

Theme: Introduction and course overview
Background reading: Odden 2005, chapter 1.

1. A message decoded by the SETI program

52 7234 5658 94 183367618 52 7638.
94 254282 363658 52 727234.
92994 78 3658 78 92994 9636 52 14345492.
94 5658 183367618 52 767638.
94 254284 52 9636 52 969636 3658.
92994 52 1638 78 767638.

- a. Odd (O) and even (E) numbers.
- b. Basic syllable structure: O E.
- c. E-harmony within a word: {2, 4} vs. {6, 8}.
- d. O can be reduplicated in the middle of a word (rarely happens).
- e. A very small number of irregular words.
- f. First syllable of certain OEOE words can be reduplicated.
- g. We don't care about meaning. We even do not know what this text means. Still, we have been able to make interesting observations.
- h. Different ways of pronouncing each digit.

2. What is phonology about?

"Phonology is the scientific study of our mental representations of sound and sound patterns, the implicit system of knowledge we use in combining and manipulating the sounds of our language."

Includes:

- Phonetic details: what is relevant for language in general? what is relevant in my language?
- Phoneme inventory / segments
- Syllable structures (do syllables exist?)
- Stress, tone and intonation
- Phonotactics
- Phonological processes, changes, conditional and free alternations. Morpho-phonology.

Rules-governed vs. analogy vs. exceptions

3. Approaches to phonology (or to linguistics, in general)

<i>I am interested in...</i>	<i>language(s) X.</i>	E.g., English / French / Slavic / Semitic linguistics
	<i>phenomenon Y.</i>	E.g., phonology of stress, syntax, code switching
	<i>theory Z.</i>	E.g., Minimalist Program, Optimality Theory

Language is a system (a) that expresses thought, (b) that changes in time, (c) of socially agreed signs, (d) that reflects social facts, (e) that is implemented in the brain, (f) that encodes information, (g) that is learned/acquired without effort.

		Linguistics is a tool to...	Language belongs to...
Antiquity	<i>"Philosophical" linguistics</i>	understanding reasoning	a thinking human
Middle Ages	<i>"Philological" linguistics</i>	analyzing (holy) texts	a text and its author.
End 18 th , 19 th c.	<i>Historical linguistics</i>	the history of a nation	a nation or people.
1 st half of 20 th c.	<i>Structuralist linguistics</i>	studying human sign systems	a society, population.
2 nd half of 20 th c.	<i>Generative linguistics</i>	studying human brain	a brain or a species.

Linguistics, in general, and phonology, in particular, as a **tool for**: history, sociology, semiotics, biology/psychology/brain sciences, language technology, language teaching, (philosophy), etc.

Internal goal of Phonological Theory:

The goal of phonological theory is to characterize sound structures of individual languages as well as patterns across languages. This involves developing a formal system flexible enough to allow the kinds of variation that is observed across languages but restrictive enough to exclude impossible phonologies.

- *describe* the structure of a single language (e.g., the structuralists)
- *describe* the structure of language, as a human phenomenon
- *understand* the structure of a single language (e.g., historical approaches)
- *understand* the structure of language, as a human phenomenon (e.g., cognitive approaches)

Understanding = providing an explanation. Answering *why's* in linguistics:

Given a (linguistic) observation: why is it so?

- Because it has developed so: historical explanations.
- Because this is how it is encoded in the brain: cognitive explanations.
- Because this is how it can fulfill its (social) function(s): functional explanations.
- Because this is how the child can learn it.
- ...
- By coincidence: quite often the best answer, don't be afraid of it!

Two major components of a phonological theory:

1. Representation: "grasp it: this is what it is."
E.g., segments; features of natural classes; syllable constituents; autosegmental tiers.
2. Processes (mappings): "do something with it: this is what it becomes."
In many contemporary theories: *underlying form* → *surface form*
(rewrite rules in SPE phonology; Optimality Theory filters).
Alternative: declarative approach: restrictions on what *surface form* can look like.

How do we Evaluate Theories?

Levels of adequacy (Chomsky 1964, *Current Issues...*):

- Observational adequacy: superficial fit to the data.
- Descriptive adequacy: ability to capture generalizations, to “account for the data”.
“significant generalizations that express underlying regularities in the language”
- Explanatory adequacy: “to explain the data” in a deeper way, generalizing to language.
e.g., by accounting for typology, characterization of the speaker’s knowledge, loan words, acquisition, predictive power, etc.
“...aims to provide a principled basis, independent of any particular language, for the selection of the descriptively adequate grammar of each language”, “concerned with the internal structure of the device”.

4. Course overview

Schedule of Topics: largely Chronological

- Foundations (“pre-generative”): phonetics, features, phonemes & allophones
- Linear SPE (Sound Pattern of English: Chomsky & Halle 1968): rules
- Lexical Phonology (Kiparsky 1982): interaction of phonology and morphology
- Productivity & gradience: exceptions, ‘minor’ rules, and testing of productivity
- Non-linear Phonology: greater emphasis on representations and output constraints: syllables, feet, autosegments...
- Optimality Theory (Prince and Smolensky 1993): constraint-based phonology
- acquisition and learning (mainly in OT)

Prerequisites

Either Linguistics 120 (General Phonetics) or a B or higher in Linguistics 110 (Intro).

Requirements (see syllabus)

Policies

You may work together on problem sets, but you must write up your own work.

You must work alone on the Exams.

Being late:

- Problem sets will be due at the beginning of class – 10% off per day late
- Exams – 25% off per day late

Reading for next week: *Hayes, chapter 1.*