Variability of languages in time and space - III

Linguistic Typology - Phonology

Anja Nedoluzhko
phomenic inventories

• all families
  – The Stanford Project on Language Universals leading to the database “Stanford Phonology Archive” (SPA)
  – The UCLA Phonological Segment Inventory Database (or UPSID) is a statistical survey of the phoneme inventories in 451 of the world's languages - [http://web.phonetik.uni-frankfurt.de/upsid.html](http://web.phonetik.uni-frankfurt.de/upsid.html)

• selected families
  – Namkung (1998), Phonological Inventories of Tibeto-Burman Languages
  – Ramaswamy (1999), Common linguistic features in Indian languages: Phonetics
  – Phonemic Inventories Across Languages ([http://www.asha.org/practice/multicultural/Phono/](http://www.asha.org/practice/multicultural/Phono/)) – Arabic, English, Korean, Mandarin etc.
phonemes

- *pin, tin, kin, fin, thin, sin, shin*
- *dim, din, ding, did, dig, dish*
- *pin, pen, pan, pun, pain, pine, pawn*
phonemes

• *pin, tin, kin, fin, thin, sin, shin*
• *dim, din, ding, did, dig, dish*
• *pin, pen, pan, pun, pain, pine, pawn*

at the beginnings and ends of syllables vs. in the middle

consonants and vowels
phonemes - consonants

• consonants (WALS)
  – small (6 to 14)
  – moderately small (15-18)
  – average (19-25)
  – moderately large (26-33),
  – large (34 or more consonants)
consonants

http://wals.info/feature/1A#2/19.3/152.8
<table>
<thead>
<tr>
<th>Size</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Small</td>
<td>89</td>
</tr>
<tr>
<td>Moderately small</td>
<td>122</td>
</tr>
<tr>
<td>Average</td>
<td>201</td>
</tr>
<tr>
<td>Moderately large</td>
<td>94</td>
</tr>
<tr>
<td>Large</td>
<td>57</td>
</tr>
</tbody>
</table>

Rotokas (West Bougainville; Papua New Guinea) **only 6 consonants** ( /p, t, k, b, d, g/ )

English - 24
<table>
<thead>
<tr>
<th>Size</th>
<th>Number</th>
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</thead>
<tbody>
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![Xóõ](spoken in Botswana)

122 consonants
(mainly because it has a very large number of different click sounds with which a word may begin)
phonemes - vowels

• vowels (according to WALS)
  – small (2 to 4)
  – average (5-6)
  – large (7-14)
vowel quality inventories
phonemes - vowels

<table>
<thead>
<tr>
<th>Size</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Small (2-4)</td>
<td>93</td>
</tr>
<tr>
<td>Average (5-6)</td>
<td>287</td>
</tr>
<tr>
<td>Large (7-14)</td>
<td>184</td>
</tr>
</tbody>
</table>

German: 14

Yimas (Papua New Guinea): 2
Vowel harmony

• a type of long-distance assimilatory phonological process involving vowels

• A vowel or vowels in a word are changed to sound the same (thus "in harmony.")

• In languages with vowel harmony, there are constraints on which vowels may be found near each other.

• Many agglutinative languages have vowel harmony.
1. Which words are compounds and why?
2. Which of the following words can be divided into parts?

földtan, földnek, háborúellenes, Budapest, burgonyalevés, óraütés, hőálló, bűnöző.

3. Translate into Hungarian:
guiltlessness, about field, about potato, wayless
Vowels

- stress
- length
- tones
Vowels - stress

• fixed
  – Initial: stress is on the first syllable
  – Second: stress is on the second syllable
  – Third: stress is on the third syllable
  – Antepenultimate: stress is on the antepenultimate (third from the right) syllable
  – Penultimate: stress is on the penultimate (second from the right) syllable
  – Ultimate: stress is on the ultimate (first from the right) syllable

• weight-sensitive, variable
  – unbounded (stress can be anywhere)
  – bounded (the placement of stress is sensitive to properties of syllables)
Mapudungun/Araucanian

\[ \text{tī'panto} \text{ ‘year’, e'lumu,yu ‘give us’.} \]
Winnebago, also known as Ho-Chunk language (Hoocąk, Hocąk) Siouan language family

hochiˈchinik ‘boy’, waghiˈghi ‘ball’
<table>
<thead>
<tr>
<th>Value</th>
<th>Representation</th>
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</thead>
<tbody>
<tr>
<td>No fixed stress (mostly weight-sensitive stress)</td>
<td>220</td>
</tr>
<tr>
<td>Initial: stress is on the first syllable</td>
<td>92</td>
</tr>
<tr>
<td>Second: stress is on the second syllable</td>
<td>16</td>
</tr>
<tr>
<td>Third: stress is on the third syllable</td>
<td>1</td>
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<tr>
<td>Antepenultimate: stress is on the antepenultimate (third from the right) syllable</td>
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<tr>
<td>Penultimate: stress is on the penultimate (second from the right) syllable</td>
<td>110</td>
</tr>
<tr>
<td>Ultimate: stress is on the ultimate (last) syllable</td>
<td>51</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>502</strong></td>
</tr>
</tbody>
</table>

Czech, Finnish, Icelandic, Hungarian

Greek, Macedonoian

Polish, Breton, Welsh, Basque
Vowels - stress

• **fixed**
  – Initial: stress is on the first syllable
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• **weight-sensitive, variable**
  – unbounded (stress can be anywhere)
  – bounded (the placement of stress is sensitive to properties of syllables)
Vowels - weight-sensitive, variable stress

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
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<td>стол</td>
<td>море</td>
<td>вино</td>
<td>волк</td>
<td>гу́да</td>
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<td>о вике</td>
<td>о волке</td>
<td>гу́</td>
</tr>
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Russian

/dorogy/ – ‘a road’
/dorogo/ – ‘dear’
Alyutor or Alutor is a language of Russia that belongs to the Chukotkan branch of the Chukotko-Kamchatkan languages.

Formulate the stress rules and put the stress for the following words:

- sawat - lasso
- pantawwi - boots
- naktâqin - solid
- nəminəm - bouillon