Variability of Languages in Time and Space

Variability in Morphology – part 1

- Linguistic signs
- Grammatical vs. Lexical meanings
- Derivational meanings
- Structural typology
  - Parameters of variation
  - Types of morphology: agglutinating, fusional, isolating, polysynthetic
- Linguistic quiz

Anja Nedoluzhko
- The term **linguistic sign** is used for pairing of a particular sound sequence (form) and a particular meaning.

- A linguistic sign is composed of two elements:
  - **signified** (= the **concept** associated with the acoustic image = **meaning**)
  - **signifier** (= **acoustic image** of the word = **form**)

(F. de Saussure)

![Diagram](image_url)
• **arbitrariness**
  • the relation between the signifier and signified is not motivated, given by convention

• **linearity** of the signifier (form)
  • in time for spoken texts
  • in space for written texts

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(F. de Saussure)
Typology in Morphology

• Morphological typology receives relatively little attention
  – Of all the aspects of language, morphology is the most language-specific → least generalizable
  – Word classes are language-specific.
  – Even the very presence of a meaningful morphological component is language-specific.
Typology in Morphology

• Structural typology
  – How grammatical meanings are built in languages

• Typology of grammatical categories and meanings
  – Which grammatical meanings are possible
  – Which realizations they have in different languages
Distinction: Lexical and Grammatical Meaning

Grammatical meaning

Component of meaning is repeating in individual forms of different words

1. Does not change the basic lexical meaning
   
   *girl* – *girls*
   
   *table* – *tables*

2. Regularly applies to different words
   
   *girls, tables, noses, computers* – grammatical meaning of **plurality**

Lexical meaning

Basic meaning of the word which is listed in the dictionary, individual meaning:

- concrete concepts
  
  *girl*     *table*       

- abstract concepts
  
  *idea, sense, imagination*

- predicates
  
  *run, read, cause*
Distinction: Lexical and Grammatical Meaning

**Grammatical meaning**

- affixation of various kinds
  - affixes, inflexion, combination of both
- non-segmental markers
  - phonemic and tonal alternations,
  - reduplication,
  - conversion
- clitics
- special “function” words (auxiliaries, prepositions)

**Lexical meaning**

- dictionary items, individual words, autonomous units
- in morphology, typically **roots**
Distinction: Lexical and Grammatical Meaning

Grammatical meaning

• Non-universal, different distribution in languages
• Closed set of units
  – Changes are very slow and apply to the whole language
• Are inter-linguistic, abstract, general, “additional”
  – They classify, specify, modify or combine lexical meanings
• Easily structured
  – obligatorily expressed in a subset of words

Lexical meaning

• Universal, present in all languages, absolute majority
• Open set of units
  – Constantly changes without “changing the language”
• Are linked to something outside language
  – objects, processes, events, properties, relations...
• Not easily structured
Relativeness of the Distinction: Evidentiality

- No grammatical evidentials
  - English *apparently, it looks like*
- Verbal affix or clitic
  - Korean, Japanese,
- Part of the tense system
  - Turkish
- Separate particle
  - Cantonese, Basque
- Modal verbs
  - in Germanic languages: Dutch *zouden*, Danish *skulle*, German *sollen*
  - French, Finnish
- Syntactic means
  - Lithuanian, Latvian, Estonian

Maps in WALS: https://wals.info/feature/78A#2/16.6/149.8
Grammatical meanings are language-specific!

Yesterday I met an acquaintance. *(English)*

Вчера я встретил знакомую. *(Russian)*

Včera jsem potkal známou. *(Czech)*

Ayer encontré a una conocida. *(Spanish)*

Hôm qua tôi gặp một người quen. *(Vietnamese)*
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Grammatical meanings are language-specific!
# Relativeness of the Distinction: Lexical and Grammatical Meaning

<table>
<thead>
<tr>
<th>Flective</th>
<th>Derivational</th>
<th>Lexical</th>
</tr>
</thead>
<tbody>
<tr>
<td>play-s</td>
<td>play-er</td>
<td>play</td>
</tr>
</tbody>
</table>

1. less concrete
2. broader compatibility
3. more standard realization
4. more ‘collaboration’ with syntax (e.g. agreement with adjectives)
5. rarely expressed within a root
6. further from the root (play-er-s)
7. less able to change POS (play_V → plays_V)

1. more concrete (place, instrument, language)
2. narrower compatibility (e.g. language only to places)
3. less standard realization (e.g. >10 affixes for ‘inhabitant’ in Spanish)
4. less ‘collaboration’ with syntax
5. more often may be expressed lexically (baker, painter but mechanic, surgeon)
6. closer to the root (play-er-s)
7. more able to change POS (play_V → player_N)
Relativeness of the Distinction: Possessivity

- Derivational or syntactic ways in English:
  - *my mother’s sister*
  - *the sister of my mother*

- Derivational or flective ways in Slavic languages:

<table>
<thead>
<tr>
<th>Czech</th>
<th>maminč-in-a</th>
<th>sestr-a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mother-POSS-Nom.Sg</td>
<td>sister-Nom.Sg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>sestr-a</th>
<th>mamink-y</th>
</tr>
</thead>
<tbody>
<tr>
<td>sister-Nom.Sg</td>
<td>mother-Gen.Sg</td>
<td></td>
</tr>
</tbody>
</table>
Relativeness of the Distinction: Causative

• Lexical ways to express causation exist in most languages
  – en. rise → raise, lie → lay, sit → set
  – en. make: kill = make die

• Japanese, Turkish, Mongolian – causative voice

<table>
<thead>
<tr>
<th>Turkish</th>
<th>Alien NOM</th>
<th>Hasan-ACC</th>
<th>die-CAUS-PAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ali</td>
<td>Hasan-i</td>
<td>öl-dür-dü</td>
<td></td>
</tr>
</tbody>
</table>

Ali killed Hasan.
Structural Typology

• How grammatical meanings are built in languages
• Approaches to structural typology
  – Holistic approach: global characterization of the entire language according to a small number of typological characteristics
    • too ambitious
  – Partial typology:
    • moving away from classifying languages into ideal types
    • specific phenomena or individual grammatical constructions are studied
Parameters of Variation

• Stems and Affixes
  – Isolating, agglutinating, fusional, polysynthetic morphology
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• Separatist vs. cumulative affixes
  – Does an affix has one or combines more meanings at the same time?

<table>
<thead>
<tr>
<th>Turkish</th>
<th>Latin</th>
</tr>
</thead>
<tbody>
<tr>
<td>ev-ler-i</td>
<td>houses (ACC)</td>
</tr>
<tr>
<td>house-PL-ACC</td>
<td></td>
</tr>
</tbody>
</table>
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• The form of morphemes
  – Segmental morpheme (different types), operations (e.g. reduplication), suprasegmentals

<table>
<thead>
<tr>
<th></th>
<th>Indonesian</th>
<th>Expression of plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>rumah</td>
<td>house</td>
<td>rumah-rumah</td>
</tr>
<tr>
<td>perubahan</td>
<td>change</td>
<td>perubahan-perubahan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Special word</th>
<th>Hawaiian</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘elua</td>
<td>a’u</td>
<td>mau</td>
</tr>
<tr>
<td>two</td>
<td>my</td>
<td>pl</td>
</tr>
<tr>
<td>my two fishes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Tones</th>
<th>ngiti (Sudan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>kamà</td>
<td>chief</td>
<td>kámá</td>
</tr>
<tr>
<td>màlàyikà</td>
<td>angel</td>
<td>màlàyiká</td>
</tr>
<tr>
<td>màlimò</td>
<td>teacher</td>
<td>màlimó</td>
</tr>
</tbody>
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• Monosemous vs. polysemous affixes

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM</td>
<td>der</td>
<td>das</td>
<td>die</td>
</tr>
<tr>
<td>ACC</td>
<td>den</td>
<td>das</td>
<td>die</td>
</tr>
<tr>
<td>GEN</td>
<td>des</td>
<td>der</td>
<td>der</td>
</tr>
<tr>
<td>DAT</td>
<td>dem</td>
<td>der</td>
<td>den</td>
</tr>
</tbody>
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German
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  – Declination classes

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**Finns**

<table>
<thead>
<tr>
<th>Case</th>
<th>Example 1</th>
<th>Example 2</th>
<th>Example 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOMINATIVE</td>
<td>‘cupboard’</td>
<td>‘Matti’</td>
<td>‘school’</td>
</tr>
<tr>
<td>GENITIVE: ‘of’</td>
<td>kaappi-0</td>
<td>Matti-0</td>
<td>koulu-0</td>
</tr>
<tr>
<td>ELATIVE: ‘from’</td>
<td>kaapi-sta</td>
<td>Matti-sta</td>
<td>koulu-sta</td>
</tr>
<tr>
<td>ADESSIVE: ‘at’</td>
<td>kaapi-l-la</td>
<td>Matti-l-la</td>
<td>koulu-l-la</td>
</tr>
<tr>
<td>INESSIVE: ‘in’</td>
<td>kaapi-s-sa</td>
<td>Matti-s-sa</td>
<td>koulu-s-sa</td>
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</table>

**Serbo-Croatian**

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<th>Example 2</th>
<th>Example 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOMINATIVE</td>
<td>žen-a</td>
<td>student-0</td>
<td>nòvac-0</td>
</tr>
<tr>
<td>ACCUSATIVE</td>
<td>žen-u</td>
<td>student-a</td>
<td>nòvac-0</td>
</tr>
<tr>
<td>GENITIVE</td>
<td>žen-e</td>
<td>student-a</td>
<td>nòvc-a</td>
</tr>
<tr>
<td>DATIVE</td>
<td>žen-i</td>
<td>student-u</td>
<td>nòvc-u</td>
</tr>
<tr>
<td>INTEGRUMENTAL</td>
<td>žen-om</td>
<td>student-om</td>
<td>nòvc-em</td>
</tr>
</tbody>
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  – Declination classes

• Overt vs. zero affixes
  – What kind of affixes have overt forms and what kinds are zero?

<table>
<thead>
<tr>
<th>LATIN:</th>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>uxor ‘wife’</td>
<td>uxor-es ‘wives’</td>
<td></td>
</tr>
</tbody>
</table>

| SOUTHERN BARASANO: |
| kahe-a ‘eye’ | kahe ‘eyes’ |

| SWAHILI: |
| ki-su ‘knife’ | vi-su ‘knives’ |

| MANDARIN: |
| ren ‘man’ | ren ‘men’ |
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• The order of morphemes
  – e.g. stem – deriv – number – case
Types of morphology

- Stems and Affixes
  - What combinations of stems and affixes are possible in a language?
- Separatist vs. cumulative affixes
  - Does an affix have one or more meanings at the same time?
Agglutinating morphology

- A word may consist of more than one morpheme, mostly many morphemes
- The boundaries between morphemes in the word are always clear-cut
- One morpheme designates one grammatical meaning
- Just a few exceptions (almost no “irregular” verbs in Japanese, Turkish)

<table>
<thead>
<tr>
<th>Case</th>
<th>Singular</th>
<th>Plural</th>
<th>Adam ‘man’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>adam</td>
<td>adam-lar</td>
<td></td>
</tr>
<tr>
<td>Accusative</td>
<td>adam-i</td>
<td>adam-lar-i</td>
<td></td>
</tr>
<tr>
<td>Genitive</td>
<td>adam-in</td>
<td>adam-lar-in</td>
<td></td>
</tr>
<tr>
<td>Dative</td>
<td>adam-a</td>
<td>adam-lar-a</td>
<td></td>
</tr>
<tr>
<td>Locative</td>
<td>adam-da</td>
<td>adam-lar-da</td>
<td></td>
</tr>
<tr>
<td>Ablative</td>
<td>adam-dam</td>
<td>adam-lar-dam</td>
<td></td>
</tr>
</tbody>
</table>

- Frequent in Turkish, Indonesian, Eskimo, Hungarian, Japanese, Basque, etc.
(flective, inflective) Fusional morphology

- no clear-cut boundaries between morphemes
  - alternations

- the expression of different categories within the same word is fused together to give a single unsegmentable morpheme

- restrictions to morpheme combinations
  - affix variance

ruk-a ‘hand’
ruč-e ‘hand’ (N.Pl, Lok&Dat. Sg)
ruč-n-í ‘hand’ (adj.)

Marie sp - í
‘Mary’ ‘sleep’ – 3.pers.+SG+present
‘Mary is sleeping.’

přátel-é
‘friends’
politíc-í
‘politicians’
vítěz-ové
‘winners’

Nom+Plural

Czech
Polysynthetic morphology

• Lexical morphemes are combined together into a single word
• Words are composed of many morphemes that have independent meaning
• Long "sentence-words"
• High morpheme-to-word ratio
• Morpheme and word boundaries are not clear cut
• Subject may be separated, but the rest stays very close
Polysynthetic morphology

In Paleosiberian Eskimo-Aleut languages:

**Chukchi**

\[tə\text{meynə}\text{levta}\text{pəytərkən}\]

1.\text{SG} - ‘big’-‘head’-‘ache’-\text{IMPF}

‘I have a fierce headache’

**Yupik**

\[tuntussuqatarniksaitengqiggtuq\]

‘He had not yet said again that he was going to hunt reindeer.’

**Greenlandic**

\[aliikusersuillammassuaanerartassagaluarpal\text{li}\]

aliiku-sersu-i-llammas-sua-a-nerrar-ta-ssa-galuarpal-li

entertainment-provide-\text{SEMITRANS}-one.good.at-\text{COP}-say.that-

\text{REP}-\text{FUT}-sure.but-3\text{.PL}.\text{SUBJ}/3\text{SG}.\text{OBJ}-but

‘However, they will say that he is a great entertainer, but ...’
Isolating and Analytical morphology

• Grammatical meanings are expressed with function words
  – One word – one morpheme
• More of isolation → Less of morphology
• Very important word order
• Many compound words

Khi tôi đến nhà bạn tôi, chúng tôi bắt đầu làm bài.
when I come house friend I plural I begin do lesson
“When I came to my friend’s house, we began to do lessons.”
English?

I am a student
You are a student
He/she/it is a student
We are students.
You are students.
They are students.
I love spring.

EN. The dog of my father is barking.

CZ. Tatínkův pes štěká.

def. Gen. poss. praes. actual
farther+poss dog+NomSg bark+praes.
Turkish – Latin – English

Given Turkish word forms and their translations into Latin and English

yazmışım — I’ve probably written
yazmışsızın — You_sg have probably written
yazmış — He has probably written
yazmışsınız — You_pl have probably written
yazar — (he) writes
yazarlar — (they) write

Translate:
into Turkish: scribo, They have probably written
into Latin: (he) writes, yazarsınız
into English: scribitis, yazmışlar

çaşırım — laboro
calışır — laborat
calışırısın — laboras
calışırısınız — laborant
calışırılar — laboratis
yazarsın — scribis
References

• Saussure, F. *Course in General Linguistics*. transl. Cours de linguistique générale (1916)
• Masayoshi Shibatani. *Linguistic Typology*, 2015, Rice University, Houston, TX, USA