Unit 8: Morphology – Words & Pieces of Words

Objectives

After completing this unit, you will be able to

1. Define the concept ***morphology***
2. Define the concept ***morpheme*** vs. ***word***
3. Describe the characteristic features of morphemes
4. Describe different types of morphemes
5. Describe the principles of English word structure
6. Describe various word formation processes

8.0 Introduction

Up until now we have been dealing with 'whole' word-meanings – the smallest units of Language which have all of its properties intact. We are now going to look inside the physical word ***forms*** and examine their ***parts*** – the bits and pieces of words, called *morphemes*. What are they? How are they different from word-meanings, the smallest units of Language? What do they do? How do they form word-meanings? Read on – Unit 8 will tell you!

8.1 What Is Morphology?

In Unit One, we learned that ***morphology*** is the ***study of forms***, which looks at the structural make-up of words. ***Morphology*** breaks the smallest unit of Language – word-meaning – into its meaningful parts (***morphemes***).

This unit focuses on how languages build words out of pieces of words (***morphemes***). This ***synthesis*** of morphemes into words is not haphazard – every language system has its own 'word-building rules' (just like they have sentence-building rules). It is the knowledge of these rules of synthesis that enables us to easily understand and create words that we have never heard before.

Here are some unusual words and expressions, all from recent TV programmes – see if you can understand what they mean:

Growingly, hotels are accommodating women travellers.
Untangle**, uncomplicate**, **unwire** your life! (Use InTel technology! ☺)
'We had some difficulty in **operationalizing** it with Turkey' (Powell).
A **subwar** between the Turks and the Kurds
There is a risk of flood defences being **overtopped** by the surge
They'd **outfaxed** all the reporters
McCain had **outraised** Obama there
Iran has conducted these **in-your-face** navy exercises in the Persian Gulf…
Should we be worried about this **warmupmanship**?
Techsperts (= tech experts)
Obama certainly **wowed** the crowds in Strassburg
Sharp-shooters on board ships would **deincentivize** the pirates (CNN,16/04/09)
I had this *is-it-really-happening-to-me* kind of moment (words of a ***pirated*** sailor)

We are able to make sense of them, because they follow English word-building rules, unlike non-words like *runnity, *funner, *schoolship, *bigly, *shoppest, *tablable, *manless, etc.

What we have in our heads is the knowledge of the building-blocks (morphemes), and of how to *put them together* into words! We use morphological rules to build all kinds of words – simple, as well as complex 'high-rise' structures, made up of several levels (i.e., *my mother-in-law's house, George the VIth's Throne, the editor-in-chief's role*, etc.). The output of one rule can be the input to another, or to itself. This enables us to create unlimited numbers of words without overloading our memory.

Activity 8.1

Morphological analysis helps us understand how we create brand-new word-meanings out of 'bits and pieces' of words.

1. Can you 'get' the meaning of '*insuperior*' or 'downsizable'?
2. Why is it that we can say *great* → *greatly*, huge → hugely, but not *big* → *bigly* or red → redly? *Laugh* → *laughable*, but not *smile* → *smilable*? And why can we say, eat → eatable, *drink* → *drinkable*, but not *sip* → *sippable*?

Now, what are these word-building blocks – morphemes?

8.2 Words & Morphemes

Literally, the word '*morpheme*' means an '***element* in a system of forms.'** They are 'pieces' of words that have meaning. Language works because we associate ***forms*** with ***meanings***. A form can be any kind of physical structure. It is easy to think of the letters on a page as shapes or forms, but what about spoken words? Think of the sounds of 'arm' and 'chair.' The two words sound different, just as they look different when written down. From the point of view of our ears, these two words have different shapes, or *forms*. Each different form evokes a different meaning.

If we say '*arm*' and '*chair*' together, their meanings fuse into one word-meaning (*armchair*); the two 'parts' of '*armchair*' are separate word-meanings, but *together* they fuse into a new word-meaning.

'Hang on a minute,' you may say, 'isn't that what happens when we put words together in a sentence? Their meanings also blend into one chunk – ***meaning-as-use***?' Indeed – that is why Bhartrhari, the Indian scholar of the 7th century AD, regarded the whole ***sentence*** as a ***unit of meaning***, 'conveying its meaning *in a flash*, just as a picture.' If both ***morphemes*** and ***word-meanings*** are forms associated with meaning, then what's the difference between them?

Word-meaning, as we remember, is the smallest unit of language that has all of its properties intact: each word-meaning is **socialised thought in the form of sound;** it **exists *in time*** and **changes *in use*.**

If words can be made up of any number of 'meaningful pieces' (as in *down-to-earth*, *understatement*, or *multitasking*, etc.), how do we know then when we have a word? *Bus stop*, *web site*, *power outage*, *mock exam* – are these pairs of words, or just words?

Descriptive linguists define ***word*** as a ***minimal free form***. This implies that it is a sound sequence which is ***uninterruptible***[1] and ***mobile*** (i.e., *banana* cannot be interrupted – you cannot say, **ba-green-nana* or **bana-yummy-na*. The sequence *banana* can also freely move about in the sentence, as in:

This banana is green.
Peter ate a banana.
We use banana leaves to wrap mumu, etc.

Words can be made up of one or of many morphemes. In fact, most long words in English can be broken down into smaller 'pieces of meaning'. The longest word in English (according to Webster's Unabridged Dictionary) contains 45 letters and can be broken down into 9 morphemes:

Pneumonoultramicroscopicsilicovolcanoconiosis

lung, respiration beyond small look Adj. silicon volcanic dust N condition, result

'a lung condition caused by the very small-looking particles of volcanic silicon dust'

Morphemes are different from words, because they **are *not necessarily free***; many of them cannot stand on their own, and only acquire their meaning when fused with other morphemes. Look, for example, at the –***s*** morpheme, which can mean the plural of a noun or the 3rd person singular form of the verb:

1 apple	2 apple***s*** (book***s***, thought***s***, etc.)
I read	She read***s***, look***s***, think***s***, etc.

By itself, the sound [***s***] has NO meaning! That is why ***morpheme*** is often defined as a "**minimal unit of *meaning* or *grammatical function***" (Yule: 1998).

However, every **grammatical function has its meaning** (albeit more abstract), i.e., the grammatical meanings of verb tenses, the order and manner of connecting words and pieces of words into larger patterns also create meaning, as we remember from Unit 5, etc. This is why we will use a simpler definition:

Morphemes are minimal units of meaning

This definition is 'stretchable': it covers all kinds of *forms* (free and not free, sound / visual), and all kinds of *meaning* (concrete, as well as the more abstract grammatical meanings).

[1] This 'uninterruptibility' principle is challenged by '**infixes**' (i.e., *a-whole-nother* matter, etc.; these are rare in English, but quite common in many other languages – Re: Section 8.4)

8.2.1 Recognising Morphemes

In theory, there is no limit on the number of morphemes in a word. It is only our breath and memory that limit their number!

Linguists identify morphemes by comparing many utterances and looking for sequences which are partially the same. For example:

The	anti-war	frog	croak-***ed***	tender-***ly***	***and***	jump-***ed***	for-***wards***
The	pro-choice	chicken	squawk-***ed***	loud-***ly***	***and***	strutt-***ed***	back-***wards***

Partial similarity between these sequences enables us to isolate sequences ***-ed***, ***-ly***, and ***–wards,*** as well as '***the***' and '***and***.'

In Turkish, partial similarity between *adam**lar*** and *kadin**lar*** enables us to isolate the plural suffix: *'**-lar**,'* and the words *adam* (man) and *kadin* (woman).

In Swahili, the overlap between **ni*ta****soma*** (I will read); **ni*li****soma*** (I read – past tense); **u*ta****soma*** (you will read); **u*li****soma*** (you read – past tense) enables us to identify ***soma*** 'read'; ***ni*** 'I'; ***u*** 'you'; ***ta*** (future tense); and ***li*** (past tense).

Not all morphemes are as easily 'segmentable' as these examples, but the identification of morphemes is done wholly by means of this basic technique of isolation through the comparison of partially similar sequences.

Activity 8.2

Do the concepts of ***word*** and ***morpheme*** overlap? If yes (or no), then why/ how?

8.3 Characteristics of Morphemes

Morphemes have four defining characteristics:

⇒ They cannot be subdivided
⇒ They add meaning to a word
⇒ They can appear in many different words
⇒ They can have any number of syllables.

Let us look at each of these features:

1. Morphemes cannot be subdivided and retain the same meaning

By definition, morphemes are the smallest *meaningful* forms of language. If you try to divide a morpheme into smaller pieces, all you will get are sounds. The individual sounds of language do not have a meaning by themselves – they have to be combined with other sounds before they have meaning. For example, we can break the morpheme '*cat*' into its component sounds (/k/, /æ/, and /t/), but none of them by themselves convey any meaning. They all have to be put together – in just the right order – to create the meaning 'feline animal.' If arranged differently, they would

create other meanings: [ækt], or [tæk]. These patterns of sounds convey different meanings and therefore they make up different morphemes.

2. Morphemes add meaning to a word

Each morpheme contributes to the overall meaning of the word, but not in equal measure – some affect the overall meaning more than others. In your opinion, which morphemes have more effect on the overall word meaning in the examples below?

arm + chair = armchair	arm + s = arms	chair + s = chairs
tool + bar = toolbar	tool + s = tools	bar + s = bars
gate + way = gateway	gate + s = gates	way + s = ways
school + girl = schoolgirl	school + s = schools	girl + s = girls
sea + horse = seahorse	sea + s = seas	horse + s = horses

3. Morphemes can appear in many different words

Morphemes are *recyclable*. If you know the meaning of the morphemes, you can 'crack' the meanings of even unfamiliar words quite easily, because the same morphemes show up over and over again in many different words. Once you've learnt the meaning of a morpheme and the knack of spotting it in slightly different forms, you'll know something about all the words that use it. Take, for example, the Latin morpheme *duc* (lead, draw, pull) - look at some words that use it:

re*duc*e	'to *pull* back';	de*duc*e	'to draw away from'
se*duc*e	'to lead apart';	pro*duc*e	'to pull forward'
in*duc*e	'to lead into'	con*duc*t	'to lead together'

Another example is *ped* 'foot' – also from Latin:

pedal	'pertaining to the foot'
pedestrian	'one who uses his/her feet for transportation'
pedigree	< Old French *pied de grue*, or Crane's Foot
biped	a creature with two feet
expedite	'to free the feet' = to speed up progress
impede	to have something in the way of one's foot (to slow down)

4. Morphemes can have any number of syllables

Don't confuse morphemes with syllables:

A syllable is a unit of *sound*; a morpheme is a unit of *meaning*.

Some morphemes have several syllables, i.e., 'hurricane,' 'banana', 'tornado,' while others don't even form a syllable: *cats* = 2 morphemes, *cats'* = 3 morphemes in a single syllable! Although possessive ['] is shown in writing, it is not even pronounced! However, the morpheme clearly exists in that word, because the words *cats* and *cats'* have different meanings (that apostrophe adds the meaning of possession).

Syllables may even divide one morpheme. For example, the word 'pregnant' has three morphemes, but only two syllables:

pre- / gn / -ant
'b/4' 'birth' 'one who' – literally, 'one who is before giving birth'

Compare to the number of syllables: preg + nant. The morpheme *gn* is split in half by the syllable structure of the word dictated by the 'gravitational pull' of the vowels.

Activity 8.3

Contrast the number of morphemes and syllables in each of the following words: dancers, paw-paw, mango, tomatoes, potatoes, zebras, algebra, sisters' songs

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8.4 Types of Morphemes

The words of language – any language – often consist of a number of elements. For example, English word-forms such as *cools, cooler, coolest, coolers, cooled, cooling, pre-cooled,* and *uncool* are made up of one element *cool,* and a number of other elements such as -s, *-er, -est,* [*-er* + *-s*], *-ed, -ing, pre-,* and *un-.* All of them are morphemes (minimal units of meaning).

The 'common denominator' between related words (i.e., *cool*) is called the **stem;** the other morphemes attached to it are called **affixes**. Affixes that come before the stem are called **prefixes**; affixes that come after the stem are called **suffixes**; affixes that are inserted into the stem are called **infixes**.[2]

Free and bound morphemes

Some stems (such as *cool, teach,* etc.) can stand by themselves as single words; they are called **free morphemes** (Re: Section 8.2).

All **affixes**, as the name suggests, must be *fixed* (or attached) to a stem; they are the **bound morphemes** which cannot normally stand alone, e.g. ***anti***-capital***ist, pro***-choice, work***ed***, happi***ly***, song***s***, sing***er***, sleep***less***, etc. They cannot stand on their own and only make sense in combination with the stem.

Bound morphemes are of two main kinds: ***inflectional*** and ***derivational***. The difference between them is that ***inflectional bound morphemes*** simply ***inflect*** *(modify)* ***the form of the same word***, to make it fit in with the other words in the sentence, whereas ***derivational bound morphemes*** create an entirely new word, related to (or '*derived*' from) the original one. Look at this sentence:

*The old dog yawn**ed** and wink**ed** sly**ly** at the help**less** and sleep**y** bat.*

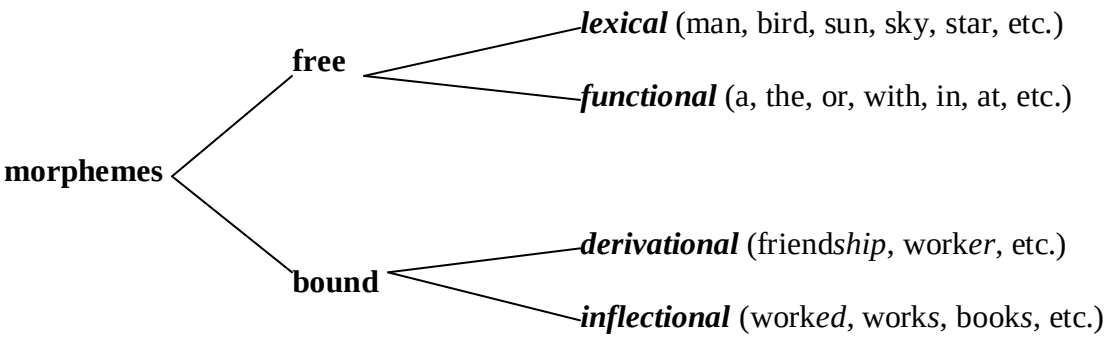
All four underlined words seem to have similar structures, consisting of a free morpheme followed by a bound morpheme. Yet the bound morphemes are different in what they do:

⇒ ***-ed*** simply indicates that the actions verbs name (to yawn/ wink) happened in the past; the morpheme *-ed modifies* the meaning of the same words, whereas

[2] Infixes are rare in English, but quite common in some Austronesian languages

⇒ ***-ly, -less*** and ***–y*** created new words, which behave in the sentence quite differently from the original words.

In order to get the overall picture, let us now draw a 'family tree' of the different kinds of morphemes. They fall into two main groups – **free** and **bound**:



Free morphemes can be

1. ***Lexical:*** those that by themselves represent independent concrete concepts (lexical morphemes are called an 'open' class of words, because we coin new words all the time, to refer to new concepts, i.e., blog, download, PMV, etc.)

or

2. ***Functional:*** function words, like auxiliary and modal verbs, conjunctions, prepositions, pronouns, and articles. Because we almost never add new functional morphemes to the language, we call them a 'closed' class of words.

Bound morphemes may be

1. ***Derivational*** (if they create a new word) or
2. ***Inflectional*** (if they create just another syntactic form of the same word).

So:

An inflectional morpheme never changes the grammatical category of a word.

For example, both *old* and *older* are adjectives. The *–er* inflection simply creates a different version of the adjective (comparative).

Derivational morphemes can change the grammatical category of a word.

The verb r*ead* becomes the noun *reader* if we add the derivational morpheme *-er*. So, the suffix form ***–er*** is an inflectional morpheme in adjectives, and derivational in nouns. These bound morphemes may look like identical twins (*-er* : *-er*), but that doesn't mean that they act the same.

Morphological Description

Now that we know the different types of morphemes, we can break most English words into their 'elements,' and name them appropriately.

Take, for example, the sentence 'The company's management sacked the workers':

The company - 's manage -ment sack -ed the work -er - s.

(functional) (lexical) (inflectional) (lexical) (derivational) (lexical) (inflect.) (funct.) (lexical) (derivational) (inflectional)

Activity 8.4

In a similar manner, analyse the morphological composition of this line from Mandelstam's poem *The Swallow* (1920):

> But I forget what I to say so wanted
> And fleshless thought fades out and joins the other shadows…

Problems in Morphological Description

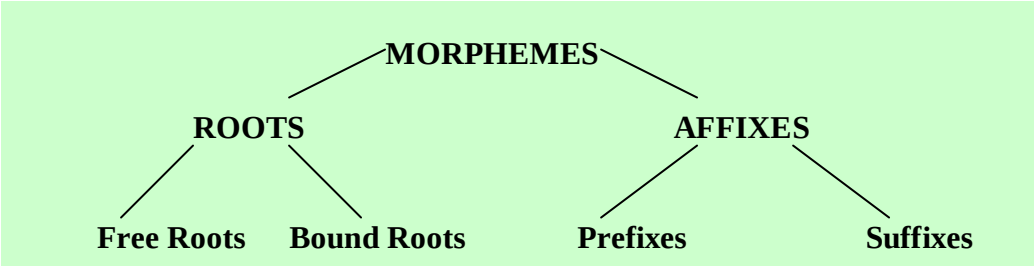
Nothing is always so 'black and white,' though – what, for example, is the 'plural morpheme' in *sheep, men, mice, geese,* or *deer*? And what about the inflection of *go* into *went, be* into *am/ is/ are* and *was/ were,* or *good* into *better*/ *best* and *bad* into *worse*/ *worst*?

We shall look at all these and other interesting cases in the next unit, dealing with variation in the forms of morphemes, or allomorphy. Right now, let us look at how we use morphemes to build word-meanings. A brief look at the structure of English words will give us an idea of the general principles of word formation.

8.5 Principles of English Word Structure

Two different *types* of morphemes – **stems** (or r**oots**) and **affixes –** act as building blocks that make up English words. Each of these classes can be further subdivided:

- ⇒ **Roots** can be **free** or **bound**
- ⇒ **Affixes** (bound morphemes by definition) can be divided into **prefixes** and **suffixes**.



Roots and affixes affect both **meaning** and **structure** (form) of a word in very different ways – let us take a closer look at the behaviour of these two classes of morphemes.

Stems & Affixes

Stem (or *root*) is the basic morpheme to which other morphemes (typically, *affixes*) are added. (A root is always unanalysable, or *monomorphemic*).

Stems differ from **affixes** in two ways:

 # 1:
Stems usually have a specific meaning, which tends to be relatively constant across all the words that use the root. Stems also contribute the greatest conceptual content to the overall meaning of the word. Since roots are doing most of the work of conveying meaning, they are **indispensable word elements: every word has at least one root.** For example, **pter** is a root meaning 'wing'. It appears in words like:

pterodactyl	'**wing**-fingers'
helico**pter**	'spiral **wing**'
a**pter**ous	'lacking **wing**s'

The form **pter** retains the specific meaning 'wing' in each word. Also, the meaning 'wing' is the central part of the overall meaning of the word.

Affixes are morphemes which **attach** to roots or a combination of roots and other affixes. They **modify the meaning of the root(s)**, but do not change it completely.

Remember our examples with 'sea' + 'horse' = 'seahorse,' as opposed to 'sea' + '-s' = 'seas,' and 'horse' + '-s' = 'horses'?

Now consider the affix **pro-** meaning 'before, for, forward' in words like:

propel	'to push forward'
pronoun	'substituting **for** a noun'
prologue	'something spoken **before** (something else)'

Although the different senses of **pro-** are clearly related, the exact meaning shifts somewhat from word to word. As a rule, affix meanings tend to be more vague, and more variable, than root meanings. Learning to deal with the 'shiftiness' of affixes is an important skill in word analysis.

 # 2:
Stems have freer distribution, i.e., they can occur almost anywhere in the word. Look back at the examples we just discussed: we find **pter** at the beginning, in the middle, and at the end of the word. **Affixes**, on the other hand, are restricted to certain positions within a word. *Pro-* (as in *pro*-choice) is a ***prefix***, and so must always come *before* the stem.

Types of Stems

Free Stems *can* occur by themselves, as whole words. Many native words, such as **blue** and **berry**, are free roots, because they can stand alone as single words. Free stems can also combine with other roots or affixes to form more complex words, as **blueberry** and **bluish.** Some other examples of ***free stems***:

un+***happi***+ness ***walk***+ed ***eat***+er+y pre+***cook*** ***winter***+ize

Bound Stems can *never* occur alone as whole words. For example, the roots *cran* and *fer* cannot stand alone; they must occur in combination with other morphemes, such as *cranberry* or *transfer*. Other examples of *bound stems/ roots*:

re+***fer*** in+***fer*** pre+***fer*** de+***fer*** con+***fer***
re+***ceive*** de+***ceive*** con+***ceive*** per+***ceive***
phob+ia ***phob***-ic, etc.

Compounds are words constructed from two or more roots (they may or may not have affixes):

blackberry a compound of two free roots
anthropol**og**y a compound of two bound roots

Types of Affixes

Affixes by definition are always bound, or 'affixed' to a root. They fall into two groups, depending on *where* they attach to the root:

- **Prefixes** occur before a root (although several prefixes can be strung together before a single root): ***dis+in***+fect+**ant**, ***in+dis***+crimin+ate, etc.

- **Suffixes** occur after a root (multiple suffixes can also occur at the ends of words), i.e., un+believ+***abil+ity***, pre+par+***at+ion+s***, un+pre+dict+***abil+ity***, etc.

Infix: The third group of affixes, **infixes**, may be whole words *embedded in the root.* They are rare in standard English and occur mostly in conversational/vulgar speech):

un+***frigging***+believable abso+***bloomin'***+lutely fan+***bloody***+tastic, etc.

Some other languages use **infixes** routinely, for example, in **Bontoc** (Philippines):

fikas	'strong'	*f**um**ikas*	'to be strong'
kilad	'red'	*k**um**ilad*	'to be red'
fusul	'enemy'	*f**um**usul*	'to be an enemy'

Circumfix: We can see just how amazingly diverse human languages are in yet another type of affixes: ***circumfix***. As the name suggests, it 'surrounds' the root – part of it precedes the root, and part of it follows it. In the **Chicasaw** language (Oklahoma),

chokm-a	→ 'he is good'	***ik***-chokm-***o***	→ 'he isn't good'
lakn-a	→ 'it is yellow'	***ik***-lakn-***o***	→ 'it isn't yellow'

Activity 8.4

While English usually marks location with prepositions (i.e. ***in*** *a house* or ***at*** *a place*), Turkish has postpositions (i.e. *house-**in*** or *place-**at***). After studying the following examples, you should be able to identify the three versions of the 'location' suffix and the conditions for their use.

('book')	*kitap*	- *kitapta*	('in a book')
('chair')	*koltuk*	- *koltukta*	('in a chair')
('room')	*oda*	- *odada*	('in a room')
('restaurant')	*lokanta*	- *lokantada*	('in a restaurant')
('house')	*ev*	- *evde*	('in a house')
('place')	*yer*	- *yerlerde*	('in places')
('hand')	*el*	- *ellerimde*	('in my hands')
('road')	*yol*	- *yollarta*	('in roads')

(Source: Yule: 1996, p. 83)

8.5Creating new words: Some General Word Formation Processes

New words appear in our lexicon all the time – people make them up to reflect new concepts and realities. One of the relatively recent developments, for example, is amateur journalism on the net – people write on issues they feel strongly about and post their thoughts and comments on their web pages (in itself a new concept ☺). They are *bloggers*, or *'web loggers'*; where did the name come from? You know the word for an official written record of events during a ship's voyage, or an aircraft's flight – '***log***', also '*logbook*' – 'a detailed record of things done, experienced, etc., as in '*keep a logbook*'? That is exactly what bloggers do – they give a detailed written account of their experiences and thoughts, and post them on the web – that is why their writings are called *weblogs / blogs*, their occupation – *weblogging / blogging*, etc. We have no trouble in understanding all those derivative words – why, do you think?

Or take *morphing,* for example. According to the Collins Gem Computer Jargon list, it is the technique of blending one image smoothly into another to create a radical transformation. Now, would you be confused, if you heard of a bear being *morphed* into a cat, or of *morphing software*, which brings such effects to the average computer? I guess even '*morphers*' is possible… I have also heard people talking recently about *rascality*, and having been *rascalled*… Although you, like me, may not have heard some of these terms before, we 'catch on' with no problem – why is it so?

We can understand new words and form new ones, because ***we know the rules of word formation in the language that we use***. These are the so-called morphological rules that we have in our heads – they determine the grammaticality of the words we produce. We have already discussed derivational suffixes and prefixes that we use to form new words. Let us quickly revise those, and focus on some other basic ways in which new words are made. Here is a list and a brief discussion of the general word formation processes, which include:

- ⇒ Derivation
- ⇒ Compounding
- ⇒ Blending
- ⇒ Clipping
- ⇒ Backformation
- ⇒ Conversion
- ⇒ Acronyms
- ⇒ Analogy
- ⇒ Coinage
- ⇒ Reduplication
- ⇒ Multiple processes
- ⇒ Borrowing

Derivation

You remember that ***affixes*** (all *bound morphemes*) are used to '*add*' meaning to *word roots*. We also remember that affixes fall into two main groups*:

- ⇒ ***prefixes***, that come *before* the root, and
- ⇒ ***suffixes***, that come after the root

****infixes*** are not common in English and ***circumfixes*** are simply not there!

We also remember that the '*kind*' and '*amount*' of meaning that these bound morphemes add to the roots depends on the kind of affix:

- ⇒ ***prefixes*** and ***derivational suffixes*** change the overall meaning of the word, they help us form *new words*, whereas
- ⇒ ***inflectional suffixes*** add only *grammatical meaning* that helps us understand the relationships between words in a sentence, but they do not change the core meaning of the word.

English prefixes and derivational suffixes come from a variety of source languages, including Old French, Latin and Greek.

Affixes, whose meaning is obvious to the average English speaker (i.e., ***un-***+clean, or fear/***-less***, etc.), are sometimes called *productive*, whereas the more obscure ones, whose meaning is not immediately obvious, are called *unproductive*. Why? Because the average English speaker, without the knowledge of classical Latin or Greek, would not know their meanings, and consequently will not use them to form new words. Here is

A Selected List of Some of the More Common ('Productive') English Affixes:

after- from the Old English preposition, giving compound nouns like *afternoon, afterbirth, afterlife, afterthought, aftermath, after-effects*, etc. A wide range of adjectives is also possible: *after-school, after-work, after-dinner, after-hours*, etc. (The adjectives usually take a hyphen, the nouns don't).

by- from OE 'by,' giving compounds like *bystander, bypass, bygones*, etc.

dis- /dif- /di- from Latin 'apart' or 'another': this prefix can elide ('fuse') with other consonants, giving words like *diffuse, divide, differ*. More importantly, it also combines with many existing verbs to give their opposites: *disagree, disappear, disapprove, dissociate, disconnect, disengage, disinfect, dislike, dislodge, disobey,* etc.

double- from Old French meaning 'two,' as in *double-glazing, double-locked, double-sided, double-jointed, double Dutch, double Scotch,* etc. There is also a meaning of deception in compounds like *double-dealing, double-talk, double-cross,* etc.

down- from OE, giving compounds like *downfall, downcast, downbeat, downturn, downgrade,* as well as vogue terms like *downsize, downturn,* etc.

ex- / ef- / e- from Latin 'out of,' as in *exhale, exceed, exhume, expatriate, expire, exonerate*. The prefix forms *ef-* and *e-* before certain consonants, as in *effusive, emerge, elapse, erase, evade, escape, educate,* etc. Words like *ex-lover, ex-husband, ex-boxer, ex-president,* etc., indicating people who 'used-to-be' something, are also from this prefix.

extra- from Latin for 'beyond,' as in *extraordinary, extra-special, extra-marital, extra-curricular, extravagant, extraneous,* etc. In many of its hyphenated constructions it act as 'intensifier' meaning 'very': extra-large, extra-bright, etc.

for- from OE preposition, usually meaning prohibition (*forbid*), abstention (*forbear, forgo*), or neglect (*forsake, forget, forlorn*).

fore- from OE 'before' or 'in front,' giving compounds such as *forecast, foretell, forewarn, forefather, foregoing, forehead, forestall,* etc.

hand- from OE, giving compounds such as *hand-made, handwriting, hand-grenade, handshake, handbag, handkerchief, handcuffs*, etc.

hyper- from Greek for 'over' or 'above' in the sense of 'excessively,' as in *hyperactive, hyper-critical, hypersensitive, hyperinflation, hypertensive, hyperbole*, etc. A prefix functioning as an intensifier, *hyper-* also functions nowadays as an independent word, meaning 'agitated' or 'keyed up': *hype, hyped-up*.

in- from OE preposition, giving compounds like *insight, inbred, inlet, income, inhale,* as well as *endear, enthral, embed / imbed, engrave*, etc.

inter- / intel- / enter- from Latin for 'between,' as in *interact, intercontinental, intercourse, intermarriage, interview, interrupt, intercom, inter-city, internet,* etc. Also: *intelligent, entertain, enterprise*, etc.

intra- from Latin 'within,' now used as an opposite of 'extra,' as in *intra-European, intravenous, intramuscular, intranet*, etc.

intro- from Latin 'to, towards' or 'within': *introduce, introvert, introspective,* etc.

low- productive contemporary compound, giving *low-key, low-profile, low-budget, low-grade*, etc.

mid- from OE 'middle': *midnight, midday, mid-week, mid-term, mid-semester,* etc.

mis- partly from OE for 'wrongly' or 'badly,' and partly from Latin 'minus' via Old French *mes,* which came to have a similar meaning, giving *misbehave, misjudge, misconstrue, mismanage, misspell, misplace, misdeed, mishap, mischief,* etc.

out- from OE, giving compounds meaning 'do better than': *outdo, outwit, outstrip, outmanoeuvre,* etc. Others, such as *outrage, outlaw, outside* have the prefix stressed, and mean 'outside of.'

over- from OE, giving compounds like *overcome, overtake, overeat, overreact, overdo,* etc.
un- from OE, meaning (1) 'not': *unkind, unfair, unsound, unlikely, unimaginable, unwise, untrue, uncool,* etc., and (2) 'back,' with the sense of 'reversal': *undo, untie, unfold, unbend,* etc.
up- from OE: *upright, uptight, upriver, upfront,* etc.
wel- / **well-** from OE adverb: *welcome, welfare, well-bred, well-trained,* etc.
with- from the OE preposition: *withstand, withhold, withdraw,* etc.

-dom OE abstract noun suffix, indicating (1) a state or condition: *freedom, boredom, martyrdom, stardom,* etc., and (2) a territory, as in *kingdom, Christendom,* etc.
-down English suffix giving (1) compound adjectives: face-*down, nose-down, top-down, hands-down, head-down,* etc., and (2) nouns: *breakdown, crackdown, showdown, touchdown, meltdown, sundown,* etc.
-en English suffix giving (1) diminutive nouns: *chicken, kitten, maiden*; (2) verbs denoting 'making like (a quality)': *broaden, shorten, lengthen, sweeten, fatten, lighten, frighten,* etc., and (3) adjectives indicating 'substance' something is made of: *wooden, woollen, silken, golden, leaden, waxen,* etc.
-ful English adjective suffix indicating: (1) quantity: *handful, bagful, mouthful, spoonful,* etc., and (2) characteristics: *beautiful, awful, thoughtful,* etc.
-head English noun affixed to other nouns, giving (1) a range of (usually pejorative) meanings: *egghead, fathead, sleepyhead, paw-paw-head, dickhead, thickhead,* etc. (2)indicating the top, or front of something: *letterhead, masthead, spearhead,* etc.
-ie / -y English diminutive suffix: *baby, dearie, doggy, Annie, Johnny, sweetie*, etc.
-ish English adj. Suffix indicating (1) 'diluted' quality: *bluish, reddish, greenish, boorish,* etc., or (2) nationality: *Irish, British, Scottish, Turkish, Kurdish,* etc.
-less English adjective-forming Suffix, indicating lack of (quality): *timeless, priceless, sleepless, lawless, toothless, thoughtless,* etc.
-like / -ly English adjective-forming suffix: *bird-like, fin-like, warlike, lifelike, businesslike, heavenly, manly, lovely, saintly, orderly, fatherly, ghastly,* etc.
-ly standard and most productive English adverb-forming suffix: *quickly, surely, squarely,* etc.
-most English adj. Suffix: *topmost, uppermost, utmost,* etc.
-ship English abstract noun suffix: *friendship, hardship, scholarship, workmanship,* etc.
-y Adj. Suffix: *hairy, moody, bloody, guilty, greedy, guilty,* etc.

The rules of 'derivational' morphology allow us to create a new word out of an old one. For example, the suffix *–able,* as in *lovable, movable, pronounceable, huggable*, etc., converts a verb meaning 'to do X' into an adjective meaning 'capable of having X done to it.'

Compounding

In addition, English is very good at 'compounding, which 'glues' two words together to form a new one. This word-combining process is very common in all Germanic languages (less so in their Romanic 'cousins'): *bookcase, fingerprint, armchair, wallpaper, car-park, underground, flyover, expressway, maybe, thunderstorm, blackout, therefore, forehead, weekend, eyeball, birthday, gridlock, toothbrush,*

standstill, go-slow, touchdown, shutdown, takeoff, cyberstalking, to mailbomb somebody, etc.

In English, a compound is often spelled with a hyphen, or as one word, but it can also be spelled with a space between the components, as in '*no one,*' for example. There is a simple way to tell whether you have a compound or a phrase: compounds generally have stress on the first element, and phrases – on the second. A *dark* ***room*** (phrase) is any room that is dark, but a ***dark*** *room* (a compound) is a photo lab. A ***black*** *board* (phrase) is a board that is black, but some ***black****boards* (compound) are green, or even white. Pronounced wrongly (or written without punctuation marks) some word strings can be ambiguous: ☺

Squad Helps Dog Bite Victim
Man Eating Piranha Mistakenly Sold as Pet Fish
Juvenile Court to Try Shooting Defendant

Blending

This is when we use two (or more) 'pieces' of different words and combine them into a 'blend' of both:

brunch < breakfast+lunch
modem <modulator-demodulator
breathalyser < breath+analyzer
electrocute < electro-+execute
sitcom < situation+comedy
slithy < slimy+lithe
televangelism < television+evangelism
ginormous < gigantic+enormous
Eurovision < European+television
smog < smoke+fog
motel < motor+ hotel
glitzy < glamour+ritzy
telecast < television+broadcast
biodegradable < biologically degradable
chortle < chuckle+snort,
blog < web log,
techsperts < technical + experts, etc.

Blending is popular with advertisers, with words like *informercials, twicicles, nicicles* and *Schweppervescence* ☺

Clipping

Clipping is a type of word formation which occurs when a word is abbreviated. The resulting terms are often colloquial, and found more often in spoken rather than written English (as the term suggests, 'clipping' means 'cutting short' the longer words). Who has the time to pronounce *laboratory*, when you can simply say *lab?* Or: *fax, bra, ad, gas, kilo, cab, perm, flu, porn, plane, pram, phone, synch* (in the phrase '*to be out of synch with something'***),** etc. Names are also typically shortened: *Al, Kay, Ed, Dick, Mike, Ike, Tom,* etc.
There must be a 'lazy bug' present in educational environments, because here we see the blossoming of 'clippings': *exam, typo, chem., gym, math, Prof, doc, uni, varsity, admin, circs*: *in / under the* ***circs****, no bull* (for 'no bullshit'), etc.
Sometimes a whole phrase can be clipped: It *shorted* (it *short-circuited),* etc.

Amp < ampere
Bus < omnibus
Chimp < chimpanzee
Coke < cocaine, coca-cola
Demo < demonstration
Disco < discotheque

Fax < facsimile
Mob < *mobile vulgus* (< Latin: 'the masses')
Phone < telephone
Photo < photograph
Piano < pianoforte
Pram < perambulator
Pro < professional
Reps < representatives
Tacs < tactics (as in to 'change tacs')
Revs < revolutions
Spec < specification,
Blog < weblog, etc.

Backformation

Backformation is a process of forming a new word by removing an element from – rather than adding one to – an imagined root, or base. This is a specialized type of reduction process: typically, a word of one grammatical class (usu. a N) is reduced to form a word of another grammatical class (usu. a V): *television → televise; donation → donate; option → opt; emotion → emote; enthusiasm → enthuse; liaison → liaise; babysitter → to babysit; psychology → to psych ,obsession → to obsess* (on sth.), etc. The word *permutation* has recently been observed attempting to *backform* a verb, *permutate*, when the verb has in fact existed for centuries, as *permute* (to *backform* is itself a backformation! ☺) A few other examples:

Automate < automation
Craze < crazy
Eavesdrop < eavesdropper
Vivisect < vivisection,
Sync < synchrony,
Psych (as in 'psych someone up'), etc.

Nouns ending in '–er' are often 'backformed' into verbs: *burglars burgle; swindlers swindle; peddlers peddle; editors edit; sculptors sculpt,* etc. – it stands to reason, doesn't it? ☺

Hypocorisms are a special type of backformation, typical of British and Australian English. A longer word is usually 'clipped' to a single syllable, and then the diminutive suffix '-y' or '-ie' is added to the 'tail': *telly, movie, Aussie, hankie, Barbie doll, bookie, cabbie, cookie, roadie,* etc.

Conversion

Conversion is a term we use to name a word-formation process, which 'converts' words from one part of speech to another, i.e., when we use familiar nouns as words, or adjectives (without any reduction):

He buttered his bread.
They import the wine in barrels, and bottle it here.
She likes to vacation in Australia.
It's expected to factor into that = it's expected to impact the outcome

Conversion is particularly productive in modern English: Prices are bottoming/leveling out. They downned their beer in one long gulp. School party, sea

air, user-friendly, vacation time, etc., etc. – in fact, the use of nouns as adjectives is becoming the norm!

Acronyms

Acronyms are abbreviations pronounced as if they were words, and they are a fairly recent method of word formation. They have proliferated particularly in the past 100 years. Acronyms are made up of the first letters of constituent words (they are shorter, simpler, and more user-friendly! ☺):

CD for 'compact disc'
VCR for 'video cassette recorder'
MP for 'Member of Parliament'
AIDS for 'auto-Immune Deficiency Syndrome'
PIN for 'personal identification number'
ATM for 'automatic teller machine'
UFO for 'unidentified flying object'
laser for 'Light Amplification by Stimulated Emission of Radiation'
scuba for 'self-contained underwater breathing apparatus'
radar for 'radio detecting and ranging,'
DIME for 'Dense Energy Metal Explosive' (the new weapon Israel used in Gaza recently)
Q2 for 'second quarter,' etc.

Note that the first set of examples are spelled out as capital letters, while the second set are written as ordinary words (one of the earliest acronyms is found in both forms: OK, or okay, meaning 'ol korrekt' ☺)

Analogy

Another, and much more productive method of word formation is **analogy,** one of the driving forces of linguistic change. Many words and expressions are formed in this way, whether you describe a boring person as '*underwhelming*' by analogy with 'overwhelming,' or say that a person has '*hidden shallows*' by analogy with 'hidden depths,' or coin words like *motorcade* by analogy with cavalcade, *technobabble* by analogy with 'nukespeak,' *etopia* by analogy with 'utopia,' or *telethon / cleanathon* by analogy with 'marathon.' Some people, wanting to show off, extend the use of Latin affixes to new forms by analogy, i.e., *religiosity, criticality, systematicity, randomicity, insipidify, optimality, stereotypy,* etc. Such words have an air of heaviosity and seriosity about them, which clouds their meaning (a tactic used frequently by unscrupulous bureaucrats and politicians). ☺
Analogy is also used for humorous precision, not pomposity. Look at these items from *The New Hacker's Dictionary*:

ambimoustrous	capable of operating a mouse with either hand
barfulous	quality that would make anyone *barf*
bogosity	the degree to which something is bogus
depeditate	to cut the feet off (e.g., while printing the bottom of a page)
dimwittery	example of a dim-witted statement
geekdom	state of being a techno-nerd
marketoid	member of a company's marketing department
mumblage	the topic of one's mumbling
pessimal	the opposite of 'optimal'

wedgitude	the state of being wedged (stuck; unable to proceed without help)
wizardly	pertaining to expert computer programmers

Coinage

Because of so many other ways in which we can form new words, coining, or the *invention* of completely new terms is rather rare in English. Some words, however, like *aspirin, hoover, nylon, kleenex, xerox*, etc., that began as invented trade names, were quickly absorbed into the language and became common words that we use every day. With the IT revolution, so many new concepts entered our reality that new terms had to be invented for many of them, i.e., *kerning* (adjusting the spacing between the letters, so they look better), *modem* (short for Modulator-DEModulator), *dingbats* (a font consisting of graphical symbols), *website, weblog/blog*, etc.

Reduplication

Here words are created by partial or complete repetition (reduplication is particularly common among children): *abracadabra, puff-puff* (for train, in the days of steam engines), *wee-wee, teeny-weeny, bye-bye, tom-tom, tut-tut, tick-tock.* Many words formed this way have contrasting sounds, i.e., *hanky-panky, helter-skelter, okie-dokie, hocus-pocus, knick-knack, mish-mash, ping-pong, mumbo-jumbo,* etc.Most of these reduplicative words rhyme – that is what makes them memorable:

Rhyming		**Non-rhyming**
arty-farty	hi-fi	dilly-dally
backpack	hoity-toity	ding-dong
Delhi belly	namby-pamby	singsong
easy-peasy (-japaneasy)	pub grub	shilly-shally
fat cat	silly-billy, willy-nilly, etc.	flimflam, flip-flop

Repetative: *gaga, goo-goo, go-go, so-so, chin-chin, chop-chop, lik-lik, singsing, toktok, mu-mu* etc.

Multiple Processes

Thanks to all these word formation processes, the number of possible words we can build out of 'pieces' of words is immense. What makes their number infinite, is the fact that morphological rules can function together to create complex 3-D structures, not simple chains of morphemes stuck together. Remember?

The output of one morphological rule can be the input to another, or to itself: we can talk of *unmicrowaveability* of some 'Liberty' fries, a *floppy disk drive slot feature availability* in some computers, or a *get-down-to-business* speech, etc.

More often than not, several word-formation processes are at work:

delicatessen → *deli* (borrowing + clipping);
snow + ball → *to snowball* (compounding + conversion),
web+ log → *blog* (clipping + blending), etc.

This is another example of how grammar functions as a complex mechanism tailored to the transmission of propositional structures through a *serial interface*.

Borrowing (using words from other languages)

This is one of the simplest kinds of word formation: the word is simply 'lifted' from another language. Over 70% of all the words in the Miriam-Webster Unabridged Dictionary are borrowed from other languages (majority from Old French, Latin and Greek). The new word may be needed in English, because it describes something not previously known to English speakers. That is how the names of exotic plants and animals came into English: orange, lemon, paprika, avocado, yam, yak, kangaroo, pelican, etc. Walter Scott popularized in his novel *Ivanhoe* the realization that while many animals in their lifetime have English names (*ox, cow, calf, sheep, swine, pig, boar, deer*), they reach our table with French names (*beef, veal, mutton, porc, bacon, venison, brawn,* etc.). This is a relic from the time when Norman masters left the care of the living animals to the Anglo-Saxon lower classes, while the superior French *cuisine* was kept in the hands of Norman cooks and *chefs.* Many other borrowings testify to this superiority: *sauce, boil, fry, roast, toast, pastry, soup, sausage, jelly, dainty.* And while the humbler *breakfast* is English, the more sumptuous meals, *dinner, supper,* and *feasts* generally, are French. Most of these borrowings date from the Norman Conquest (1066 AD) and are no longer perceived to be foreign. We tend to be more aware of more recent borrowings, such as *glasnost, perestroika,* etc.

Loanwords are words that exist in one language and are imported into another language. Examples:

- ⇒ *bature* is a Hausa word for a 'white man' (*baturia* – a 'white woman'), along with numerous other Hausa words, are used extensively in Nigerian English
- ⇒ the words *tai tai* 'wife' and *gweilo* 'foreigner' were imported directly from Cantonese into Hong Kong English
- ⇒ *bilum* – which language does it come from? ☺ - is part of PNG English, as are *tokples, toksave,* etc.

As we know, *borrowing* is one of the most common sources of new words in English. English has 'soaked up' numerous loanwords from a multitude of languages through contact with other nations and cultures: *alcohol* (Arabic), *boss* (Dutch), *robot* (Czech), *yoghurt* (Turkish), etc. Here are a few other examples:

Dutch: *apartheid, bluff, brandy, bully, bumpkin, clamp, coleslaw, commando, dope, drill, sledge, slim, snoop, spook, spoor, stoop, trek, golf, frolic, yacht*, etc.

German: *frankfurter, hamburger, hamster, waltz, quartz, schnitzel*, etc.

Norse and the Scandinavian languages: *anger, blink, bloom, blunder, blur, crook, die, dirt, doze, dregs,egg, fellow, gaze, geyser, law, leg, meek, muck, nasty, odd, roof, scold, sky, slalom, sniff, squeal, take, kick, weak, ugly, want, window, etc.*

Indian languages: mango, bungalow, dungarees, crimson, nirvana, pariah, sapphire, shampoo, sugar, swastika, yoga, etc.

Russian: [tok ʃou] < talk show, [bai] < Bye!, etc.

A **loan-translation**, or ***calque***, is a special type of borrowing, which translates a foreign word, phrase, or idiom and adopts its meaning: French *un grate-ciel* → *sky-scraper*, English 'boyfriend' → Japanese *boyifurendo* (borrowing with sound modification), but a *calque* in Chinese: *nan pengyu.* [oxota na vedʲm] is the Russian calque of 'witch hunting.,' meaning 'hunt for witches', [ʃok i trʲepʲet] < 'shock and awe,' [osʲ zla] < 'axis of evil,' [avia ʃou] < air show (here we have a calque + borrowing), etc.

Summary

1. ***Morphemes*** are the ***smallest meaningful units of language***:
    a. They cannot be subdivided
    b. They add meaning to a word
    c. They are 'recyclable'
    d. They can have any number of syllables
2. Our mental dictionaries contain ***morphemes and instructions for combining them***.
3. Morphological rules can create complex *three-dimensional* structures: this makes the number of possible combinations infinite.
4. Bloomfield's definition of ***word*** as ***a minimum free form*** is not always useful, because
    a. Words may be bound too tightly with their context (Cf. set phrases/idioms), or
    b. They can be homonyms/homophones – they can actually belong to different lexical items.
5. Word sound sequences are distinguished by ***uninterruptibility*** and ***mobility***.
6. Morphemes can be isolated through comparing sound sequences.
7. Morphemes can be *free* or *bound*; *free morphemes* can be *lexical* or *functional*, and *bound morphemes* can be *inflectional* or *derivational*.
8. Two different *types* of morphemes act as building blocks that make up English words – ***Roots*** and ***Affixes***. Each of these classes can be further subdivided:
    a. ***Roots*** can be ***free*** or ***bound***
    b. ***Affixes*** can be divided into ***prefixes*** and ***suffixes***
        i. Infixes and circumfixes may be common in other languages

Self-Assessment Exercises

Q 1 **What is a word?** How do you know?

Q 2 **What's a word in a foreign language?** How do you know?

Q 3 **More than one process was involved in the formation of each of the forms below. Can you identify them?**

a. I have a new *car-phone*.
b. John wants to be a *footballer*.
c. The negotiators *blueprinted* a new peace proposal.
d. Another *carjacking* has been reported.

Think of 5 examples of multiple word formation processes at work.

Q 4 **Identify the affixes in:**

Unfaithful, carelessness, refillable, disagreement, scholarship, referee, impossible, scholarship, clearly, thankfully, unprecedented, disinterested, pleasant, nation, increment, exploding, interpreter, international, handbook and *increasingly*

Analyse 10 words of your choice.

Q 4 **Identify affixes in these Nali (Manus) utterances; give their meanings, and say whether they are prefixes, suffixes, infixes or circumfixes:**

maran	his/her eye	ndrio	my stomach
moro	my eye	ndriam	your stomach
maram	your eye	ndrian	his/her stomach
poyo	my head	seu(a)tou	my house
payam	your head	seu(a)tam	your house
imo	my arm	seu(a)tan	his/her house
imam	your arm	seu tahu	their house
ndriko	my leg	seu torou	our house
ndrikam	your leg	seu tawawu	your (pl.) house
ndrikan	his/her leg	payatou	our head

Q 5 **What word-formation processes can you identify in the sentences below? Give your own examples.**

When I am ill, I want to see a doc, not a vet.
I was a deejay before, but now I am an emcee in a nightclub.
That's a-whole-nother problem!
He is always taking pills, either uppers or downers.
Live reporting is very popular nowadays, so we bring you Jenny – live! ☺

Q 6 Think of at least 10 new words that have recently entered the language you speak, and identify the word formation process(es) that have taken place in their creation.

Q 7 How do you form new words? How do you know how to?

Q 8 Do a complete morphological analysis of the following utterances from the Maninka language; fill the blank spaces with the proper Maninka forms:

bugo	'hit'	bugoli	'the hitting'
dila	'repair'	dilali	'the repairing'
don	'enter'	donni	'the entering'
dumu	'eat'	dumuli	'the eating'
gwen	'chase'	gwenni	'the chasing'
da	'lie down'	dali	'the lying down'
famu	'understand'	famuli	'the understanding'
men	'hear'		'the hearing'
sunogo	'sleep'		'the sleeping'

Q 9 Assess the following statements as 'True' or 'False':

1. A word is always bigger than a morpheme.
2. Affixes are bound non-roots.
3. A morpheme is the smallest possible unit of meaning.
4. The word 'unrealistically' contains 4 morphemes.
5. The plural '-s' is a derivational morpheme
6. The ending '-ly' is a functional morpheme
7. The suffix '-ment' is an inflectional morpheme
8. 'Flamingo' is a free lexical morpheme.
9. '-ful' is a bound derivational morpheme.
10. 'Pregnant' is made up of 2 morphemes.

Q 10 Identify word formation processes at work:
Decentring, universalists / substratists, to input data into computer system, interactional processes, systematicity, describably, stick-to-it-ness, webisodes.

References

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