could also call the vowel changes in the past tenses of some verbs allomorphs of the normal past tense inflection, as in the forms *talk*/*talked* and *run*/*ran*. So we would transcribe them something like {talk} + {-ed past tense} and {run} + {-ed past tense}.

Difficulties in Morphemic Analysis

Here are some problems to be aware of.

1. Tom may think of *automobile* as one morpheme meaning "motor car", where as Dick, is aware of two morphemes *auto-* (self) and *mobile* (moving), and he thinks that *automobile* is a combination of them. Not everyone may recognise every morpheme.
2. Persons may know of a given morpheme but differ the degree to which they are aware of its presence in various words. For instance, most English speakers know the agentive suffix /-ər/ (spelt <er, ar, or>) meaning "one who, that which", and recognise it in countless words like *singer* and *actor*. But many may only dimly sense the morpheme in *professor* and may overlook it entirely in *voucher*, *cracker*, and *tumbler*. This awareness will vary with different individuals.

Why are there differences in the awareness of morphemes. Education can provide one explanation. After all, you might be able to see *nose* and *nasal* containing the same morpheme, but what about *nuzzle* or *nasturtium*. Look these up in the dictionary, and the relationship will be clear as daylight. However, historical change in language contributes a great deal to out perception of 'morphemeness'. For instance, words like *troublesome* and *lonesome* seem like they are composed of two morphemes. But what about *winsome*? Since *win* is not a free morpheme which has a meaning related to *winsome*, it can hardly be called the base of the word. We have to conclude that *winsome* only has one morpheme. But the origin of the word tells all: it comes from Old English *wynnsum* 'joyous', and the morpheme *wynn* 'joy' was then, but no longer, usable as a free morpheme. Likewise the word *ungainly* might seem to be composed of two morphemes *un-* and *gainly*. But what exactly does *gainly* mean? You'll find it in dictionaries meaning 'graceful', but it will normally be marked as obsolete. So, if we're talking about the here and now, should we consider *ungainly* to consist of one or two morphemes? A variety of historical developments in meaning can obscure our perceptions of morphemic status. Often the only way to recognise the presence of some morphemes is through the study of the history of the English language and of foreign languages from which English has borrowed vocabulary (primarily Latin, Greek, and French). A good dictionary which gives the **etymology** (or origin) of words can help. However, when analysing morphemes in present-day English, it is important to consider whether the morphemes of the past are still recognisable today. The word *daisy* is probably only recognisable as one morpheme by most people today, but it was once three. Your dictionary will reveal that the word comes from *day's eye*.

<u>Words</u>

Every word must have at least one morpheme, but it may have more than one. Morphemes that can stand alone and have meaning as a word are called **free morphemes**. Morphemes that cannot stand alone but must be attached to another morpheme to have meaning are called **bound morphemes**. Hence there is a major difference between morphemes like *bright* {bright}, a free morpheme, and {–en}, a bound morpheme.

Bases and Affixes

A **base** is the part of the word that carries its principal meaning. Often it can be a free morpheme, such as {bright}, but it can also be bound. Most bases that are bound morphemes come in words of foreign origin. For example, the {sent} in *consent* and *dissent* has nothing to do with "sending"; it comes from the Latin word *sentire* "to feel".

A word must contain one base and may contain one or more other bound morphemes called **affixes**. An affix is a generic term for a bound morpheme that is not a base. If it occurs before the base it is called a **prefix**. If it occurs after the base, it is called a **suffix**. There is also a type of affix called an **infix**, which actually goes in the middle of the base. These are very rare in English, but two important examples are the vowel changes in *man*/*men* an *run*/*ran*. Clearly these vowel changes represent plural and past tense morphemes. We'll be looking at these in another context later on.

Some important observations:

1. Prefixes and suffixes can be piled on top of each other, as in *insubordinate*:

prefix	prefix	base	suffix	suffix
{in-}	{sub-}	{ord}	{-in}	{-ate}

2. Infixes can only occur within the base, which is not possible to represent easily in standard morphemic notation:

singular	plural	present tense	past tense
*m**a**n* {man}	*m**e**n* {man} + {-s pl}	*r**u**n* {run}	*r**a**n* {run} + {-ed past tense}

Derivational and Inflectional Affixes

Some affixes have the effect of creating new words, although the end result may or may not have a closely related meaning. For instance, the affix {-en} added to {gold} will produce *golden*, the adjective form of *gold*. The prefix {con} added to {sent} will produce *consent*, whereas the prefix {dis} added to {sent} will produce *dissent*, quite a different meaning! Affixes of these types are called **derivational morphemes**. Sometimes derivational morphemes change the part of speech, converting, say a verb to a noun or vice versa (like *break*/*breakage*), or a noun to an adjective (like *day*/*daily*). Sometimes they derive a new word of the same part of speech like *camp*/*camper*. They can even have feminine meaning, like *fiancé*/*fiancée* or *baron*/*baroness*. Sometimes they have diminutive meanings like *dog*/*doggy*, *cat*/*kitten*. English has a great variety of derivational suffixes, in part because it has borrowed many from other languages. **Note: derivational morphemes are always prefixes or suffixes**.

Inflectional affixes (or just **inflections**) are morphemes which supplement the meaning of the base with information about the grammatical significance of the word in a particular sentence. Consider the following sentences.

1. The boy played with the dog/dogs.
2. The boy's dog played with him.
3. The boy plays/played with the dog.
4. The boy is happy/happier/happiest when playing with the dog.

The introduction of the underlined inflections does not change the basic meanings of the words but does give us essential information such as "How many?", "When?", and "How much?"

The inflectional system in English can be summarised as follows:

Inflection	Name	Examples

Noun Inflections		
{-s pl}	Noun plural	dogs, bushes
{-s poss}	Noun possessive	boy's, boys', men's*
Verb Inflections		
{-s 3rd sg pres}	3rd person singular present	runs, catches
{-ing vb}	present participle	discussing
{-ed past}	past tense	chewed
{-d past part}	past participle	chewed, eaten**
Adjective Inflecions		
{-er comp}	comparative	bolder, sooner, nearer
{-est super}	superlative	boldest, soonest, nearest

* English spelling distinguishes the possessive from other {-s} morphemes using apostrophes, but this is not in the pronunciation.

** -en is a very common variation from {–d} in the past participle. We'll talk about the reasons for this below.

Note: inflectional morphemes are always suffixes or infixes. Suffixes that do not have one of the inflectional meanings listed above are not inflectional; they are derivational.

Inflections often have allomorphs such as /s/ and /z/ for {-s pl}, or even the so-called zero-allomorph in words like "two *sheep*" and "two *fish*", where the plural morpheme is not pronounced, or in words like *ran*, where the {-ed past} morpheme is an infix. Some students find it confusing to represent these allomorphs with the more common English spellings *–s* and *–ed*. If you find this confusing, you may omit the spellings and just write {noun plural}, {past tense}, {comparative}, etc. All that is really important is that you be clear which morpheme you are indicating.

Historically, English had many more inflexions, and some of them still occur infrequently. Here are some examples;

1. Noun plurals: *ox*/*oxen*, *child*/*children*, *man*/*men*, *sheep*/*sheep*.
2. 3rd person singular present: *speaketh*, *pleaseth*.
3. Past participle: *driven*, *caught*, *slept*.

Word Formation

At the end of the day, morphemes combine into the linguistic units we identify as words. Exactly how we identify them as words is something that really isn't known. The nature of the problem is illustrated by variations in English spelling. For instance, *Webster's Ninth New Collegiate Dictionary* lists the words *woodchuck* and *woodcock* as one word, but on the same page lists *wood duck* and *wood louse* as two. Are there any formal criteria for differences in the printed form? In fact, many combinations of free morphemes are written as two words in English where they would be written as one word in German.

For our purposes it is not important to dwell on how we identify words, since most of the time we intuitively identify words. If you want a test which is generally successful, try pausing between potential words. If you can insert a pause without stranding a meaningless (and therefore probably bounded) morpheme before or after the potential word, it probably is a word. There is one way this test yields lousy results. English contains many verbs consisting of two parts: verbs like *call up* (telephone), *keep on* (continue), *take off* (depart). If you separate the two parts, the meaning changes. Although we spell these verbs as two words, they are really one word. The part we spell separately is called a particle. Generally these particles occurred at the beginning of the word (in *forget* and *begin*, for instance) in the early history of English; however, from the nineteenth century onwards words with the particle at the end of the word have developed in large numbers. We'll be looking at these verbs in greater detail later.

Simple, Complex, and Compound Words

A **simple word** consists of a single free morpheme: like *slay*, *flea*, *long*, or *spirit*. **Complex words** consist of either two bound morphemes (*matricide*, *televise*, *exclude*, *cosmonaut*), or a bound morpheme and a free morpheme (*lioness*, *telephone*, *eraser*, *pyromania*). **Compound words** consist of two free morphemes.

Compound words bear a strong resemblance to grammatical constructions consisting of more than one separate word. In fact, they often imply concepts that can be expressed by grammatical constructions:

1. subject + verb earthquake (when the earth quakes)
2. verb + object killjoy (someone who kills joy)
3. verb + adverbial downpour (when something pours down)
4. subject + adjective high chair (a chair that is high)

Innumerable jokes have been based on word plays which pun on the resemblance of compound words with grammatical constructions consisting of two separate words. Here's one: "So the cannibal chief says to his victim, 'What did you do for a living?' The victim replies, 'I was an associate editor.' The chief answers, 'Cheer up. After tonight you'll be an editor-in-chief'" Normally compound words can be distinguished from grammatical constructions by different stress patterns. For instance, "It was a hard ball" is stressed differently from "They play hardball".

<u>Word Etymologies</u>

We now get to look at the interesting subject of how words are formed historically. Many of you notice that new words are created all the time, but fewer of you probably think about the fact that this has been going on for centuries. What is old now was once new. Some words, including many of our everyday words can actually be traced back some 5,000 years or more (though you have to reverse all the phonological changes that they've been subjected to). In addition, many words in English have been borrowed from other languages like French and Latin. Any good dictionary will give you the origin or **etymology** of a word, whether it goes back to Old English, the earliest form, or whether it has been borrowed from another language.

But English speakers do not rely on the current stock of vocabulary and borrowing from other languages. There are a number of other processes by which new words are created. We'll quickly go through a numbers of them.

1. Borrowing: loanwords as just described.
2. Compounding: we've already discussed this.
3. Derivation: by adding derivational suffixes to word bases, new word can be created. Examples are: *dis-advise*, *de-plane*, *tele-play*, *eco-system*, *counselor-ship*, and *Mc-Anything*.
4. Invention: some words are totally made up by stringing together meaningless phonemes. Examples are *Kodak*, *nylon*, *dingbat*, *goof*, and *blurb*.
5. Echoism: words whose sound suggests their meaning. Examples such as *hiss*, *peewee*, *clang*, *quack*, *whisper*. This is often called *onomatopoeia*.
6. Clipping: words created by cutting off the beginning or the end of a word, or both, leaving a part to stand for the whole. Examples are: *lab*, *dorm*, *prof*, *exam*, *plane*, *phone*, *flu*, *fridge*, *sitcom*, *math(s)*. Cf. Also US English *pissed*.
7. Acronymy: *acronyms* are words formed from the initials or beginning sounds of a succession of words Examples are: *MP* (Member of Parliament or military police), *NATO* (North Atlantic Treaty Organisation), and *radar* (radio detecting and ranging).
8. Blending: words formed by fusing two words into one. Examples are: *brunch*, simulcast, *motel*, *smog*.

Here are two more. *Back-formation* is when a word consisting of two bound morphemes has one of the morphemes removed, turning the remaining bound morpheme into a free one. For instance, if you ask, "What does a *feeper* do?" the answer is, "He feeps." Historically, many words have been created like this. The words *peddlar*, *beggar*, *swindler*, and *editor* all pre-existed the verbs *peddle*, *beg*, *swindle*, and *edit*, which were created from them. *Folk etymology* is when a new word is created to explain an historical form of the word which the speaker doesn't understand. Some examples will demonstrate what I mean. The word *female* comes from French *femelle*, Latin *femella*. It does not contain the morpheme {male}, but rather {fem} (woman) + {ella} (diminutive). However, from the fourteenth century on, English speakers began to associate the string of phonemes /mel/ in this word with the morpheme {male} and so altered the spelling. Another example is the term "net ball" in tennis. The term is actually "let ball", which preserves a now obsolete meaning *let* (prevented). In *Hamlet* I.4, for instance, Hamlet says to his two friends who are holding him back from following his father's ghost: "Unhand me, gentleman. / By heaven I'll make a ghost of him that lets me." The word is entirely different from the word *let* meaning "to allow". A novice tennis player unfamiliar with the term might understand it as *net*, since /l/ and /n/ are not far apart in sound, and *net* makes sense where *let* does not. *Real tennis* is another example. *Real* is the Old French spelling for "royal".

Form-Class Words and Structure-Class Words

Some words cannot have affixes, derivational or inflectional, attached to them (some examples are words like *can*, *may*, *will*, *shall*, *must*, *might*, *could*, *would*, *should*). Words which can change their form through the addition of derivational or inflectional affixes are called **form-class words**: nouns, verbs, adjectives, and adverbs. Words which are incapable of changing through

inflexion or derivation are called **structure-class words**: prepositions, conjunctions, and the like. Some words straddle the divide between the two classes, so we examine each separately.