2. Language typology

What is language typology?

- The study of how languages differ
  - Languages vary, but their variation is not random – it is subject to limitations
  - Understanding these limitations can provide insights into both language and cognition in general

Example: Basic word order

Basic word order

Order of Subject, Verb and Object in the clause

Three main types

- **SOV** (Amharic, Hindi, Japanese, Persian, Turkish, etc.)
- **SVO** (Chinese, English, Fula, etc.)
- **VSO** (Arabic, Hebrew, Tongan, Welsh, etc.)

VOS, OVS, OSV exceedingly rare

“Subjects tend strongly to precede objects”

Japanese (SOV)

<table>
<thead>
<tr>
<th>servant</th>
<th>nom</th>
<th>horse</th>
<th>dat</th>
<th>water</th>
<th>acc</th>
<th>give</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>x</td>
<td>S</td>
<td>V</td>
<td>S</td>
<td>V</td>
<td>S</td>
</tr>
</tbody>
</table>

Arabic (VSO)

<table>
<thead>
<tr>
<th>gave</th>
<th>the-servant-nom</th>
<th>the-horse-acc</th>
<th>water-acc</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>S</td>
<td>x</td>
<td>O</td>
</tr>
</tbody>
</table>

Fula (SVO)

<table>
<thead>
<tr>
<th>servant gave</th>
<th>puccu</th>
<th>ndiyam</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>V</td>
<td>O</td>
</tr>
</tbody>
</table>

Comparing three languages
2. Language typology

Why study typology?

- Early typology (19th century)
  - Belief that language expresses a nation’s “spirit”
  - Typological knowledge could provide insight into this “spirit”
- Still widespread, e.g.
  - relatively strict and complex rules of German grammar seen as an expression of German discipline and rule of law
  - comparative lack of strict rules in Chinese seen as an expression of Chinese flexibility and pragmatism
- These ideas not supported by linguists

Modern typology

- Not concerned with languages in their entirety, but with specific phenomena

The power of generalization

- Turkish is SOV – so what?
  - Is this fact any more “interesting” than knowing that “room” = oda?
  - Yes, because:
    - It says something about the overall structure of the language
    - It allows nearly all languages to be grouped into just three types
    - This fact often correlates with other structural facts
    - Such facts can tell us something about general cognitive processes
- In linguistic typology, we are primarily looking for linguistic variation with a high power of generalization

Anthropological vs. typological significance

- How many Eskimo words for ‘snow’?
  - The Inuit do not have 20 (or 100 or 200) words for “snow”!
  - But even if they did: so what?
- Fula has many words for cattle...
  - This is of great interest to anthropologists
  - Reflects the central position of cattle in Fula society
  - Neutralized specialized terminology
- But the typological significance is marginal

Kinship terms are another example

- Eight words for ‘cousin’ in Chinese
  - Interesting for anthropologists, but not for typologists

Cattle in Fula

- One small dictionary has no less than 82 different words, including:
  - guddi ‘bull without a tail’
  - wuudi ‘cow without a tail’
  - jaabuye ‘cow with a large navel’
  - lelwaaye ‘cattle with eyes like a gazelle’
  - tolle ‘cow with one horn’
  - wijaaye ‘cattle with horns drooping
  - tajje ‘cow whose calf has been killed so that she may be fattened’

Many types are distinguished by their horns

- wumale ‘cow without horns’
- gajje ‘cattle with horns twisted back’
- eelliinge ‘cattle with upright horns’
- lembe ‘cattle with horns twisted forward’

Analytical vs. synthetic languages

1. Morphological typology

- There are many ways to express grammatical meaning
- For example, to distinguish between singular and plural...

1. None
  - Japanese (JAP) hito ‘person’, pl. hito
2. Function word
  - Tagalog (TGL) bato ‘stone’, pl. mga bato
3. Affiliation
  - Turkish (TUR) ev ‘house’, pl. evler
4. Sound change
  - English (ENG) man, pl. men
  - Arabic (ARA) naful ‘man’, pl. rijalun
5. Reduplication
  - Malay (MAL) anak ‘child’, pl. anak-anak

Analytical (word = morpheme)

- Japanese, Korean, Korean
- “highly analytic (aka isolating)”
- “modern” or “recent”
- “most” in the world

Synthetic (word > morpheme)

- Russian, Finnish, Hungarian
- “highly synthetic”
- “most ancient”
- “most productive”

Polysynthetic (word = clause)

- “most complex”
- “most productive”
- “most productive”

But no language purely analytic or purely polysynthetic

JPN: analytic re. (no) noun inflection, but highly synthetic re. complex verb inflection

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If you wait for me, I will go with you

- Chinese (ZHO)
  
  Nǐ děng wǒ, wǒ jiù gēn nǐ qù
  
  Nǐ děng wǒ, wǒ jiù gēn nǐ qù
  
  2SG wait 1SG, 1SG then with 2SG go

- Eskimo (KAL)*

  Uttaqqiguvinga, aullaqatigiingapiqat
  
  Uttaqqigu- vi- nga, aulla- qa- ti- gi- niaq- pa- git
  
  Wait if 2SG 1SG, go partner have FUT ASS 1SG/2SG

- Lack of inflection in analytic languages
- Widespread use of inflection in polysynthetic languages

- Agglutinative vs. flective languages

  A subdivision of non-analytic languages

  - Agglutinative
    
    Example: Turkish
ev- ler- den
  
  house Pl. ABL
  
  1. one morpheme, one meaning
  
  2. clear boundary between morphemes
  
  3. grammatical processes expressed through affixes
      form of individual morphemes not affected

  - Flective ("fusional")

    1. cumulation (one affix = multiple meanings)

    2. fusion (morphemes fuse)

    - E.Norw (sva:*t) 'answered'
      < [sva:*] + [t]
      - [r] + [t] \( \rightarrow \) \( \text{[ʈ]} \)

    3. introflection (root modification)

    - ENG man, pl men
    
    - ARA rajulun 'man', pl rijalun

Agglutinative > Flective

Analytic > Agglutinative > Flective

- Like flective
  
  - More than one morpheme per word, i.e. synthetic

- Like analytic
  
  - One-to-one meaning-form correspondence

- Historical development: Analytic > Agglutinative > Flective

  - But also: Flective > Analytic (e.g. English, Norwegian, etc.)

Typical features of analytic languages

- Predominantly monosyllabic morphemes (and sometimes words)
  
  - Polysyllabic morphemes/words less efficient in languages with one morpheme per meaning

- Extensive use of tones
  
  - Helps distinguish otherwise homophonous monosyllabic morphemes

- Extensive use of function words

- Relatively fixed word order
  
  - Function words and word order take over the grammatical function of inflection

- Less rigid grammatical rules

  - Inflectional paradigms (synthetic languages) create more tightly woven and less flexible grammatical structure

Typical features of flective languages

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- Relatively fixed word order

- Function words and word order take over the grammatical function of inflection

- Less rigid grammatical rules

  - Inflectional paradigms (synthetic languages) create more tightly woven and less flexible grammatical structure

Grammatical flexibility in Chinese

1. It has no inflection
2. Subject and object are often optional
3. Function words are often optional
4. Word boundaries and sentence boundaries are fuzzy
5. Apart from the noun-verb distinction, word class distinctions are fuzzy

Morphological typology map

- Analytic

  - Turkish

  - Hindi

  - JPN

  - Polish

  - German

- Agglutinative

  - AMH / ARA / HEB

  - San

  - Hindi

  - JPN

- Synthetic

  - English

  - Norwegian

  - German

- Polysynthetic

  - West Greenlandic

- Flective

  - Russian

  - Spanish

  - Arabic

  - Hebrew
2. Language typology

2. Syntactic typology

- More about word order
  - Order of subject, verb and object
  - OV (object-verb) vs. VO (verb-object)
  - Modifier+head vs. head+modifier
  - Left-branching vs. right-branching

Order of subject, verb and object

- English (SVO): He ate the pudding
- Japanese (SOV): Watashitachi wa Nihongo o hanasu
- Arabic (VSO): Qatala l- malik-u l- malikat-a

Six possible orders

- SVO Chinese
- SOV Amharic, Hindi, Japanese, Persian, Sanskrit, Turkish
- VSO Arabic, Hebrew
- VOS (Malagasy)
- OVS (Hirakynyan)
- OSV (Tobati)

The first three are very common, the last three rather rare

Strong tendency for subject to precede object

- SOV, SVO and VSO most common (96.3%)
- VOS, OVS and OSV rather rare (3.7%)

Why S before O?

- Because the prototypical subject is:
  - an agent: The one who carries out the action and therefore the source of the action
    - (Temporal iconicity: cause precedes effect)
  - human: The element which is more animate tends to precede elements which are less animate, and humans rank highest in the animacy hierarchy
    - human < animate < inanimate
  - a discourse theme: Thematic elements tend to precede non-thematic elements
    - Elements that are more thematic than the subject, may be placed before the subject, as in That I don’t know.

Word order correlations

- SOV languages
  - noun + postposition
    - “Nippon e”
  - genitive + noun
    - “nu no nameae”
  - verb + auxiliary
  - relative clause + noun
    - “som elsket yngve mannen”
  - standard of comparison + adjective
    - “watashi yori mo toshiue”
- VSO languages
  - preposition + noun
    - “to Japan”
  - noun + genitive
    - “sno y ri” (name of dog)
  - auxiliary + verb
  - noun + relative clause
    - “mammen som elsket yngve”
  - adjective + standard of comparison
    - “older than me”

What about SVO languages like English?

- Sometimes claimed to be “intermediate”
- However, English has the following properties:
  - preposition + noun
    - (to the house)
  - noun + genitive
    - (the house of Tom)
  - auxiliary + verb
    - (will come)
  - noun + relative clause
    - (the cat that ate the rat)
  - adj + standard of comparison
    - (better than Tom)
- Compare these with a VSO language like Irish (GAI):
  - preposition + noun
    - (to teach)
  - noun + genitive
    - (a teach na Tom)
  - auxiliary + verb
    - (badh teach)
  - noun + relative clause
    - (sin cat a th an francach)
  - adj + standard of comparison
    - (nicks teach na Tom)
2. Language typology

What about SVO languages like English?

- Sometimes claimed to be "intermediate"
- However, English has the following properties:
  - preposition + noun (in the house)
  - noun + genitive (the house of Tom)
  - auxiliary + verb (eat the rat)
  - noun + relative clause (the cat that the rat)
  - adj + standard of comparison (better than Tom)

- Conclusion: SVO languages behave mostly like VSO
  - What distinguishes these two from SOV is the position of the object relative to the verb

Left-branching vs. right-branching

- Is there a better explanation?
  - Explain the phenomenon of correlation with fewer exceptions

- Branching Direction Theory (Dryer 1992)
  - Verb patterns are determined by branching categories and object patterns are non-phrasal
  - HEAD MODIFIER
  - Languages tend to have consistent branching direction

- The need to be able to expand plays a role in word order

Left-branching: Japanese

<table>
<thead>
<tr>
<th>object + verb</th>
<th>verb+adj</th>
<th>verb+aux</th>
<th>rel.clause+noun</th>
<th>std.of.comp.+adj</th>
<th>adjective+noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>noun + postposition</td>
<td>to go home</td>
<td>to talk</td>
<td>to write a letter</td>
<td>to come from</td>
<td>to be a good country</td>
</tr>
<tr>
<td>noun + genitive</td>
<td>at home</td>
<td>to make</td>
<td>to be the student's book</td>
<td>to come from 15G</td>
<td>to be a good country</td>
</tr>
</tbody>
</table>

Head+modifier

- To explain correlations between object-verb order and other word order features?

- Distinction between head and modifier:
  - HEAD MODIFIER
  - VSO vs. OV

Right-branching: English

- Verb + object
  - kissed the girl he met at the party a few days before
  - in the city where the great composer was born

- Noun + genitive
  - friends of the man whose father had left behind a treasure

- Auxiliary + verb
  - we come home to the valley he had left in his childhood

- Noun + relative clause
  - that have been spoiled by parents who love them

- Adjective + std. of comp.
  - prettier than the women he had seen on TV

- Noun + adjective
  - men so strong they could kill tigers if they wanted to

3. Semantic typology: Motion verbs

- Satellite-framed languages
  - Moving expressed by main verb
  - Path expressed by a satellites (e.g. particle)

- Verb-framed languages
  - Moving expressed by a complement (e.g. participle)
  - Romance, Semitic, Japanese, Korean, Polynesian, Turkish, ...

- Japanese
  - da go to some place

- Spanish
  - The bottle floated out of the cave

Institutt for kulturstudier og orientalske språk (IKOS)
2. Language typology

Comparing verb-framed and satellite-framed

- Spanish: "Sale un buho" [t exits an owl]
- Japanese: "Fukuroo ga dete-kite" [t owl come out]
- Turkish: "Oradan bir baykus çıkıyor" [t from there an owl exits]
- Hebrew: "Yaca milox haxor yanišul" [t exits from-inside the-hole owl]
- English: "An owl flew out"
- German: "Weil da eine Eule rausflattert" [t because there an owl out fluttered]
- Russian: "Tam vy-škud ila sova" [t there owl ~ put (v.)]
- Chinese: "Rí chǔ yì zhí diànlóuying" [t exits come one owl]

From satellite-framed to verb-framed

- The man ran back down into the cellar
  1) Encode back (omit down and in)

- The man descended into the cellar running
  2) Encode down (omit back and in)

- The man entered the cellar running
  3) Encode into (omit back and down)

4. Phonological typology: Tone vs. stress

Most languages use either tone or stress, but not both*

- **Tone** used to distinguish between words
  - mà 馬 'horse'
  - mā 媽 'mother'
- **Level tones**
  - Distinguished by pitch: high, mid, low, etc.
  - Mostly found in Africa
- **Contour tones**
  - Mainly distinguished by shape: rising, falling, rising-falling, etc.
  - Mostly found in Asia

**Stress** used to accentuate one syllable vis-à-vis others

- Lack a ~
- Free stress (unpredictable)
  - E.g. Germanic languages
  - May distinguish between words: yammi (p.) ~ part (v.)
- Fixed stress (predictable)
  - Main stress on
  - Penultimate syllable
  - Last syllable
  - First syllable
  - Main stress on

No tones: 306 (58%)
Simple tones: 132 (25%)
Complex tones: 88 (17%)

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Next week: **Language families**

- Haspelmath, Martin et al. (eds.) 2008. WALS online. (Munich: Max Planck Digital Library) http://wals.info

Glossar (3)

- affix: affix
- aggr.: agger
- agglutinating: agglutinerende
- analytic: analytisk
- clause: clause
- compound: komponent, overensstemmelse
- correlation: korrelation
- derivation: derivering
- discourse: diskurs
- falling: falingende
- fictive: fiktiv
- fusional: fusjonerende
- head: hode
- head-first: hode-først
- head-last: hode-sist
- inflection: bøyning
- introflexion: introfleksjon
- left-branching: venstreforgrenende
- level tone: nivåton
- manner: måte
- modifier: modifikator, adledd
- path: vei
- post-synthetic: post-synetisisk
- prefix: prefiks
- reduplication: reduplikasjon
- right-branching: høyreforgrenende
- satellite-framed: satellittinnrammet
- stress: trykk
- suffix: suffiks
- synthetic: syntetisk
- theme: tema
- tone: ton
- verb-framed: verbinnrammet

[Image 57x101 to 286x109]
[Image 57x334 to 286x343]
[Image 57x568 to 286x577]