

# Unit 1

## Theoretical introduction (1)

The place of phonetics in a functional theory of language

Slides for the session of

*Phonetics with Listening Practice (British)*

held on

12 / 13 brumaire de l'année CCXXX de la République

02 / 03 November 2021

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## Theoretical introduction (1)

### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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Phonetics with Listening Practice (British): Unit 1:



Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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Theoretical Introduction (1)

φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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Theoretical Introduction (1)

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Theoretical Introduction (1)

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φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology



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Theoretical Introduction (1)

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Theoretical  
introduction (1)

Outline

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language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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Theoretical Introduction (1)

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Theoretical Introduction (1)

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Phonetics with Listening Practice (British): Unit 1:

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Theoretical Introduction (1)

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φων

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introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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Phonetics with Listening Practice (British): Unit 1:

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Theoretical Introduction (1)

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φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 1 From matter to meaning: language in the evolutionary order

## 2 Signs and semiotic systems

## 3 Dimensions in the Systemic Functional theory of language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

## 4 Three kinds of phonetics

## 5 Phonetics vs. phonology



# The place of language in the evolutionary order of nature:

φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

### The place of language in the evolutionary order of nature:

- **matter + life** → *function*

### The place of language in the evolutionary order of nature:

- **matter** + **life** → *function*

- **life** + **society** → *value*

*Gebrauchswert*



*Tauschwert*

### The place of language in the evolutionary order of nature:

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

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↓ *Tauschwert*
  - **society** + **language** → *meaning*
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- [before there is grammar:]
  - **sounds** 'standing for' **meanings** → *words*

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  - thus, adult human language has three ‘*levels*’ or ‘*strata*’:



### The place of language in the evolutionary order of nature:

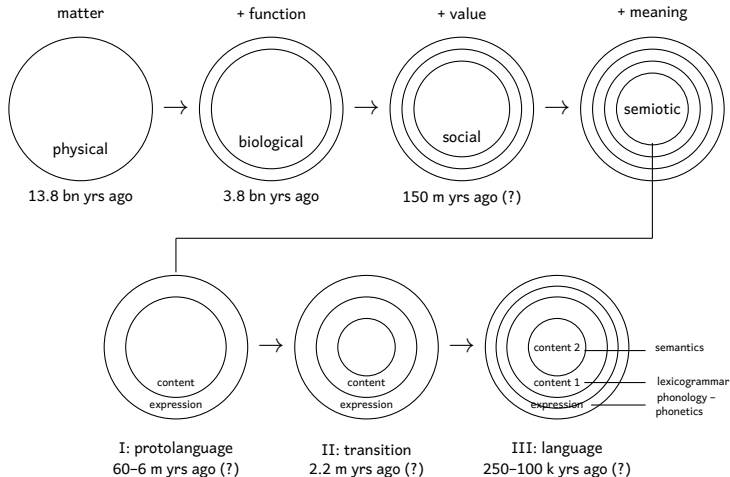
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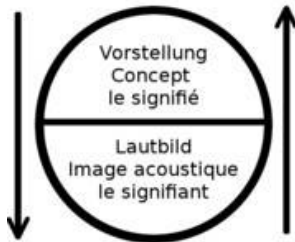
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  - thus, adult human language has three ‘*levels*’ or ‘*strata*’:
  - **meanings**
  - ... stood for by **wordings**
  - ... stood for by **sound(ing)s**



**Figure:** From matter to meaning (after C. M. I. M. Matthiessen)

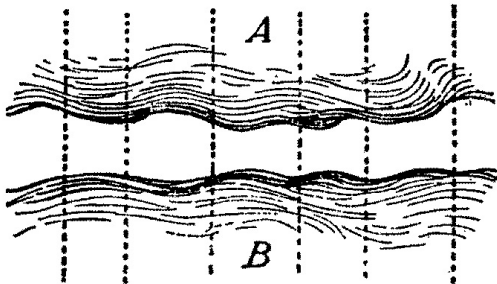
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**Figure:** The sign function (Saussure)

Source: Wikipedia

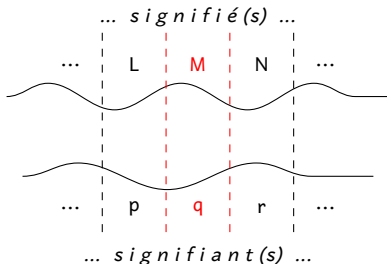
(Fig. 3 here)



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

Source: Wikipedia

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



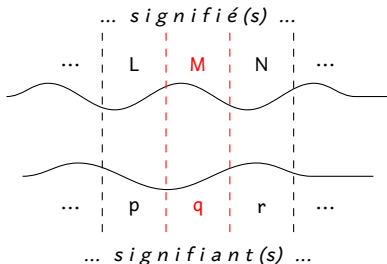
- that **q** stands for **M** is **ARBITRARY**
  - **M** is only defined by its **VALUE** relative to { ... L ... N ... }
  - **q** is only defined by its **VALUE** relative to { ... p ... r ... }
- society (a speech community) is necessary to define these **SYSTEMS** of values



**Figure:** Klingon has 8 different concepts where English has only ‘fight’; and don’t confuse the final sound of “qaH” [q<sup>h</sup>αx] (‘Sir!’) vs “qagh” [q<sup>h</sup>αɣ] (‘worms’)



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



- that **q** stands for **M** is **ARBITRARY**
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## A semiotic system = a system of signs

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

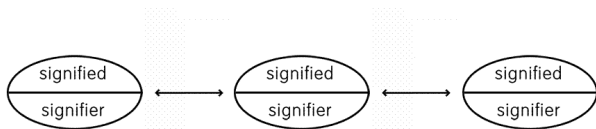
Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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

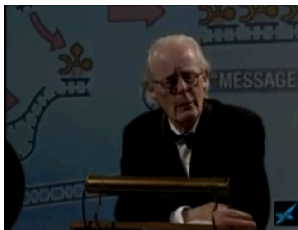


Source: Wikipedia

- Language is a system of signs.
- Read:  
**Ferdinand de Saussure: *Cours de linguistique générale*. 1916.**  
Available [online](#).

## From a bistratal to a tristratal semiotic system

(Fig. 4 here)



**Figure:** John Maynard Smith ← click for link to video extract

The full video on the origin of life is available in six parts here:

<https://www.youtube.com/watch?v=viP5kBMtZ18>

[https://www.youtube.com/watch?v=EzP3m\\_XlwV8](https://www.youtube.com/watch?v=EzP3m_XlwV8)

<https://www.youtube.com/watch?v=fRzRbohQ5Zs>

<https://www.youtube.com/watch?v=Il-yoFGogyA>

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φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology



Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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- 1 **Manifestation** (how language appears [‘manifests itself’] in the world)

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- 6 **Axis** (choice vs. chain)
- 7 **Delicacy** (‘broad’ vs. ‘narrow’ descriptions)

## 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

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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- **“signing”** (*Gebärdensprache*) ... for the hearing-impaired

φωv

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## Higher strata constraining lower strata

φωv

### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

**Stratification**

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

- **Phonetics** (are those human sounds? AND: are those the kinds of sounds you'd hear in English?)

- **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?)



- **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?)

- **Discourse Semantics** (what do the words and structures mean... in context?)
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- **Register** (what's going on? who's taking part? what role is language playing?)
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- **Genre** (what kind of text for what social purpose?)
- **Register** (what's going on? who's taking part? what role is language playing?)
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- **(Code)** (who's an insider? e.g. two insiders: „Unn?“ – „Jo.“)
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## Higher strata constraining lower strata

- (Material reality: Bipedal apes living)
- **Ideology** (what is thinkable? what is doable?)
- **(Code)** (who's an insider? e.g. two insiders: „Unn?“ – „Jo.“)
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φωv

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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- (Material reality: Bipedal apes making noises with their faces)

φωv

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology



## Higher strata constraining lower strata

- “*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.“)
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φωv

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

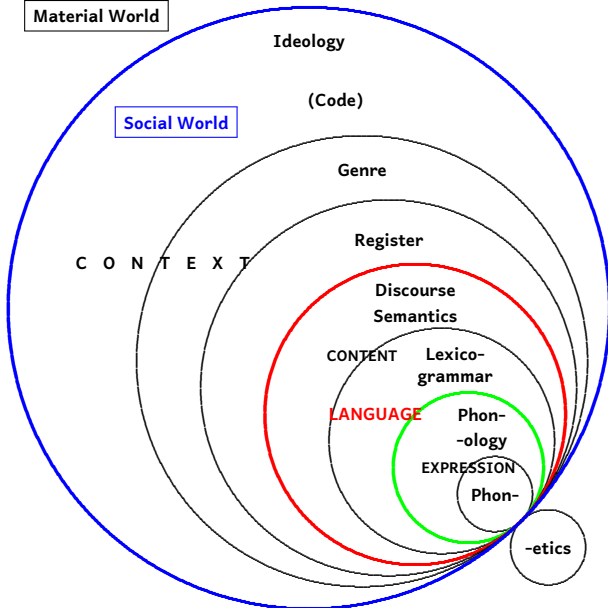
Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

Material World



φωv

Theoretical introduction (1)

Outline

From matter to meaning: language in the evolutionary order

Signs and semiotic systems

Dimensions in the Systemic Functional theory of language

Manifestation

Stratification

Metafunction

Instantiation

Rank

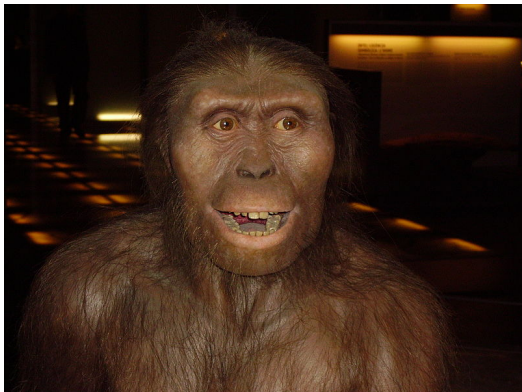
Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## Ideology is historically conditioned



Source: Wikipedia / Licence: CC by SA 2.0

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

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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

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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)

Theoretical introduction (1)

Outline

From matter to meaning: language in the evolutionary order

Signs and semiotic systems

Dimensions in the Systemic Functional theory of language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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

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

Theoretical introduction (1)

Outline

From matter to meaning: language in the evolutionary order

Signs and semiotic systems

Dimensions in the Systemic Functional theory of language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 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' 麻 má 'Hanf' 馬 mǎ 'Pferd' 罵 mà 'fluchen'
--------------	-----	--

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## The potential and the actual

- Today's weather is an actual instance of the climate.



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### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 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.



φωv

### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology



## 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.



φωv

### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 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).



φωv

### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 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).



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

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### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## Rank: bigger units made up of smaller ones



### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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

## There is a rank scale in phonology, too

tone group	ə <sup>^</sup> n <b>æst</b> ə rɔɪd <b>kɪld</b> ðə <b>dɑɪn</b> ə sɔ:z								
foot	<sup>^</sup> ən	<b>æst</b> ə rɔɪd			<b>kɪld</b> ðə		<b>dɑɪn</b> ə sɔ:z		
syllable	ən	æst	ə	rɔɪd	kɪld	ðə	dɑɪn	ə	sɔ:z
phoneme	ə n	æ s t	ə	r ɔ ɪ d	k I l d	ð ə	d a i n	ə	s ɔ : z

φων

### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## A structure is a configuration of functional roles

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

syllable	sɔ:z			(bigger unit)
(STRUCTURE)	Initial	Nucleus	Final	← functional roles
phonemes	s	ɔ:	z	(smaller units)

or:

syllable	sɔ:z			(bigger unit)
(STRUCTURE)	Onset	Rhyme		← functional roles
		Nucleus	Coda	
phonemes	s	ɔ:	z	(smaller units)

φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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

must

and you should learn it

may

I

and you should learn it

she

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

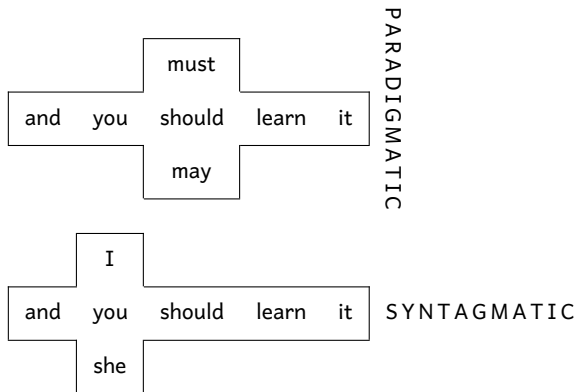
Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

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



φωv

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology



## There is choice and chain in phonology, too

		f
		θ
		s
		ʃ
f		v
θ		ð
<hr/>		
s	ʒ:	z
<hr/>		
ʃ		ʒ
v		
ð		m
z		n
		ŋ
h		
m		
n		

sɔ:z ʃɔ:z ɫɔ:z fɔ:θ fɔ:s fɔ:m fɔ:n fɔ:l (all exist)

φων

### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 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:

[ ɹ̥<sup>w</sup>ed̚ ]

φων

Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

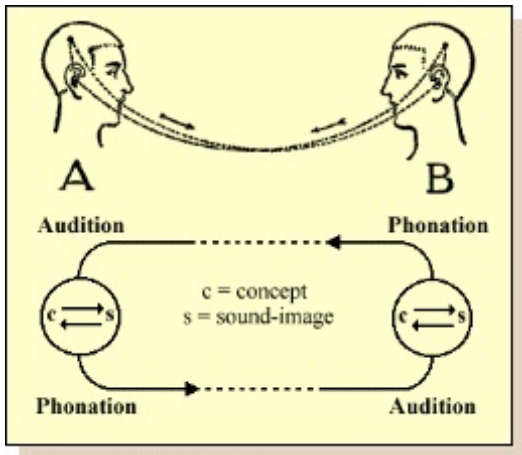
Delicacy

Three kinds of phonetics

Phonetics vs. phonology

# Articulatory, acoustic and auditory phonetics

(Fig. 5 here)



**Figure:** Producing, transmitting, and receiving signs

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

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”.

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### Theoretical introduction (1)

#### Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 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”

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Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology

## 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](http://www.spence.saar.de/courses/phonetics/coursenotes201602/fascicles/fascicle_01.pdf)



Theoretical  
introduction (1)

Outline

From matter to meaning:  
language in the  
evolutionary order

Signs and semiotic systems

Dimensions in the Systemic  
Functional theory of  
language

Manifestation

Stratification

Metafunction

Instantiation

Rank

Axis

Delicacy

Three kinds of phonetics

Phonetics vs. phonology