Morphological processes

- Morphological processes are classified into two main types depending on their functions.
  - Derivation
  - Inflection

Inflection

- “Bending” a lexeme to fit in a sentence.
- Inflectional morphology is syntactically determined.

Inflectional morphology

- Inflectional categories/inflectional dimensions

French
manger ‘to eat’

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>singular</td>
<td>plural</td>
</tr>
<tr>
<td>1st</td>
<td>mange</td>
<td>mangeons</td>
</tr>
<tr>
<td>2nd</td>
<td>manges</td>
<td>mangez</td>
</tr>
<tr>
<td>3rd</td>
<td>mange</td>
<td>mangent</td>
</tr>
</tbody>
</table>

- How many inflectional dimensions?

Inflectional morphology

- Morphosyntactic features/inflectional features/morphosyntactic properties
  - Features belong to the same dimension if they share a semantic or functional property and are mutually exclusive.

  - What are the features of the following categories in the paradigm of *manger*?
    - Tense, Number, Person
### A feature value notation

**French**

- **mangerons**
  - TENSE: FUTURE
  - PERSON: 1\textsuperscript{ST}
  - NUMBER: PLURAL

- *mangent?*

### Exponence

- **The realization of morphosyntactic features via inflection**
- **The morpheme [s] is the exponent of the morphosyntactic feature plural.**
- **Simple exponence**: one morpheme for one morphosyntactic feature
- **Cumulative exponence**: more than one morphological feature maps onto a single morpheme

### Exponent

- **Extended exponence**: a single morphosyntactic feature is realized simultaneously on more than one form

-- **Ancient Greek**

- *elelýkete*  
  - ‘you had unfastened’  
  - Perfective is marked by reduplication (*le-*), infixation (*k*) and the form of stem (*ly*).

### Context-free and context-sensitive inflection

- **Context-free inflection**: a simple mapping between a morphosyntactic feature and a particular phonological string
  - – [PROGRESSIVE] and –iŋ
- **Context-sensitive inflection**: realization of a morphosyntactic feature varies
  - – [PAST]
### Inherent vs. Contextual Inflection

- **Inherent inflection** reflects properties of inflected elements regardless of contexts.
  - Gender of nouns
  - Tense of verbs

- **Contextual inflection** is determined by syntactic contexts. It marks the relationship between two elements in a syntactic construction.
  - Case marking on nouns and pronouns
  - Gender marking on adjectives

### Contextual Inflection

- **How is inflection assigned?**
  - **Government**
    The form of an element is dictated by other elements.
    - Case marking on nouns and pronouns
  - **Agreement (or concord)**
    Morphosyntactic features of elements in a phrase or sentence are not in conflict.
    - Subject-verb agreement

### Inflection and Derivation

**Inflection**
- Produces a new word-form
- Does not change lexical category
- Does not change the core meaning
- Have a regular meaning
- Can be added to all members of the class

**Derivation**
- Produces a new lexeme
- May or may not change lexical category
- Often change the meaning
- May or may not have a regular meaning
- Cannot be added to all members of the class
Order of morphemes

- Derivational morphemes are closer to the stem than inflectional morphemes.
  form-al-iti-e-s
glob-al-ize-d

- If both the derivation and inflection follow the root, or they both precede the root, the derivation is always between the root and the inflection. (Greenberg 1963)

Other implicational universals
(Greenberg 1963)

- The presence of inflectional morphology implies the presence of derivational morphology.
- The presence of morphological gender marking implies the presence of number marking.
- If a verb agrees with either its subject or its object in gender, it also agrees with it in number.
- If the pronoun is marked for gender in the plural, it is also marked for gender in the singular.
### Order of inflectional morphemes

- Inflection morphology is represented by templates. **Stem-Number-Case**
- Inherent inflection is closer to the stem than contextual inflection.

### Models of inflectional processes

<table>
<thead>
<tr>
<th>Models of inflectional processes</th>
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</thead>
<tbody>
<tr>
<td><strong>Item-and-Arrangement Morphology</strong></td>
</tr>
<tr>
<td>- Morphology is the concatenation of morphemes.</td>
</tr>
<tr>
<td>- เป็นการต่อเนื่อง inflectional morpheme ให้ คำสั่ง</td>
</tr>
<tr>
<td>- ย้ำหาก อาจไม่มี one-to-one ระหว่าง inflectional properties กับสรุปที่แสดง และบางครั้งไม่แสดงด้วยการติด affix แต่ใช้รูปแบบ เช่น เบี่ยงเสียงจะก็ได้</td>
</tr>
<tr>
<td><strong>Item-and-Process Morphology</strong></td>
</tr>
<tr>
<td>- Inflection are process-based operations.</td>
</tr>
<tr>
<td>- [X]N -&gt; [X-ami]N[+pl..instr]</td>
</tr>
<tr>
<td>- ตัวเดิม -ami จะได้ feature +pl.. instr กับ N</td>
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<tr>
<td><strong>Distributed Morphology</strong></td>
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<tr>
<td>- A morpheme is inserted in a slot with certain features.</td>
</tr>
<tr>
<td>- ใน syntactic tree มี abstract morphemes ที่สรุปของ features [+plural] [+past] ...ที่ปลายที่สุด</td>
</tr>
<tr>
<td>- phonological content จะ spelt out ตัวการ insert vocabulary items ที่แสดงผลต่อ feature</td>
</tr>
<tr>
<td>- /z/ ↔ [_, +plural]</td>
</tr>
<tr>
<td>- The task of providing fully inflected word is distributed over other components of grammar</td>
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<td><strong>Word-and-Paradigm</strong></td>
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<tr>
<td>- A lexeme and its feature values in a paradigm goes through realization rules.</td>
</tr>
<tr>
<td>- [X]N[+pl..instr] -&gt; [X-ami]N</td>
</tr>
<tr>
<td>- ตัวเดิมจากแบบที่ถูกมา [X]N -&gt; [X-ami]N[+pl..instr]</td>
</tr>
<tr>
<td>- ไม่ใช่ process ไม่ได้เต็ม feature แต่การมี feature นั้นทำให้ realization มีการเดิม –ami</td>
</tr>
<tr>
<td>- การทำความรู้แบบนี้เรียก realizational morphology</td>
</tr>
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</table>
Morphological theories

• Dichotomy approach (split morphology)
  – Rules of derivation operate on a lexicon that feeds into the syntax.
  – Syntactic rules apply.
  – Inflectional rules apply.
• Explains why derivation is closer to the root
• But, this approach doesn’t explain exceptional cases of root-inflection-derivation.

Morphological theories

• Continuum approach
• Differences between inflection and derivation are not clear-cut.
• Prototype: the most typical member of a class
  – Prototypical inflection: agreement –s
  – Prototypical derivation: noun suffix –ment
• Explains the ordering of affixes
  – More prototypically derivational affixes appear closer to the base

Morphological theories

• Tripartition approach
  – Contextual inflection
  – Inherent inflection
  – Derivation
• Inherent case is similar to derivation in that an inflected form has an unpredictable, idiosyncratic meaning.
Syncretism

- A single inflected form corresponds to more than one set of morphosyntactic features.

<table>
<thead>
<tr>
<th>Romanian</th>
<th>‘to fill’</th>
<th>‘to do’</th>
<th>‘to know’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>úmpl-u</td>
<td>fác</td>
<td>stí-u</td>
</tr>
<tr>
<td>2sg</td>
<td>úmpl-i</td>
<td>fác-i</td>
<td>stí-i</td>
</tr>
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Inflectional processes

- Affixation
- Stem alternation
- Apophony (or ablaut concerns vowel changes within a root, for example, sing-sang-sung, drive-drove-driven)
- Reduplication
  And other processes