Nicholas LaCara · University of Toronto lin333 · 7 January 2019

An overview of morphology

The goal of this lecture is to provide an overview of issues that we will encounter in our discussion of morphology this semester. We will discuss the place of morphology in the grammar, the units morphology manipulates and their behaviour, the different kinds of morphological phenomena that exist, and the relation between morphology and words. We will focus more on problems than on solutions today as a preview of things to come.

1 What does morphology study?

- Broadly speaking, morphology is the study of the grammatical properties of words and how words are related to one another.
- Consider the following two words:

  (1) a. public b. publicize

- A *prima facie* look at these two words suggests that (1b) is related to (1a) in several ways, both phonologically and semantically:
  - The word *public* is (apparently) a proper subpart of *publicize*. Example (1b) is evidently more complex than (1a).
  - The words have related meanings (to publicize something means to make that thing public). In some sense, the meaning of (1a) is contained in (1b).
- A simple hypothesis: Example (1b) is derived from less complex (1a).
  - The complex (1b) can be decomposed into two subparts, *public* and *-ize*.
  - We will refer to the elements that go into word building (like *public* and *-ize*) as morphemes.
  - Morphemes are the basic elements manipulated by the morphology.
  - On the traditional definition, they are the most basic pairings between form and meaning, and the smallest meaningful linguistic unit.

As we will see in Section 2.5, a morpheme may have more than one surface form, as succh, morphemes are sometimes analyzed as more abstract units.

- Once we adopt the hypothesis that words are composed from morphemes, we can ask several questions about morphemes:
  i. What kind of morphemes are there?
     (What kind of morpheme is *public*? What about *-ize*?)
  ii. What sort of grammatical properties do individual morphemes have?
     (What properties does *-ize* contribute the word?)
  iii. What kinds of morphemes can combine with one another?
     (What words can *-ize* combine with? What can *public* combine with?)

Next week we'll talk about the alternative hypothesis: That there is no such thing as morphemes.

- We can already start answering questions like this:

  i′. Some morphemes can stand on their own, while others must attach to other elements.
  - *Public* is a FREE MORPHEME, since it can be a word on its own.
  - Conversely, *-ize* is a BOUND MORPHEME, since it must combine with another morpheme to form a word.

  Some bound morphemes can appear as a word themselves; a recent one is *-ish*.

  ii′. The words in (1a) and (1b) have different syntactic distributions.
  - The word *public* is an adjective or a noun, grammatically speaking.
  - The addition of *-ize* makes *publicize* a verb.

  iii′. This suggests that *-ize* can attach to adjectives to form verbs.
  - To form a verb from the adjective *public*, you cannot combine it with, *e.g.*, *-en* (**publicen*).

  Compare *hard* → *harden*, *sweet* → *sweeten*.

- Already, though, you may have noticed that things aren't entirely so simple:
  - The final segment of [ˈpʰʌb.lɪk] is realized as a fricative in [ˈpʰʌb.lɪ.saɪz]. Why?
  - Why *can't* you use the suffix *-en* to make a verb from *public*? Or, for that matter, *-ify* (**publicify*)?

  Compare *pure* → *purify*.
  - If *publicize* means 'to make something public', then how come *realize* often means 'to become aware of something' rather than 'make something real'?

  This transparent meaning exists, too, it's just not the most common one.

- In many ways, morphology does not outwardly appear to be as systematic as syntax and phonology, especially morphology that changes one word into another, known as DERIVATIONAL MORPHOLOGY.
  - We frequently find irregularities, exceptions, and non-transparent meanings when looking at derivational morphology.
  - Any theory of morphology must eventually come up with an explanation for why.

- In addition to how new words are derived from less complicated pieces, morphology also studies how the form of a word interacts with syntax, which has traditionally been referred to as INFLECTIONAL MORPHOLOGY.

  We discuss the division between derivational and inflectional morphology in Section 3 below.

- Roughly speaking, inflectional morphology changes the form of a single word based on the syntactic position:

(2) a. play
b. plays
c. played
d. playing

- In some sense, these are all the same word, but it comes in different forms depending on the syntactic position it occurs in (*i.e.*, depending on whether it is in the complement of a tense head or an auxiliary).

2 Morphemes

- Let us begin with some discussion about how to identify morphemes and what kinds of morphemes seem to exist.
- The point of view we will take in this section will be largely descriptive; we will return to more technical discussion after this.

2.1 Kinds of morphemes

- There are different kinds and forms of morphemes which morphologists have identified.
- The most basic division is between ROOTS and AFFIXES.
  - Katamba and Stonham (2006: 42) define a root as 'the irreducible core of a word, with absolutely nothing else attached to it.' The core meaning of the word is usually associated with this element.
  - Affixes do not generally exist on their own and must attach to other elements.

See also Fábregas and Scalise 2012: 37.

- In English, many roots are FREE MORPHEMES. Free morphemes are roots that do not need to attach to another element to form a word:

This is property (13b) in Fábregas and Scalise (2012: 8).

(3)

a.	time	c.	play	e.	big
b.	llama	d.	tell	f.	cool

- However, not all roots are free morphemes. For instance the Spanish root $\sqrt{\text{HABL-}}$ in (4), having to do with speech, can never occur on its own.

This might well be because of phonological constraints (no word in Spanish can end with the segments [bl], but even roots that are phonotactically allowed, like $\sqrt{\text{CANT-}}$, 'sing', never appear on their own either.

(4) *Spanish* hablábamos (Embick 2015: 64):

habl-	-á	-ba	-mos
ROOT	-TH	-TNS	-AGR
speak		-PST	-1PL

'We spoke/were speaking.'

- Affixes, on the other hand, are arguably never free morphemes. They are BOUND MORPHEMES and must attach to some base.

(5)

a.	timely	c.	played	e.	bigger
b.	llama's	d.	retell	f.	uncool

- Affixes take a wide variety of forms, which we will look at below.

2.2 Kinds of affixes

2.2.1 *Suffixes*

- SUFFIXES are familiar to English speakers as affixes that follows their bases. They express a variety of meanings and information.

(6) a. criticize b. happiness c. tallest

2.2.2 *Prefixes*

- Prefixes, which attach to the beginnings of their bases, should also be familiar to English speakers.

(7) a. ex-president b. unhappy c. indifferent

- Together, suffixes and prefixes are the most common kind of affixes cross-linguistically.

2.2.3 *Infixes*

- Many languages also exhibit infixes, which are affixes placed inside the root or base to which they attach.

(8) Um-*infixation in Tagalog* (McCarthy and Prince 1993):
   a. *sulat* 'eat' + *-um-* → *s-um-ulat*
   b. *gradwet* 'graduate' + *-um-* → *gr-um-adwet*

The infix *-um-* puts focus on the subject.

(9) t-*infixation in Syrian Arabic* (Katamba and Stonham 2006: 174):
   a. *samaʕa* 'hear' + *-t-* → *stamaʕa* 'listen'
   b. *rafaʕa* 'lift' + *-t-* → *rtafaʕa* 'lift oneself'

The infix *-t-* is a reflexive morpheme.

- Infixes are not just affixes that get stuck between a base and another affix.
- For instance, the *-ate* in *caffeination* is not an infix because it is just a suffix that is added before the suffix *-tion* is added.

(10) *Derivation of* caffeination:

   a. *caffeine* + *-ate* → *caffeinate* b. *caffeinate* + *-tion* → *caffeination*

- English has a few similar processes:

(11) *Infixation processes in English*:
   a. *Expletive infixation*: Mani-fuckin'-toba
   b. *Homeric infixation* (Yu 2004): tele-ma-phone
   c. *Hip-hop* iz-*infixation* (Viau 2002): h-iz-ouse

Yes, Homer Simpson.

2.2.4 *Circumfixes*

- Circumfixes are affixes that surround their bases. Although they appear to have two pieces, they are treated as a single *discontinuous* affix.

- Perhaps the most famous example is German *ge- -t*, which forms past participles:

(12) a. *machen* ⟶ b. *gemacht*

mach -en	ge- mach -t
√MAKE -INF	PTCP- √MAKE -PTCP
'to make'	'made'

(13) a. *sagen* ⟶ b. *gesagt*

sag -en	ge- sag -t
√SAY -INF	PTCP- √SAY -PTCP
'to say'	'said'

- To emphasize, despite being discontinuous, circumfixes are usually taken to be a single morpheme.
- This shouldn't be confused with cases where a single base receives a separate prefix and affix.
- For instance, in *uninteresting*, *un-* is a prefix and *-ing* is a suffix; they do not form the non-existent circumfix *un- -ing*.

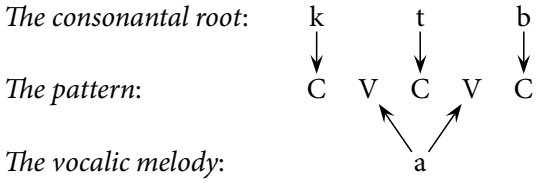
There are some suspicious cases, though, that look like they might be better analyzed as two separate affixes, a phenomenon known as PARASYNTHESIS. We'll talk a bit more about this next week and why it's a problem.

(14) a. *interest* + *-ing* → *interesting*
b. *interesting* + *un-* → *uninteresting*

2.2.5 *Transfixes*

- TRANSFIXES take discontinuous morphemes to their extreme.
- Semitic languages (including Amharic, Arabic, and Hebrew) famously display a form of transfixation known as root-and-paradigm morphology.
- In these languages, consonantal roots combine with vowels in a certain pattern to form words.

(15) *The morphology of* katab *'he read' (Hebrew)*:



https://en.wikipedia.org/wiki/K-T-B

- Each of these elements contribute something to the meaning – The root contributes the core meaning 'read', while the vowels and pattern contribute information about the voice and argument structure.
- This sort of morphology is a form of NONCONCATENATIVE MORPHOLOGY, since one does not simply attach affixes onto the ends of words (*i.e.*, one does not simply concatenate morphemes in this system).

For a really detailed discussion, see Arad (2003).

2.3 Identifying morphemes

- Fábregas and Scalise (2012: 22) identify four properties that morphemes have.

(16) *Properties of morphemes*:
  a. Isolability It must be possible to identify the unit and separate it from the rest of the word.
  b. Contrastiveness The morpheme should be able to be replaced with other morphemes in the same context.
  c. Recurrency A morpheme cannot be restricted to one specific context.
  d. Meaning A morpheme must be associated with a specific meaning.

- They discuss the example of English *-ation* in the word *presentation*.

(17) a. *-ation* can be separated from the base *present*.
  b. *-ation* can be replaced with *-able* to form *presentable*.
  c. *-ation* occurs in other words (*variation, authorization*…)
  d. *-ation* as a meaning along the lines of the effect or result of the verb to which it attaches.

The term base can be used to refer to whatever a particular affix attaches to.

- We can conclude that *-ation* is a morpheme (specifically, a suffix).

This is a somewhat idealized case, as we'll see.

- We might compare this to morphemes like *-ism* and *-ist*, the first of which refers to various ideologies and the second to adherents of that ideology.

(18) a. Marxism, surrealism, fundamentalism
  b. Marxist, surrealist, fundamentalist

- One might be tempted to further decompose these into three separate morphemes: *-is*, meaning 'ideology', and *-m* and *-t*, meaning the abstract ideology and a human follower, respectively.

It is possible to isolate them, it is possible to assign them meanings, and they contrast.

- However, *-t* and *-m* would lack recurrency – they only follow the putative morpheme *-is* and nowhere else. Thus, they are poor candidates to be morphemes.
  - The same could be said of *-is* we only see it before *-m* and *-t*.
- In other words, these are not good candidates because you never see them in any other contexts.

2.4 Issues with these properties

- There are some issues to take into account here, however.
- First, the notion of having meaning in (16d) has to be be fairly broad here.
  - Some morphemes lack meaning in a traditional semantic sense, so 'meaning' must be taken to include certain sorts of grammatical information.

- Consider, for instance, the theme vowel in a Spanish verbs (glossed TH below):

(19) *Spanish* hablaremos *and* beberemos (after Embick 2015: 64):

a. habl -a -re -mos
ROOT -TH -TNS -AGR
speak -FUT -1PL
'We will speak.'

b. beb -e -re -mos
ROOT -TH -TNS -AGR
drink -FUT -1PL
'We will drink.'

- The theme vowel does nothing more than identify the conjugation class each verb belongs to.

For more on theme vowels, see Fábregas and Scalise 2012, Ch. 4, and Embick 2015, Ch. 3.

- Other issues arise with suffixes like *-ize*. What specific meaning does *-ize* share in all of the following?

(20) a. publicize
b. computerize
c. hospitalize
d. winterize

- Clearly it is contributing *some* meaning, but it seems to vary from word to word.
- A separate issue arises from isolability (16a) and recurrency (16c). In the examples in (21), it is possible to isolate the morpheme *-ate*, leaving behind various grammatical bases associated with morphemes (*caffeine*, *vaccine*, and *valid*).

Some theories of morphology, like Distributed Morphology (Halle and Marantz 1993), assume that morphemes only have meanings in the context of other morphemes. Thus, the meaning of *-ize* would be determined, in part, by whatever base it attaches to. This means loosening requirement (16d) even further.

(21) a. caffeinate
b. vaccinate
c. validate

(22) a. create
b. excavate
c. celebrate

- But if we try to isolate *-ate* in (22), we wind up isolating *cre-*, *excav-*, and *celebr-* as bases, but none of these are obviously associated with any morpheme in English.
  - One way of dealing with this is to double down and say that these apparent bases really are morphemes. This seems to run afoul of (16c), but the recurrency of *-ate* may justify this.
  - Alternatively, one could posit that each of the words in (22) represents a single, indivisible morpheme, since it isn't possible to identify more than one isolable, recurrent morpheme.

And this is basically the view that Distributed Morphology would take, too.

- There is no obvious right answer here. Our analyses are only as good as our tools, and sometimes we just have to make a decision that might get shown to be wrong later down the line.

2.5 Allomorphy and the forms of morphemes

- Another issue that can make it difficult to identify morphemes is that they can take on different forms in different morphological and phonological environments.

- For example, take the verb *freeze*. In the context of the past participle suffix *-en*, the form of the root changes:

  (23) *freeze* + *-en* → *frozen* (*cf.* **freezen*)

- Other forms of allomorphy are conditioned phonologically. The nominative suffix in Korean, for example, takes on different forms depending on whether it follows a consonant or a vowel:

  (24) *Phonologically conditioned allomorphy of the Korean nominative suffix*: Embick 2010

Allomorph	Environment	Example	Gloss
-i	/C__	*pap-i*	'cooked rice'
-ka	/V__	*ai-ka*	'child'

- This is analogous to allophony in phonology – an underlying morpheme surfaces as different ALLOMORPHS in different environments.
  - However, the processes that cause this need not be phonological.
  - The environment can be morphological, as in (23).
  - The allomorph may not be derived phonologically (there's no phonological process that can derive *-ka* from *-i* in Korean, or *vice versa*).

- Typically allomorphs are phonologically similar to one another. However, when the forms bear no resemblance, this is known as SUPPLETION or SUPPLETIVE ALLOMORPHY. Fábregas and Scalise (2012: 16) imply that suppletion is distinct from allomorphy somehow, but I suspect this depends on your theoretical outlook and how you treat it.
- This includes cases like the Korean example above as well as the more famous case of English *go~went*.

  (25) *go* + *-ed* → *went* (*cf.* **goed*)

- Here, *-t* could be an allomorph of the past tense suffix, but it is pretty unreasonable to claim that *wen* is phonologically related to *go*.
- Allomorphy is a phenomenon that happens a lot under a number of different circumstances. As the examples above show, it affects roots and affixes alike.
  - We'll have more to say about this when we talk about vocabulary insertion in Distributed Morphology. Come back on 11 March.

3 Divisions in morphology

- As mentioned above, there is a traditional distinction between INFLECTIONAL MORPHOLOGY and DERIVATIONAL MORPHOLOGY. Some theoretical approaches to morphology, like Distributed Morphology, reject this distinction.
  - Derivational morphology derives new words from smaller pieces.
  - Inflectional morphology changes the forms of existing words, often as a result of syntactic position of that word.

3.1 Derivational morphology

- Derivational morphology is responsible for forming new words.
- As an example, the suffix *-er* attached to a verb in English typically creates a noun denoting somebody who performs the action denoted by that verb.

  (26) *drive* + *-er* → *driver* 'somebody or something that drives'

- In addition to the new form, *drive* and *driver* have.

  (i) different meanings, and
  (ii) different syntactic categories.

The book will often say things 'these words have different listings in the dictionary.' This is a nice analogy, but it is not a valid way of distinguishing derivational and inflectional morphology.

- By any reasonable measure, they are distinct words, and derivational affixes must change category or or change the meaning (if not both).
- Affixes involved in forming new words are often called DERIVATIONAL AFFIXES.
- Alongside derivational affixes, another way of forming new words is COMPOUNDING.
- COMPOUNDING combines two words (or free morphemes) to form a new word.
  - You might think of this as a sort of derivational *process*.
- This processes is recursive: A word formed through compounding can itself be part of a compound:

  (27) a. *linguistics* + *department* → *linguistics department*
  b. *conference* + *room* → *conference room*
  c. *linguistics department* + *conference room* → *ling. dept. conference room*

English doesn't have a single spelling rule for compounding. Sometimes words are spelled without spaces, sometimes with hyphens, sometimes with spaces.

- These might look a lot like phrases, since we are just comining multiple nouns with one another.
  - If you were to put this in a DP, though, how would you modify this with an adjective?

If you are familiar with Minimalist mechanisms, one might imagine these are formed by simply merging nouns with each other. Does that seem like a reasonable proposal here?

3.2 Inflectional morphology

- In contrast to derivational morphology, INFLECTIONAL morphology is traditionally taken to change the form of words rather than create new ones.
- For instance, take Case marking in languages like Icelandic. Depending on where in the sentence a noun occurs, the form of that noun changes (it appears in different cases):

(28) *Declension of the noun Icelandic* hús *'house'*:

	Singular		Plural	
	Indefinite	**Definite**	**Indefinite**	**Definite**
Nominative	hús	húsið	hús	húsin
Accusative	hús	húsið	hús	húsin
Dative	húsi	húsinu	húsum	húsunum
Genitive	húss	hússins	húsa	húsanna

- Note, too, that the form of the noun changes to represent whether it is plural or definite.
- Regardless of these changes, however, the meaning of the house does not change, and the element remains a noun.
- As mentioned above in (2), verbs do this too. Although the form of the verb may change due to tense/aspect and agreement, the verb remains a verb.
- Icelandic, again, provides a clear example: The form of a verb changes depending on the subject and tense of the sentence it is in:

Fábregas and Scalise (2012: 13) say that inflectional processes are those that alter the forms of words in specific syntactic environments. The facts are a little more complicated than this; for instance, plural nouns can occur in many of the same positions singular nouns do. We'll discuss this in a couple weeks when we talk about Inflectional Morphology.

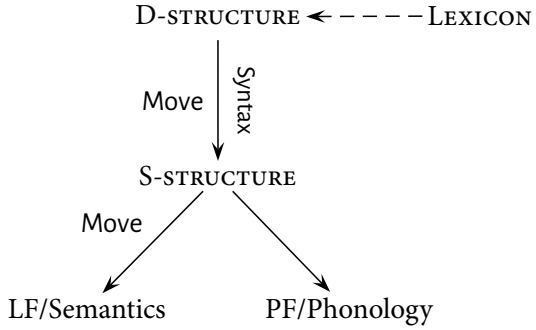
(29) *Icelandic (indicative) paradigm for* heyra *'hear'*:

	Present		Past	
	Singular	**Plural**	**Singular**	**Plural**
1	heyri	heyrum	heyrði	heyrðum
2	heyrir	heyrið	heyrðir	heyrðuð
3	heyrir	heyra	heyrði	heyrðu

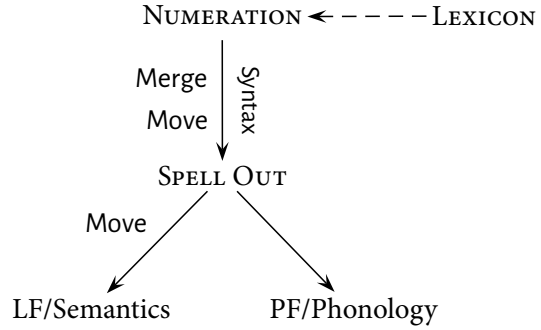
4 The place of morphology in the grammar

- A big question is where and when morphology happens during the derivation of a sentence. How is it related to syntax and phonology?
- As a starting point, most models of syntax assume a model of grammar that looks as follows:
  - The syntax is assumed to be a computational system that combines simple elements to create bigger constituents.
  - The phonology takes the structures produced by the syntax and determines how to pronounce them.
  - The semantics takes the structures produced by the syntax and determines how to interpret them.
- This view is usually called the Y-model; below are standard GB and Minimalist models:

(30) *A standard GB grammar*:



(31) *A Minimalist Grammar*:



- Where morphology fits in is a controversial point. Approaches to this question divide into two classes:
  - Constructionism proposes that the system that derives syntactic structures is also responsible for deriving morphology. There is no separate component of the grammar specifically dedicated to morphology.
  - Lexicalism proposes that the system deriving syntactic structures is distinct from the one deriving complex words.
- Constructionism is appealing theoretically because we need only propose *one* computational component in the grammar – the syntax – which puts words together using the same mechanisms that put together sentences.
- However, words seem to behave outwardly different from the sort of objects constructed by syntax. Having two computational components, as proposed by Lexicalism, each with different properties, could explain these differences.

Looking ahead: Fábregas and Scalise (2012: 142–147) outline issues with the Constructionist approach, but the arguments are not conclusive.

- The question is ultimately an empirical one.
  - It's theoretically simpler to have a single component of the grammar tasked with computation.
  - But the fact that morphology behaves differently from syntax in many notable ways could well be evidence that a different computational system is responsible for each.

LIN331 students may recognize this as methodological economy.

- Importantly, when we say *lexicalist*, we indicate a certain relation between the lexicon and morphology.
  - Recall from LIN102/232 that the lexicon is usually taken to be a list of elements that can be manipulated and combined by the syntax.
  - This list stores idiosyncratic information about each lexical item along with that lexical item (its category, pronunciation, meaning, *etc.*).
  - In the strictest sense, this is not a generative or computational system: Lists are just lists. We can add elements to the list or subtract them, but a list does not create new things.
  - Crucially, all theories of language must assume that something like the lexicon exists.

In syntax, we often simply refer to these things as 'words', but we will see that that is too simplistic for our purposes.

Fábregas and Scalise (2012: 15) state that '[a]ll theories of language must assume a lexicon of the kind described' here. This is not really true. Distributed Morphology divides the work of the traditional lexicon into several different lists. But the point remains that some properties of language must be listed.

- Many lexicalist approaches to grammar expand this definition, assuming that the morphological operations responsible for forming different words are active as part of the lexicon.
  - One can think of the derivation of individual words as idiosyncratic information about that word.
  - Recall the discussion from earlier: We can turn *public* into a verb by suffixing *-ize*; suffixing *-ify* results in the ungrammatical/nonexistent **publicify*.
  - Under lexicalist theories, this can be codified by saying that there is no word **publicify* in the lexicon and that the rules that govern word formation in the lexicon simply don't produce **publicify*.
  - In other words, this could be codified as just an idiosyncratic property of *public*: It combines with *-ize* and not *-ify*.
- On the Constructionist view, however, individual morphemes are the elements that populate the lexicon, and the syntax is responsible for joining these morphemes together to create words.
- But regardless of how we model the lexicon and morphology, we know they must interact in various ways. Consider the past tense form of *eat*:

(32) *eat*

a. Past tense → *ate*

b. Past tense ↛ **eated*

- Normally in English, to for the past tense of a verb, one adds *-ed* to the verb, but that is not possible here. One must use the irregular form *ate*.
- This tells us that irregular forms BLOCK the use of regular forms. If an irregular form exists, it is not possible to use the regular form of a word.
  - The form *ate* has to be listed in the lexicon since its form is unpredictable. …or the equivalent list in DM.
  - Once a speaker learns that the past tense of *eat* is *ate*, the morphology must be prevented from generating the form **eated*.
  - This is really striking, since it's obvious what **eated* would mean if it were a word in mainstream varieties of English.
- This is a difficulty regardless of which view one takes. It becomes necessary to contrast POTENTIAL WORDS like **eated* with EXISTENT WORDS like *ate*.
- Like syntax, the rules of morphology are, in principle, able to make an unbounded number of words, yet not every possible word is a word that the speaker has in their lexicon.
  - For whatever reason, not every potential word is an existent word in a language.
  - Furthermore, some stored information can apparently block the generation of other material.

– There are issues of PRODUCTIVITY that we'll come back to. Some processes can apply to any word of the right category, while some processes are limited to only certain words.

> **Caveat**: I am a Constructionist. Fábregas and Scalise are lexicalists (this will become clearer in later chapters. You will see scepticism of Constructionism in the readings, whereas you'll get critiques of Lexicalism in my lectures.

4.1 Words

This subsection is an attempt to repackage Section 2.2 of Fábregas and Scalise 2012.

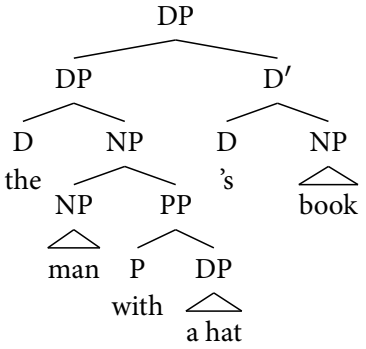
- There is a question lurking here, the answer to which seems obvious until one thinks about it: What is a word?
  - There is no one truly satisfying answer to this question, and answers depend a lot on perspective.
- Speakers of many languages have some intuitive notion of what a word is, and many writing systems encode this intuitive distinction orthographically (in their spelling systems) by placing spaces between words.
  - However, orthographies are well known to be unreliable representations of linguistic information, and speaker intuitions about what counts as a word may well correlate with their level of literacy and education.

Additionally, many languages simply lack writing systems.

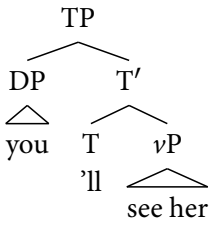
- We cannot rely simply on syntactic constituency to guide our answers, either. Consider the English possessive construction and English auxiliary contraction

See Abney 1987.

(33) the man with a hat's book



(34) You'll see her.



  - The element orthographically spelled *hat's* does not correspond to a syntactic constituent; constituency does not line up with the intuitive sense of a word.
  - The same can be said of *you'll*. Assuming auxiliaries are in T and subjects are in SpecTP, these elements cannot be syntactic constituents.

- A closer approximation to the intuitive notion of a word is a kind of phonological domain. Some languages have processes that target elements that we might call words.
- A classic case is vowel harmony, which requires some features of every vowel to match throughout a word. For instance, Finnish requires all the vowels in a word to match in value for the feature [BACK]:

  Stress and pitch placement is another domain.

  (35) *Finnish backness harmony*:

a.	talo	→ talo-ssa	b.	kynä	→ kynä-ssä
	house	house-in		pen	pen-in
	‘in (the) house’			‘in (the) pen’	

- This suggests that there is some phonological domain that approximates the intuitive notion ‘word’.

  The elements *hat's* and *you'll* above do seem to be phonologically coherent units, too.

- However, it is hard to point at any particular phonological or phonetic domain in a one-to-one mapping with the intuition *word*.

  (36) *Did you meet them?* → [ʤə.ˈmi.rəm]

- There are no obvious word boundaries in the phonetic representation in (36).
  - *Did you* is reduced to [ʤə]. Is this a word?
  - Syllable boundaries don’t line up with the orthographic word boundaries.
- It also doesn’t seem possible to say that semantic units listed in the lexicon correspond to words either.
  - The meaning of idioms *keep tabs on* or *kick the bucket* must be listed somewhere, yet it seems odd to say that each idiom is itself a word.
- So what can we say? The answer depends a lot on theoretical perspective.
- Many constructionist approaches deny the idea that words are syntactically meaningful units.

  Distributed Morphology is probably the most prominent Constructionist approach.

  - The syntax manipulates morphemes, grouping them into syntactic units.
  - The phonology takes these syntactic units as input, producing phonological and prosodic units that correspond to what we think of as words.
  - The reason words don’t correspond precisely to syntactic units is largely due to requirements of PF/phonology.
- Lexicalist approaches assume that word building occurs in the lexicon, so any element that comes out of the lexicon will be a word.
  - Lexical entries may be subject to morphology-specific constraints, which is why they don’t clearly adhere to syntactic or phonological structures.
- We will deal with this more as we get more into the details of morphological structure.

Terms

affix A morpheme that cannot not generally exist on its own and must attach to other elements.

allomorph An allomorph is one of two or more complementary surface forms of a morpheme that surfaces different phonological or morphological environments.

base An element to which an affix attaches.

blocking A phenomenon where the existence of an irregular morphological form prevents the use of the regular (predictable) form.

bound morpheme A morpheme that cannot stand on its own and that must attach to another morpheme.

circumfix A discontinuous affix placed around its base.

compounding A derivational process that combines two words to form a new word.

constructionism An approach to morphological theorizing that proposes that the system that derives syntactic structures is also responsible for deriving morphology.

contrastiveness Morphemes should be able to be replaced with other morphemes in the same context (Fábregas and Scalise 2012).

derivational morphology Morpholohgical processes or elements responsible for forming new words.

existent word A word that exists in a speaker's lexicon.

free morpheme A morpheme that can appear as a word on its own.

infix An affix placed within a base.

inflectional morphology Morphological processes or elements that change the form of an existing word.

isolability It must be possible to identify a morpheme and separate it from the rest of the word (Fábregas and Scalise 2012).

lexicalism An approach to morphological theory that proposes that the systems deriving syntactic structures is distinct from the one deriving complex words. Many approaches assume this happens in the lexicon.

meaning A morpheme must be associated with a specific meaning (Fábregas and Scalise 2012).

morpheme The basic elements manipulated by the morphology. On the traditional definition, they are pairings between form and meaning, and the smallest meaningful linguistic unit.

nonconcatenative morphology A form of word formation that does not involve stringing morphemes together sequentially.

potential word A word that can be generated by morphological rules but is not included in the lexicon of a language.

prefix An affix that precedes its base.

productivity The degree to which a speaker can use a morpheme to inflect a word or derive a new word.

recurrency A morpheme cannot be restricted to one specific context (Fábregas and Scalise 2012).

root The irreducible core of a word, with absolutely nothing else attached to it (Katamba and Stonham 2006). The core meaning of the word is usually associated with this element.

suffix An affix that follows its base.

suppletion Suppletion is a form of allomorphy where the resulting allomorph of a morpheme which has no phonological similarity to the other allomorphs.

transfix A discontinuous affix interspersed in its base.

References

Abney, Steven Paul. 1987. The English Noun Phrase in its Sentential Aspect. Doctoral Dissertation, Massachusetts Institute of Technology.

Arad, Maya. 2003. Locality Constraints on the Interpretation of Roots. *Natural Language & Linguistic Theory* 21:737–778.

Embick, David. 2010. *Localism versus Globalism in Morphology and Phonology*. Linguistic Inquiry Monographs. Cambridge, Mass.: MIT Press.

Embick, David. 2015. *The Morpheme: A Theoretical Introduction*, volume 31 of *Interface Explorations*. Berlin: De Gruyter Mouton.

Fábregas, Antonio, and Sergio Scalise. 2012. *Morphology: From Data to Theories*. Edinburgh Advanced Textbooks in Linguistics. Edinburgh: Edinburgh University Press.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the Pieces of Inflection. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, ed. Samuel Jay Keyser and Kenneth Hale, 111–176. Cambridge, Mass.: MIT Press.

Katamba, Francis, and John Stonham. 2006. *Morphology*. Modern Linguistics. Basingstoke: Palgrave Macmillan, 2nd edition.

McCarthy, John J., and Alan Prince. 1993. Generalized Alignment. In *Yearbook of Morphology*, ed. Geert Booij and Jaap van Marle, 79–153. Dordrecht: Kluwer.

Viau, Joshua. 2002. Accounting for *-iz* infixation in rap and hip-hop music. Manuscript, Norwestern University.

Yu, Alan. 2004. Reduplication in English Homeric Infixation. In *The Proceedings of the 34th Meeting of the North East Linguistic Society*, ed. Keir Moulton and Matthew Wolf. Amherst, Mass.: GLSA Publications.