Unit 1

Theoretical introduction (1)

The place of phonetics in a functional theory of language

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Phonetics with Listening Practice (British): Unit 1:

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The place of phonetics in a functional theory of language

[ˈɹɒb.ət ˈspens] Robert Spence

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Fachrichtung Sprachwissenschaft und Sprachtechnologie, Universität des Saarlandes

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1

Contents

2   From matter to meaning: language in the evolutionary order

From matter to meaning

The place of language in the evolutionary order of nature:

· **matter** + **life** → *function*
·   **life** + **society** → *value*   *Gebrauchswert*
                                                        ↓
                                                   Tauschwert
·   **society** + **language** → *meaning*

  – [before there is grammar:]
  – **sounds** 'standing for' **meanings** → *words*
  – [once there is grammar:]
  – **sounds** 'stand for' **words** ...
  –   ... and **words in structures** 'stand for' **meanings**
  – thus, adult human language has three *'levels'* or *'strata'*:
  – **meanings**
  –   ... stood for by **wordings**
  –   ... stood for by **sound(ing)s**
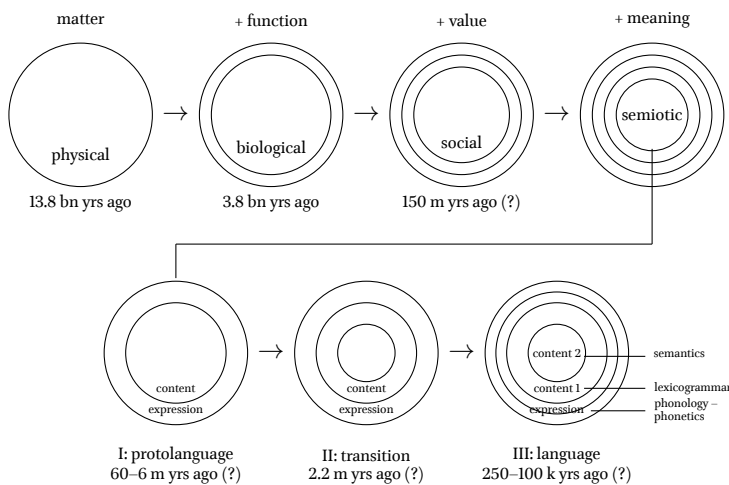
Figure 1: From matter to meaning (after C. M. I. M. Matthiessen)

3   Signs and semiotic systems

Signs and semiotic systems
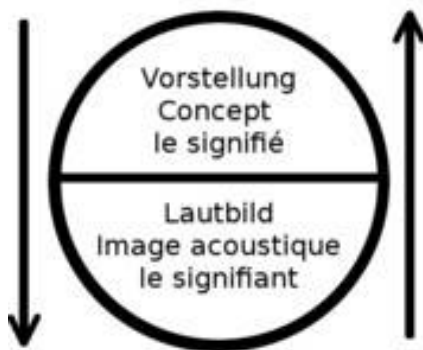
  (Fig. 2 here)

  (Fig. 3 here)
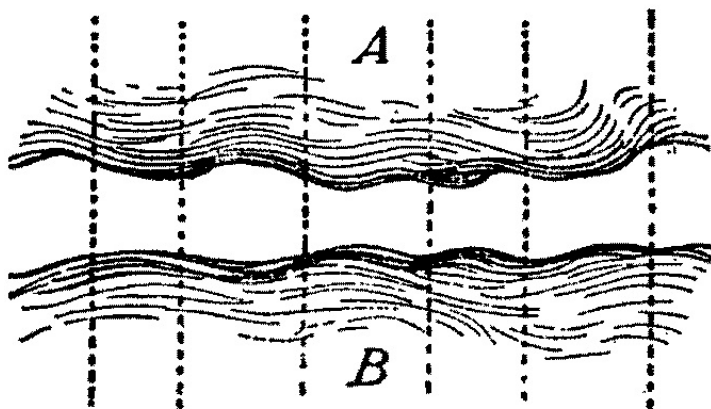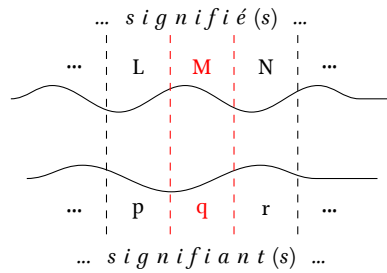
Figure 2: The sign function (Saussure)

Figure 3: Without language, thought and sound are indefinite and indistinct

· language (... L/p, M/q, N/r, ...) is a form, not a substance

   – that q stands for M is ARBITRARY
   – M is only defined by its VALUE relative to { ... L ... N ...}
   – q is only defined by its VALUE relative to { ... p ... r ... }

· society (a speech community) is necessary to define these SYSTEMS of values

1.8

For example:

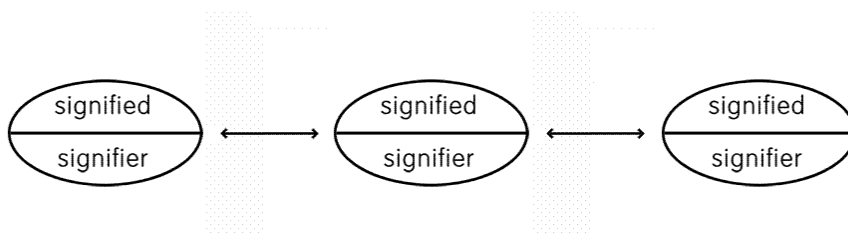Klingon has 8 different concepts where English has only 'fight'; and don't confuse the final sound of "qaH" [qʰɑx] ('Sir!') vs "qagh" [qʰɑɣ] ('worms') !

A semiotic system = a system of signs

· Each sign can only be defined by its place in the *system* of signs.

Source: Wikipedia

· Language is a system of signs.
· Read: Ferdinand de Saussure: *Cours de linguistique générale*. 1916. Available online.

1.9

(Fig. 4 here) The full video on the origin of life is available in six parts here:
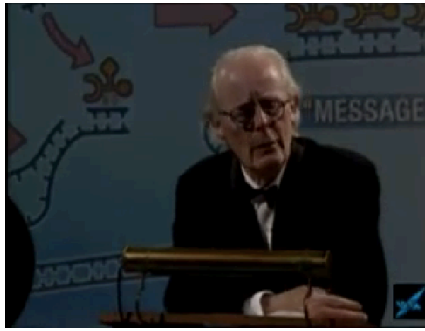
Figure 4: John Maynard Smith ← click for link to video extract

```
https://www.youtube.com/watch?v=viP5kBMtZ18
https://www.youtube.com/watch?v=EzP3m_XlwV8
https://www.youtube.com/watch?v=fRzRbohQ5Zs
https://www.youtube.com/watch?v=Il-yoFGogyA
https://www.youtube.com/watch?v=dmrje1cd90o
https://www.youtube.com/watch?v=tzGDio2ARPw
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1.10

4   Dimensions in the Systemic Functional theory of language

The theory of language adopted in this course is **Systemic Functional Linguistics (SFL).** The theory provides a number of dimensions for describing language, the most important of which are described here:

1. **Manifestation** (how language appears ['manifests itself'] in the world)
2. **Stratification** (levels of 'something standing for something else')
3. **Metafunction** (different 'functional components' of meaning, determining different kinds of structures)
4. **Instantiation** (of the potential by the actual)
5. **Rank** (bigger units made up of smaller ones)
6. **Axis** (choice vs. chain)
7. **Delicacy** ('broad' vs. 'narrow' descriptions)

1.11

4.1   Manifestation

Three possible manifestations of language

At the point where language interfaces with physical reality, there are three possible ways in which it can 'manifest itself':

· **sound** (pronunciation) ... from the very beginning
· **writing** (orthography) ... since about 3000 B.C.
· **"signing"** (*Gebärdensprache*) ... for the hearing-impaired

1.12

4.2 Stratification

- *"Language: the noises we make with our faces in order to live"*
-     (Material reality: Bipedal apes living)
- **Ideology** (what is thinkable? what is doable?)
- **(Code)** (who's an insider? e.g. two insiders: „Unn?" — „Jo.")
- **Genre** (what kind of text for what social purpose?)
- **Register** (what's going on? who's taking part? what role is language playing?)
- **Discourse Semantics** (what do the words and structures mean... in context?)
- **Lexicogrammar** (what do the words and sentences mean... regardless of context?)
- **Phonology** (are those the kinds of sound patterns you find in English words and sentences?)
- **Phonetics** (are those human sounds? AND: are those the kinds of sounds you'd hear in English?)
-     (Material reality: Bipedal apes making noises with their faces)

1.13
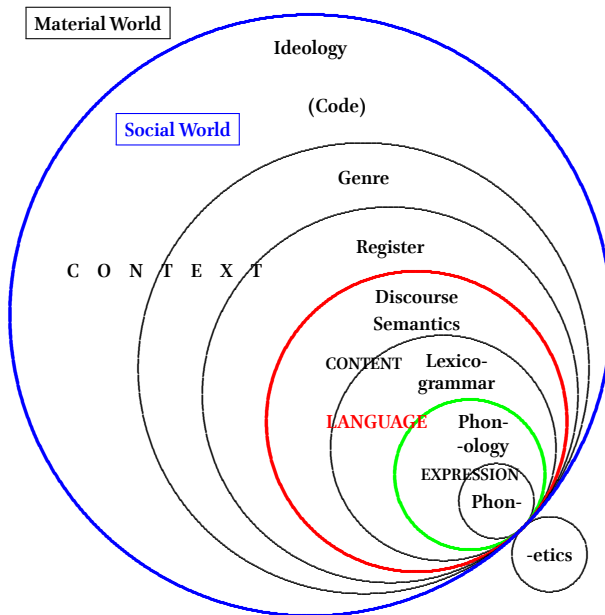
Ideology is historically conditioned
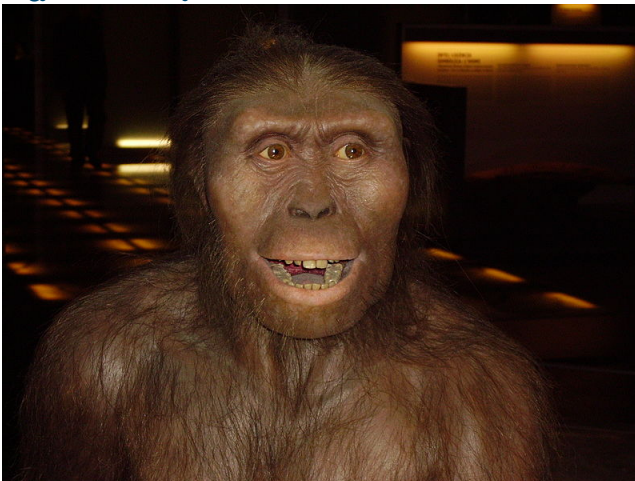
It's 3.2 million years ago. You're an *Australopithecus afarensis*. What is thinkable? What is doable?

1.14

4.3   Metafunction

Functional components of language and the type of structure associated with each (1)

Function of language		Examples	Structural type
ideational	logical	—Chris said ... 　　that Jane thought ... 　　　　that Tom had claimed ... 　　　　　　that Peter likes Mozart	linear ("string"-like)
	experiential	—the dinosaurs died —an asteroid killed the dinosaurs —Peter likes Mozart —Sally's the cleverest girl in the class	nuclear ("particle"-like)
interpersonal		—he likes Mozart —he's, like, sooo totally into Mozart —I suspect he's possibly rather fond of Mozart, wouldn't you say?	prosodic ("field"-like)
textual		—an asteroid killed the dinosaurs —they were killed by an asteroid —they were killed by one —it was an asteroid that killed them	culminative ("wave"-like)

Functional components of language and the type of structure associated with each (2)

Function of language		Examples	Structural type
⟶ (natural logic) reflecting upon the world (experience) ⟶	modification, quotes/reports, subordination, coordination, apposition, ...	Chris said ... 　　that Jane thought ... 　　　　that Tom had claimed ... 　　　　　　that Peter likes Mozart	linear ("string"-like)
	processes, participants, circumstances ...	Pete — like — Moz	nuclear ("particle"-like)
acting upon the world by interacting with the other people in it: mood, modality, negation, attitude, ...		? suspect...possibly...rather...wouldn't ?	prosodic ("field"-like)
creating relevance: theme–rheme structure, information structure, ...		they were killed by an **asteroid**	culminative ("wave"-like)

Functions of language associated with changes in pitch (dt.: Tonhöhe)

in English: **intonation** (see Units 9–11)

logical	yes	e.g. ways of joining clauses together
experiential	no	
interpersonal	yes	e.g. what you feel and want
textual	yes	e.g. what is 'given' and what is 'new'?

in Chinese: **lexical tone**

experiential	yes	e.g. distinguishing between different concepts
		媽 mā 'Mutter'
		蔴 má 'Hanf'
		馬 mǎ 'Pferd'
		罵 mà 'fluchen'

<div align="right">1.17</div>

4.4   Instantiation

The potential and the actual

- Today's weather is an actual instance of the climate.
- This text is an actual instance of the English language.
- The climate is the potential for weather.
- The English language is the potential for English text(s).

<div align="center">

climate   weather

POTENTIAL ——————— ACTUAL

language   text

</div>

- There are intermediate degrees along the line between the potential and the actual.

<div align="right">1.18</div>

4.5   Rank

Rank: bigger units made up of smaller ones

The rank scale in grammar:

clause	an asteroid killed the dinosaurs						
group	an asteroid		killed		the dinosaurs		
word	an	asteroid	killed		the	dinosaurs	
morpheme	an	asteroid	kill	ed	the	dinosaur	s

<div align="right">1.19</div>

There is a rank scale in phonology, too

tone group	∧ ən **æst** ə rɔɪd **bɪld** ðə **daɪn** ə sɔːz								
foot	∧ ʌne	**æst** ə rɔɪd		**bɪld** ðə		**daɪn** ə sɔːz		
syllable	ən	æst	ə	rɔɪd	kɪld	ðə	daɪn	ə	sɔːz
phoneme	ə n	æ s t	ə	r ɔɪ d	k ɪ l d	ð ə	d aɪ n	ə	s ɔː z

1.20

A structure is a configuration of functional roles

A unit is "made up of" smaller units... but how?

syllable	sɔːz			(bigger unit)
(STRUCTURE)	Initial	Nucleus	Final	← functional roles
phonemes	s	ɔː	z	(smaller units)

or:

syllable	sɔːz			(bigger unit)
(STRUCTURE)	Onset	Rhyme		← functional roles
		Nucleus	Coda	
phonemes	s	ɔː	z	(smaller units)

1.21

4.6   Axis

Axis: choice (paradigmatic) vs. chain (syntagmatic)

```
                must

and    you    should    learn    it

                may

        I

and    you    should    learn    it

        she
```
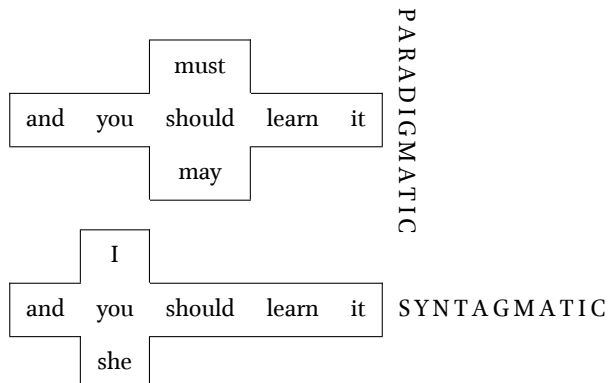
1.22

Axis: choice (paradigmatic) vs. chain (syntagmatic)

1.23

There is choice and chain in phonology, too

		f
		θ
		s
		ʃ
f		v
θ		ð
s	ɔː	z
ʃ		ʒ
v		
ð		m
z		n
		ŋ
h		
m		
n		

sɔːz ʃɔːz lɔːz fɔːθ fɔːs fɔːm fɔːn fɔːl (all exist)

<div style="text-align:right">1.24</div>

4.7   Delicacy

Delicacy: 'broad' vs. 'narrow' transcriptions

A 'broad' (less delicate) transcription, making only the minimum necessary number of distinctions:
[ɹed]
A 'narrow' (more delicate) transcription, making as many distinctions as possible:
[ɹ�̚e̞d̚]

<div style="text-align:right">1.25</div>

5   Three kinds of phonetics

Articulatory, acoustic and auditory phonetics
(Fig. 5 here)

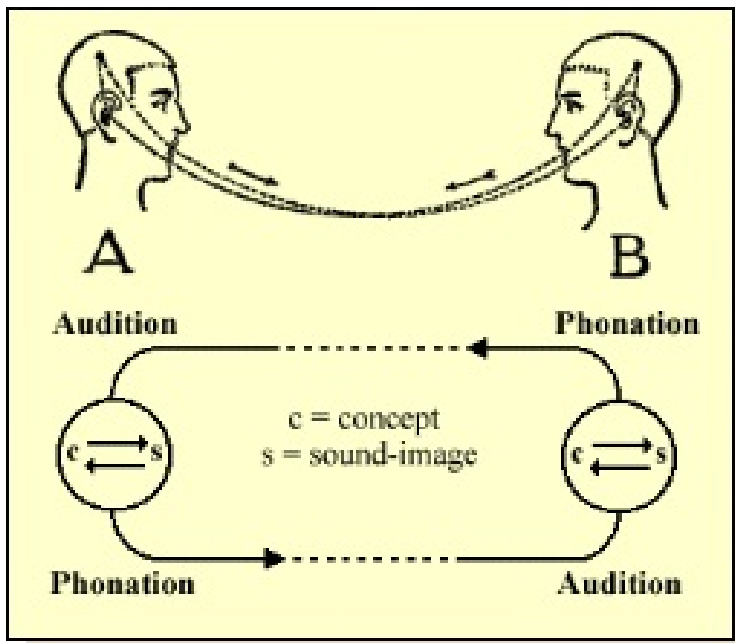

Figure 5: Producing, transmitting, and receiving signs

<div style="text-align:right"><small>Source: Wikipedia</small></div>

<div style="text-align:right">1.26</div>

<div style="text-align:center">10</div>

6 Phonetics vs. phonology

Why do we need phonology? (1)

Phonology is the study of the sound patterns of a language. How can you tell that this is French just by listening to it?

Un petit d'un petit /
S'étonne aux Halles /
Un petit d'un petit /
À degrés te fallent /
Indolent qui ne sort cesse /
Indolent qui ne se mène /
Qu'importe un petit /
Tout gai de Reguennes?

from the mediaeval manuscript "Mots d'heures: gousses, rames".

<div align="right">1.27</div>

Why do we need phonology? (2)

Now compare this strangely similar English poem. How can you tell it is English, just by listening to it? (What about the rhythm?)

Humpty Dumpty /
sat on a wall /
Humpty Dumpty /
had a great fall /
And all the King's horses /
and all the King's men /
Couldn't put Humpty /
together again.

source: the traditional collection "Mother Goose Rhymes"

<div align="right">1.28</div>

Why do we need phonetics?

1)
Spelling is not a good guide to pronunciation:

I take it you already know /
Of tough and bough and cough and dough? /
Others may stumble but not you /
On hiccough, thorough, lough and through.

2)
What do British or Americans think when they hear your accent?

HOMEWORK: Read the whole of the above poem (modified from `http://tinyurl.com/6y2zgw7`) and be prepared to read it aloud next week. See the Worksheet for Unit 1 – the last page of the part of the Course Notes you can find here:
`http://www.spence.saar.de/courses/phonetics/coursenotes201602/fascicles/fascicle_01.pdf`

<div align="right">1.29</div>