Phonetics in phonology, typological markedness and knowledge of grammar

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Prerequisite: an introductory graduate-level phonology course (& at least basic knowledge of Optimality Theory)

Description & Goals

It is a general assumption among phonologists that people have knowledge of abstract linguistic regularities. In pre-OT theories, such regularities are stored in the form of rules. In OT, rules are replaced with markedness constraints which are argued to be innate and universal. Linguistic universals, i.e., regularities attested across languages, are attributed to the universal markedness constraints.

There are several recent theories which do not agree with OT about how to explain speakers’ knowledge of their language and language universals. Controversies can be summarized as the debates of mind vs. body and nature vs. nurture. Specifically, we will address the following questions ((i-iii) and (iv-v) can be subsumed under the “mind vs. body” and “nature vs. nurture” debates, respectively):

(i) What is the role of phonetics in phonology?
(ii) Is the influence of phonetics on phonology direct or indirect?
(iii) Which of the two, phonetics or phonology, is more responsible for patterns of loanword adaptation and non-native sequence production/perception?
(iv) What is the origin of speakers’ knowledge of their language, (possibly innate) universal grammatical restrictions on language structure or language-specific linguistic experience?
(v) Are language universals due to cognitive bias (analytic bias in Moreton’s terminology) or systematic phonetic errors in transmission (channel bias)?

In seeking answers to these questions, the following competing theories will be discussed.

1. Optimality Theory (OT): Markedness is a main part of the grammar. Phonetics influences phonological grammar, only indirectly.
2. Phonetically-based Phonology (PBP): Markedness is a main part of the grammar. Phonetics influences phonological grammar, more directly (phonetic optimization).
3. Evolutionary Phonology: Markedness is not part of the grammar. Typological universals are the result of historical sound changes (no phonetic optimization).

In the first half of the course, I will focus on the discussion of PBP while comparing it to standard OT and Evolutionary Phonology. In the latter half of the course, I will mostly discuss (psycho-linguistic) experimental studies which have been carried out to explore issues, presented above as questions.
### Tentative Class Schedule (PBP = Hayes, Kirchner and Steriade eds. (2004))

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics &amp; readings</th>
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<tr>
<td>1. Sept 3</td>
<td>Phonetic functionalism</td>
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<td>2. Sept 10</td>
<td><strong>Introduction to PBOT:</strong> Hayes (1997/1999*), Hayes &amp; Steriade (PBP*)</td>
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<td>4. Sept 24</td>
<td>Wright (PBP*), Jun (PBP*), Kochetov &amp; So (2007), Kaun (PBP*: ††)</td>
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<td>5. Oct 1</td>
<td><strong>Articulation:</strong> Kirchner (PBP*); Flemming (PBP*)</td>
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<td>6. Oct 8</td>
<td>{Zhang (PBP), Gordon (PBP*)}, Kawahara (2006*)</td>
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<td>7. Oct 15</td>
<td><strong>Inferred input:</strong> [Jun (2002 ms), Flemming (2008 ms)]**</td>
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<td>8. Oct 22</td>
<td>No class</td>
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<tr>
<td>9. Oct 29</td>
<td><strong>Evolutionary Phonology:</strong> Blevin &amp; Garrett (PBP*), Hale &amp; Reiss (2000*)</td>
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<td>11. Nov 12</td>
<td>Berent et al. (2007*), Berent et al. (2008), Berent et al. (2009*)</td>
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<tr>
<td>15. Dec 10</td>
<td>Term-paper Presentation</td>
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### Readings

**Required readings**

A single copy of PBP papers and other papers which cannot be downloaded from the library or authors’ website will be put in the reserve box. You must xerox and return it quickly for other students.

**Optimality Theory**


**Phonetics**


### Requirements

- Readings and class participation
- Lead discussion of one paper in the reading list
- Abstract writing: Berent et al. (2007)
- A final term paper and its presentation

### Final Term paper

- Select topic and meet with me by Oct 30.
- Submit a one-page progress report by Nov 19.
- Paper Presentation: Dec 10
- Paper Due: Dec 14
Bibliography


Albright, Adam (2007) Natural classes are not enough: Biased generalization in novel onset clusters. Ms, MIT.

Berent, I; D. Steriade; T. Lennertz, and V. Vaknin (2007) What we know about what we have never heard: evidence from perceptual illusion. *Cognition* **104**.


(Berent, Iris and Tracy Lennertz (2007) What we know about what we have never heard before: Beyond phonetics, Reply to Peperkamp, *Cognition* **104**, 638-643.)


Löfstedt, Ingvar (?) Allomorphy as optimization of perceptual salience: the Swedish non-neuter singular definite article. Ms, UCLA.


