

October 13–16, 2009

CLASS 10–12: INTERFACES AND PROCESSES

MORPHOLOGICAL PRODUCTIVITY AND PROCESSES

Observations:

1. *Though many things are possible in morphology, some are more possible than others.*
2. *Though there are infinitely many potential words in a language, some are more likely to become actual words than others.*

To say that a given morphological pattern is more **productive** than another is to say that there is a higher probability of a potential word in the first pattern being accepted in the language than there is of a potential word in the second pattern.

some key terms: *potential word* — *competence vs performance*

(1) *A suffix is **formally general** if it always attaches to a category X and derives category Y.*

Example: *-ness* always **attaches to any adjective** (A) and yields an **abstract noun** (N) which is either in common use or would not be listed in a dictionary because its meaning is predictable.

*Example: *-ity* **attaches only to some adjectives** to yield an **abstract noun**.

*Example: *-th* **attaches to very few adjectives** to yield an **abstract noun**.

(2) *A suffix is **formally regular** if it always attaches to a category X of a certain structure.*

Example: *-ness* can attach to **any adjective of any structure**.

Example: *-ity* can **attach to adjectives** of the structures *-ive, -able/ible, -al, -ar, -ic, -id, -ous*.

However, there are **formally irregular** forms (*density, *tensity, tension*).

*Example: *-th* can **attach to adjectives** of irregular, unpredictable structure.

(3) *Formal regularity does **not imply** formal generality.* [for a reverse-like rule, see (4)]

Often the gaps found (**richity*) have **historical roots** (Latin *-ity* vs. Germanic *-ness*.)

Formal regularity does not always come in **syntactic varieties** (e.g. $A+af \rightarrow N$) or **morphological varieties** (depending on the form/structure of a base it attaches to), it can also be **phonologically conditioned** (such as V with final stress allows $-al_N$ as in $\rightarrow survival, *edital$ — exception: *burial*).

(4) *Formal generality presupposes formal regularity.* [in practice, not by definition]

But apart from this discussion, we can also identify **semantic regularity**:

(5) *A process is **semantically regular** if derived meaning is always uniform and consistent.*

Example: *-ly* always contributes the meaning ‘in an X fashion’ or ‘to an X degree’ (note that *-ly* is also formally regular: it attaches to A and yields Adv)

Unsurprisingly, formal and semantic regularity can **diverge**: consider the different contribution of *-ity* in *selectivity, locality, partiality, polarity* or *-able* in *readable, punishable*. Moreover, some morphologically clearly related words **vary** in terms of what types of derivational affixes, incl. stress, they allow (e.g. *admit, commit, permit, remit, transmit* and *-ion, -al, -ment, -ance*). The **converse** situation is arguably found in names for domestic animals in terms of sex and age.

The latter especially raises the question why there is no **cowlet* analogous to *piglet* — instead we have *calf* which **semantically blocks** existence (or derivation) of *cowlet*:

(6) *If there is a **word X specified for Y**, then Y should be expressed by X and not be derived.*

While there might be exceptions, blocking of suppleted forms is **absolute**.

Concerning productivity and structure, consider **negative prefixes** in English:

- (7) a. **non-Christian** ‘not Christian’
non-human ‘not human’
- b. **unchristian** ‘not behaving in a Christian manner’
inhuman ‘absence of human qualities’
- (8) a. **logical / contrary negator**: ‘not X’ ($\neg X$)
b. **contradictory negator**: ‘opposite of X’

Types of productivity constraints:

- *phonological* constraints
- *morphological* constraints
- *syntactic* constraints
- *semantic* constraints

DERIVATION AND SEMANTICS

Semantic type

The entity or relation (real or imaginary) in the world a word refers to.

Polysemy

one lexeme, more than one related meaning

Homophony

same sounding words, different meanings

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|------|----|---|-----------------------|
| (9) | a. | I don't like watermelon . | <i>mass</i> |
| | b. | I don't like watermelons . | <i>count</i> |
| (10) | a. | Hugh broke the window . | <i>figure</i> |
| | b. | The kids climbed through the window . | <i>ground</i> |
| (11) | a. | A hot glass put under cold water will shatter. | <i>container</i> |
| | b. | Franny downed the glass in two seconds flat. | <i>content</i> |
| (12) | a. | The president and his family live in the White House . | <i>place</i> |
| | b. | The White House reacted too late to Katrina. | <i>people</i> |
| (13) | a. | Sarah is upset about her scratchy voice . | <i>characteristic</i> |
| | b. | It was well known that the Voice didn't drink. | <i>person</i> |

Overextension

Use of a word to refer to objects/individuals typically covered as well as others that are perceptually similar.

Underextension

Use of a word to refer to only a subset of its actual referents.

Semantics of derivations

affixation: e.g., *-ism* 'doctrinal system of principles' vs. 'a peculiarity of speech'

zero derivation: N-to-V (location, duration, agent, goal, instrument, miscellaneous)

- **evaluative domain**: things in the extension of a noun which serve to evaluate it

agentive -er: four basic categories of derived meaning

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| (14) | Persons: | baker, dancer, gambler, driver |
| | Animals: | pointer, retriever, warbler, trotter |
| | Material objects: | blotter, eraser, fertilizer, shutter |
| | Immaterial objects: | reminder, clincher, thriller, eye-opener |

Strategy 1: assign the derivation a **semantic rule** (as for zero-derivation)

Strategy 2: classify words into categories and build on **proto-** or **archetype**

PROSODIC MORPHOLOGY AND SOME MORPHOPHONOLOGICAL PROCESSES

interaction of morphology and phonology: **morphophonology / morphophonemics** (focus of the relevance will be on *allomorphy* and *prosodic morphology*)

- basic (phonological) terminology: *onset* — *nucleus* — *coda*

Consider the English **past tense affix -ed** (see also previous class discussions):

- (15) a. [d]: *blamed, triggered, realized, sighed, rubbed*
 b. [t]: *jumped, yakked, shushed, quaffed, itched*
 c. [əd/ɪd]: *aided, loaded, hoarded, knighted, projected*

The **underlying past tense morpheme** is [d]:

- [t] is the result of **assimilation** and
- the vowel in [əd/ɪd] of **epenthesis**.

Assimilation:

Said to occur when one segment takes one or more phonetic characteristics of another one (“phonetic characteristics” — such as nasality, place of articulation, voicing, and so on):

- **progressive assimilation** is said to take place when the characteristic spreads forward;
- **regressive assimilation** is said to occur when the characteristic spreads backwards.

Epenthesis:

A process that inserts a segment in a given environment.

Consider the **genitive affix -os** in Classical Greek, attached to the nominal stem:

- (16) a. ait^hiops ‘Ethiopian’ ait^hiopos ‘of an Ethiopian’
 b. p^hleps ‘vein’ p^hlebos ‘of a vein’

[You may ignore the term **hiatus** for another process, which doesn’t exist in English, as well as the **phonotactic constraints** discussed, *root-and-pattern* and *reduplication*. The same goes for the terms *exaptation*, *conjugation*, *leveling*, *analogy*, and *variable*.]

PRIMARY VS SECONDARY AFFIXES

The prime goal of today’s class is the distinction into **primary vs secondary affixes** — alternatively known as **class 1 vs class 2 affixes** or even **level 1 vs level 2 affixes**.

Primary and secondary affixation:

In general, affixation involves the addition of an affix to a base to derive morphologically complex words. Morphologists generally assume that there are two kinds of affixes:

- *Primary affixes* attach to a morpheme (+) boundary, so closer to the root
- *Secondary affixes* attach to a word (#) boundary, so they attach to a stem

- (17) Primary suffixes: +ion, +ity, +y, +al, +ic, +ate, +ous, +ive...
Primary prefixes: de+, re+, sub+, in+, con+, pre+, en+, be+...
- (18) Secondary suffixes: #ness, #less, #hood, #ful, #ly, #y, #like...
Secondary prefixes: de#, re#, sub#, un#, non#, semi#, anti#...

The two classes of affixes give rise to **different phonological effects**:

- ❶ primary suffixes cause **stress shift** (they may even **attract stress**, if they are prefixes), while secondary suffixes are **stress neutral**:

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|------|------------|----------------|------------------|
| (19) | | <u>Primary</u> | <u>Secondary</u> |
| | productive | product+ív+ity | prodúct+ive#ness |
| | fínite | ín+finite | non#fínite |

- ❷ primary affixes may undergo **automatic phonological processes**, as the result of their attachment, while secondary affixes **may not**:

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|------|----|--------------------------------|--|
| (20) | a. | in+edible , *in-eatible | un#eatable , *un#edible |
| | b. | il+legal , *inlegal | un#lawful , *ul#lawful |
| | c. | con+tain | non#basic , non#racial |
| | d. | cor+rect , *con+rect | * nom#basic , * nor#racial |

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|------|----|--------------|--------------|--------------|
| (21) | | <i>in+</i> | <i>un#</i> | |
| | a. | irrédparable | unrepáirable | (cf. repáir) |
| | b. | irrévocable | unrevókable | (cf. revóke) |

- (22) inept, inert — *unept, *unert (but: *impalpable*, *impossible*)

Affix Ordering Generalisation:

Primary affixes always occur inside secondary affixes, i.e. they appear nearer to the root.

- (23) *hope#ful+ity, *ir+re#fill#able, ...

Consider next some interesting contrasting issues between **+able** and **#able**:

- (24) *compáre* [kâm'pær]:
 +able: **cómpar+able** ['kâmp(\)r\bɪʃ] — not *cómparable*: 'unlike'
 #able: **compár#able** [kâm'pær\bɪʃ] — not *compáreable*: 'not possible to compare'

(25)	+able	#able		
	a. defensible	defendable		
	b. perceptible	perceivable		
	c. divisible	dividable		
(26)	+able	base	#able	base
	a. cultivable	cultiv	cultivable	cultivate
	b. educable	educ	educatable	educate
	c. irrigable	irrig	irrigatable	irrigate
	d. navigable	navig	navigatable	navigate
	e. demonstrable	demonstr	demonstratable	demonstrate

Note a **further difference** between (primary) +able and (secondary) #able:

- in words of the form *X#able*, *X* must be a transitive verb (*cultivate*-class, (26))
- not so with *X+able*: *possibile* (Lt. *posse* 'to be able'), *risible* (Lt. *ride:re* 'to laugh')

The Level Ordering Hypothesis in a theoretical approach to **capture all these facts**:

(27) *The Level Ordering Hypothesis (LOH)*

Level I: +affixation (primary)

Stress Rules

Level II: #affixation (secondary)

Level III: compounding

Level IV: regular inflection

(28) passion fruit, passion fruits — *passion fruit#y, *com+passion fruit

Some **problems** with the *Level Ordering Hypothesis*:

- **some compounds** such as: *systems analyst*, *student affairs manager*...
- **words like organization**: the suffix *-ize* is secondary, but it occurs inside the primary suffix *-ion*; the same holds for words ending in *-ability* and *-istic*.

THE BRACKETING PARADOX

(29) *ungrammaticality*:

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|----|-------------------------|--|
| a. | un- [grammatical -ity] | (according to the LOH) |
| b. | [un- grammatical] -ity | (because <i>un-</i> only attaches to adjectives) |

The second bracketing is also favoured by the actual interpretation of the word: *ungrammaticality* is the condition that refers to something being *ungrammatical*; according to the first bracketing what *un-* negates is the state of *grammaticality*.

[Feel free to read up more on this; we will *not* deal with the paradox any further.]