Final exam

- Exam covers chapters 1–11 of Haspelmath and class notes
- Comprehensive exam, but more on second half
- In class part: Wednesday, May 11
- Take home part: due Monday, May 16
- Both parts are open book, but:
  - You still need to study
  - Don’t work in groups

Morphology

- Morphology is the study of the systematic covariation in the form and meaning of words.
- Two main types: inflection and derivation
- Morphemes as minimal signs
  - Item and Arrangement = morphemes + tactics
  - Item and Process = morphemes + rules
- A third model, Word and Paradigm, takes the notion of an inflectional paradigm as central

Early generative theories

- “Remarks on nominalization” (Chomsky 1970)
- Gerundive nominalizations, like passives, are very predictable
  - \( \text{Pat criticizes the book} \rightarrow \text{Pat’s criticizing the book} \)
- Derived nominalizations are more irregular:
  - \( \text{Pat criticizes the book} \rightarrow \text{Pat’s criticism of the book} \)
- Lexical redundancy rules

Early generative theories

- “Prolegomena to a theory of word formation” (Halle 1973)
- IA model, with a list of morphs feeding into a set of tactic rules
- Non-occurring forms (*arrivation) removed by filter
- Dictionary lists occurring and non-occurring forms

\[ \text{List of morphs} \rightarrow \text{WFRs} \rightarrow \text{Filter} \rightarrow \text{Dictionary} \rightarrow \text{Syntax} \]
Early generative theories

- “Word formation in generative grammar” (Aronoff 1976)
- Inflection and compounding are (for Aronoff) in the syntax
- No list of morphs: only free forms are listed
- WFRs are schemata for producing new words out of old words
  \[X_V \text{-}er]_N ‘one who Xs habitually, professionally, etc.’
- Completely predictable words formed by wholly productive WFRs don’t have to be listed (e.g., -ly)

Compounds

- Types of compounds
  - Root, Synthetic, Endocentric, Exocentric, Appositional
  - In synthetic compounds, the left daughter fills a semantic role in the meaning of the right daughter
    truck driver, fast acting, pan fried, moth eaten
  - In some languages, noun-verb compounds seem more syntactic (noun incorporation)

Inflection

- Linguists have identified a number of criteria, but none are definitional
- Inflectional morphology relates word forms of a lexeme, derivational morphology relates word forms
- Two general approaches
  - Split morphology: inflection and derivation belong to different modules
  - Continuum: inflection and derivation are descriptive categories, but all morphology is combined into a single module

Position classes

- Most generative theories of morphology work best for agglutinative derivational morphology: each morph corresponds to an atomic meaning
- In contrast, descriptive traditions don’t treat all morphology as agglutination
  - Template morphology
  - Paradigm-based morphology
  - Paradigm functions and realizational morphology
    - Inheritance and defaults
    - Syncretism
Interfaces

- Modular theories of grammar
- **Lexical Integrity Hypothesis**
  Words are syntactic atoms.
- Lexical rules and syntactic rules
- Complexity
  - Syntax is context sensitive or at least context free
  - Morphology on the other hand seems to be a regular language

Clitics

- Clitics are subject to syntactic rules, but are prosodically dependent on their hosts
- *Simple* clitics alternate with a full word, *special* clitics don’t
- Clitics are much more promiscuous than affixes
- Clitics also rarely have lexical gaps or idiosyncrasies
- Tests to distinguish clitics from affixes
  - English contracted negation *n’t*
  - Romance verbal clitics
  - Second position clitics

Interfaces

- Grammatical vs. thematic relations
- Syntactic rules only refer to GFs like *subject* or *object*
- Lexical rules can refer to thematic relations like *agent* or *patient*
- Words as islands

- Derived environment rules
- Strict Cycle Condition
- Interleaved morphological and phonological processing
  - Lexicon builds a bracketed structure
  - Phonology applies to successively larger units, respecting the Strict Cycle Condition
Lexical phonology

- Lexical and post-lexical phonological rules
- Different kinds of derived environments trigger different phonological rules
- Phonological processes distinguish two types of rules:
  - Type 1: -ity, in-, -ical, -ian, -al, -y, -ous, ive
  - Type 2: -ness, un-, -ly, re-, -ize, -able, -ful, -y, -ism
- Level Ordering hypothesis

Lexical phonology

- For English
  - Level 1: integrated affixes, irregular inflection
  - Level 2: neutral affixes, compounding
  - Level 3: regular inflection
  - Post-lexical: clitics
- Other languages may (in theory) differ, but in practice they don’t seem to
- Many lingering problems and paradoxes

Bracketing paradoxes

- Affix Ordering Generalization
- Reanalysis triggered by the fact that un- wants to attach to an adjective
  \[[[\text{grammatical}]_{\text{A}}+\text{ity}]_{\text{N}}\]
  \[[\text{un}+[[\text{grammatical}]_{\text{A}}+\text{ity}]_{\text{N}}]_{\text{N}}\]
  \[[\text{un}+[\text{grammatical}]_{\text{A}}+\text{ity}]_{\text{N}}\]
  Level 1
  Level 2
  Reanalysis
- Alternative solutions
  - Lexical relatedness
  - QR raising
  - Derivational paradigms
Morphosyntax

- Inflectional morphology indicates relations between elements in a clause
- Predicate/argument structure
  
  *Pat stole $20 from the cashbox.*
  
  `stole` agent `Pat` Subject
  `theme` $20 Direct object
  `source` `the cashbox` Oblique (from)

- Argument structure is made up of semantic or thematic roles (agent, theme, etc.)
- Syntactic valence (or subcategorization) from is made up grammatical relations (subject, object, etc.)

Morphosyntax

- Canonical mapping between thematic roles and grammatical relations
- Canonical mapping links most agent-like argument to subject and most patient-like argument to object
- Case and agreement marking helps identify grammatical relations
- Valence alternations reflect non-canonical mappings
  
  - Passive
  - Anticausative
  - Reflexive

Morphosyntax

- Causative markers add a new agent to the argument structure
- Applicatives add new non-subject arguments to a verb's argument structure
  
  - Recipient (dative shift)
  - Instrumentals
  - Benefactives
  - Ethical datives

Frequency

- Frequency effects are very important in morphology, perhaps more than any other subfield of linguistics
- What is frequency?
  
  - Relative and absolute frequency
  - Word, stem, and morph frequency
  - Type and token frequency
- Token frequencies follow Zipf's Law
Productivity

- “Productivity” in glossary: A morphological pattern or rule is **productive** if it can be applied to new bases to create new words.
- Productivity isn’t really an all-or-nothing concept
- Measuring productivity
- The importance of hapax legomena

Frequency

- Frequency effects in morphological paradigms
- Frequency and length
- Frequency and syncretism
- Frequency and irregularity
- Frequency reversals

Dual mechanism theory

- Dual Mechanism Theory (Marcus, Clahsen, Pinker, et al.)
  - Associative lexicon for irregular inflection
  - Computational rules for regular inflection
  - An alternative version of the DMT proposes that both systems work in parallel (Baayen and Schreuder)
  - The lexicon is a list of all full forms and all morphemes
  - Words are segmented by looking up both the whole word and all substrings in the lexicon
  - Whichever pathway comes up with an answer first, wins
  - Spreading activation

Dual mechanism theory

- Activation and productivity
  - The number of forms with an affix that get parsed is a good measure of that affix’s *activation*
  - High activation affixes are more likely to be salient and productive
  - Words with high activation affixes are less likely to be irregular (semantically or otherwise)
- Activation and blocking