Homework

- Read chapter 3
- Read chapters 1 and 2 in Beesley and Karttunen (if you’re so inclined)
Structuralist morphology

- Structuralist theories
  - Item and Arrangement = morphemes + tactics
  - Item and Process = morphemes + rules
- Word and Paradigm
- Internal reconstruction
- Structuralist model

phonetics : phonology : morphophonology : morphology : syntax
Post-structuralist morphology

• Halle’s refutation of biuniqueness and morphophonemics
• Chomsky’s Affix Hopping transformation
• Reduced system

phonetics : phonology : morphology : syntax
Generative linguistics

- Everything predictable about word formation follows from phonology and/or syntax
- Anything that isn’t predictable is listed in the lexicon, an unstructural collection of exceptional forms
- Problem solved!
- ...until Chomsky (1970) “Remarks on nominalization”
“Remarks”

• In early generative grammar, syntactic variation arose through the application of *transformations*

  \[
  \text{Pat criticizes the book} \quad \rightarrow \quad \text{The book was criticized by Pat}
  \]

• Transformations are (almost) completely regular, with consistent changes in form and meaning

• Gerundive *nominalizations*, like passives, are very predictable

  \[
  \text{Pat criticizes the book} \quad \rightarrow \quad \text{Pat’s criticizing the book}
  \]

• Derived *nominalizations* are like gerunds in many respects:

  \[
  \text{Pat criticizes the book} \quad \rightarrow \quad \text{Pat’s criticism of the book}
  \]
“Remarks”

- In fact, gerunds and derived nominals are different in many important ways.

- Every verb has a gerund form, and the form, meaning, and syntactic properties of the gerund are completely predictable.

- Not so derived nominals:

  - *it is easy to please Pat.
  - *its being easy to please Pat
  - *its easiness to please Pat

  - *Pat amused the children with balloon animals.
  - *Pat’s amusing the children with balloon animals
  - *Pat’s amusement of the children with balloon animals
“Remarks”

- Also, we have derived nominals with no obvious source:
  *Chris doubted about their proposal
      Chris's doubts about their proposal
  *Chris advised to Sandy
      Chris's advice to Sandy

- The formal change is also not always the same
  
  criticize / criticism
  amused / amusement
  break / breakage
  revive / revival
  organize / organization
  give / gift
“Remarks”

• The meaning is also not always predictable from the meaning of the verb

  *Pat’s balloon animals provided endless amusement / *amusing*

• Specialized forms

  *marriage, construction, actions, revolution, permutation*
“Remarks”

- We have a distinction between:
  - transformations, which are completely predictable, and
  - lexical entries, which are listed

- Derived nominalizations seem to be somewhere in between

- Chomsky’s proposal was that derived nominalizations be formed in the lexicon, but that any regularities could be captured by *lexical redundancy rules*

- Strong vs. Weak Lexicalist Hypothesis
“Prolegomena”

- Halle’s (1973) “Prolegomena to a theory of word formation”
- Halle starts with a basic Item-and-Arrangement morphology
  - list of basic morphemes
  - Word Formation Rules
- Order is significant, e.g., Quechua

\[
\begin{align*}
\text{maqa-} & \quad \text{naku-ya-} & \quad \text{chi-} & \quad \text{n} \\
\text{beat-} & \quad \text{REC-} & \quad \text{DUR-} & \quad \text{CAUS-} & \quad 3
\end{align*}
\]
‘He is causing them to beat each other’

\[
\begin{align*}
\text{maqa-} & \quad \text{chi-} & \quad \text{naku-} & \quad \text{rka-} & \quad \text{n} \\
\text{beat} & \quad \text{CAUS-} & \quad \text{REC-} & \quad \text{PL-} & \quad 3
\end{align*}
\]
‘They let each other be beaten.’
“Prolegomena”

• Simple model

  List of morphs \[\rightarrow\] WFRs \[\rightarrow\] Syntax

• Word Formation Rules
  
  - \([\text{STEM} + \text{ity}]_N\) \(\text{paucity, probity, credulity}\)
  - \([\text{STEM} + \text{ant}]_A\) \(\text{vacant, pregnant, mendicant}\)
  - \([\text{VERB} + \text{al}]_N\) \(\text{recital, appraisal, conferral}\)
  - \([\text{ADJ} + \text{ity}]_N\) \(\text{serenity, fecundity, obesity}\)
Prolegomena

- Overgeneration is a big problem for this model
  - arrive, arrival, *arrivation
  - refuse, refusal, *refusation
  - derive, *derival, derivation
  - describe, *describal, description
  - approve, approval, approbation
  - recite, recital, recitation
  - propose, proposal, proposition

- These ‘accidental gaps’ also occur in inflectional paradigms (past participle of strive?)
“Prolegomena”

• Halle proposed a filter to flag strings like *arrival which ought to be words but aren’t

• We also want to keep track of the difference between actual words, potential words, and gaps
  
  • Actual word: unmanly, reprocess
  
  • Potential words: undogly, resimplify
  
  • Gaps: ungoodly, refall

• Dictionary lists actual words and gaps
“Prolegomena”

- Halle’s model

- Interface with phonology?
WFRs can be phonologically conditioned

E.g., -en attaches to one syllable adjectives ending in an obstruent

quicken, redden, roughen, shorten
*sloven, *greenen, *apten, *laxen

A puzzle:

soften, moisten, fasten

These work because the final -t is deleted by a post-syntactic phonological rule
“Prolegomena”

- Halle’s final model

```
List of morphs → WFRs → Filter → Dictionary → Syntax
```

Output

Phonology
Problems

- Lots of problems
- Process morphology
- Word-based form relations
  - blends (*smog, brunch*)
  - clipped compounds (*cheeseburger, heliport*)
  - acronyms (*laser, snafu*)
- WFRs and phonology
- The Filter will have to know to remove an infinite number of non-words, and handle the meanings of specialized words (*transmission*)
Problems

- More problems
- Back-formations: from the noun *self-destruction* we get the verb *self-destruct*, which in Halle’s model would come from the unattested verb *self-destroy*
- Do we really need a list of morphemes and a dictionary? Can’t we get away with one or the other?
- Where is meaning associated with forms? (*cran* morphs)
## Problems

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