

# Phonology (class 1)

## Business:

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The basic requirements for the course are:

- *Active participation* (two absences allowed, but no absentmindedness. The best way to make a good impression is to participate in discussions, do homework, ask relevant questions and generally show interest in the subject)
- *Readings* (almost each week there will be something to read at home and prepare for discussion, very often specific instructions will accompany the reading assignments)
- *Tests* (there will be **at least** two tests)
- *Exam* (final big test)

## What is the subject of study in any science and what are the procedures/methodology?

### INTRODUCTION

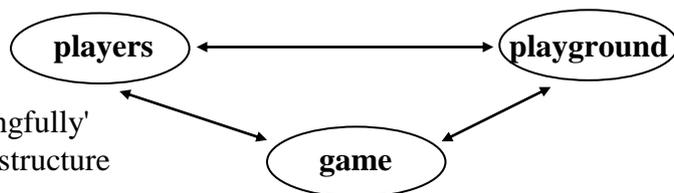
Language and linguistic modules (e.g. phonology, morphology, syntax etc.) exhibit internal logic – it is a self-organizing system (a mini-universe as in (1)).

(1)

who?

categories:

Cs, Vs + 'meaningfully'  
defined internal structure



where?

context, domain:

phonological word

#.....#

linearly ordered Cs&Vs

**CVCV, CVVCV, CVCCV**

syllable structure

what and how can we play?

C ↔ C

V ↔ V

C ↔ V

} **interactions**

(relations)

effects?

depend on whether there is or isn't a relation

(↔)

depend on what Cs & Vs are made of

(properties)

Rules of the game follow from the inherent properties of categories and the nature of the domain of interaction. The above scheme works for any area of scientific investigation.

(2)

chemistry	chess game
<b>players:</b> elements defined in terms of properties such as valence, atomic weight, density, etc	<b>players:</b> chess pieces defined in terms of status and types of movements they can make
<b>playground:</b> test tubes, environment (radiation)	<b>playground:</b> chessboard (determines possible movements)
<b>game:</b> reactions depending on the properties of elements and environment + effects: e.g. fusion, fission. The types of possible chemical processes are determined by the nature of players and playground ( $2\text{H}_2 + \text{O}_2 > 2\text{H}_2\text{O} > 2\text{H}_2 + \text{O}_2$ )	<b>game:</b> <i>principles of movements</i> , e.g. straight, diagonal, knight's movement, castling + <i>effects:</i> blocking, checking, capturing (deleting), promoting

### (3) FIRST STEPS IN SCIENTIFIC DISCOVERY

- establish the players (categories) and the playground
  - *astrophysics*: planets **vs.** space, etc.
  - *physics*: elements like water, gas **vs.** environment, etc.
  - *sociology*: a person **vs.** society, etc.
- characterise the players (definition of categories) to make them distinguishable from others – give names and labels, define properties, etc.
  - *physics, chemistry*: oxygen – “a colourless odourless highly reactive gaseous element: the most abundant element in the earth's crust (49.2 per cent). It is essential for aerobic respiration and almost all combustion and is widely used in industry. Symbol: O; atomic no.: 8; atomic wt.: 15.9994; valency: 2; density: 1.429 kg/m<sup>3</sup>; melting pt.: -218.4°C; boiling pt.: -182.96°C”
- establish laws (rules of the game) in which the “players” are involved
  - *physics*: the law of gravity, weight of objects submerged in water
  - *sociology, psychology*: law of the mob, law of the stronger, survival instincts, contextual behaviour, interaction between members of opposite gender

### (4) THERE IS ALSO THE QUESTION WHY? (WHAT-WHERE-HOW-WHY)

- To answer questions beginning with “WHY” we must construct a THEORY, e.g:
  - *in socio-biology*: a lot of behavioural patterns may be “explained” by assuming that: *all creatures strive for the survival of their species* (Darwin)
  - *in physics*: the relativity theory ( $E = mc^2$ )
  - *in politics*: the conspiracy theory
  - *in economics*: the game theory (*sic!*)

### (5) Linguistics in general, is no different...

*Syntax*: ale go zrobiliśmy w trąbę vs. \*ale go zrobili w trąbęśmy

*Morphology* **govern-ment** vs. \***ment-govern**, \***govern-ation**, pan – **pan-owie**, vs. **pan-y**

*Phonology*: **drgnąć** vs. \***gndrać**

The categories, their definitions, and the laws will be of different nature, just as in the case of other branches of science, but the scientific procedures remain similar.

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### (6) How to discover PLAYERS? Phones, Allophones, Phonemes

Phonemic analysis is a method of discovering true players in phonology. Procedures:

- |                                   |   |
|-----------------------------------|---|
| A. COLLECT DETAILED PHONETIC DATA | there are more phones than phonemes, e.g. [p <sup>h</sup> , p, b], [l, ł]   |
| ↓                                 | the list has to be methodically reduced                                     |
| B. CARRY OUT A PHONEMIC ANALYSIS  | - minimal pairs / contrastive units, e.g. [p <sup>h</sup> m] / [bm] / *[pm] |
| ↓                                 | - complementary distribution, e.g. [sp], [l, ł]                             |
| ↓                                 | - phonetic similarity [ŋ] vs. [h]   |
| ↓                                 | - allophonic rules (phonological rules), e.g. /p/ → [p <sup>h</sup> ] / #_ŷ |
| C. LIST OF PHONEMES               | e.g. /p,t,k,b,d,g,l, ɪ, ʊ, i:, u:..../                                      |

**(7) Activity I: DARK and CLEAR [l] in RP English**

(define the contextual distribution). Where to look? **Playground!** #\_, \_#, V\_, \_V, C\_, \_C

**a. CLEAR**

light [laɪt]	loom [lu:m]	London ['lʌndən]
Dublin ['dʌblɪn]	allow [ə'laʊ]	hilarious [hɪ'leəriəs]
belly ['beli]	fillip [fɪlɪp <sup>h</sup> ]	pillow ['pɪləʊ]
brilliant ['brɪljənt]	failure ['feɪljə]	
all over [ɔ:'ləʊvə]	tell us [t <sup>h</sup> elʌs]	cool and calm [k <sup>h</sup> u:lən'kɑ:m]

**b. DARK**

file [faɪl]	rule [ru:l]	dull [dʌl]
dullness ['dʌlnəs]	help [heɪp]	filter ['fɪltə <sup>h</sup> ]
dangle [dæŋɡl]	always [ɔ:'tʌwɪz]	Salisbury ['sɔ:tzbrɪ]
Hilton ['hɪltən]	gamble [gæmbəl]	belfry ['beɪfri].

**c. what phenomenon is illustrated in c?**

gamble [gæmbəl]	gambling ['gæmbliŋ]	gambler ['gæmblə]
fail [feɪl]	fail it ['feɪlɪt]	failure ['feɪljə]
oil [ɔɪl]	oily [ɔɪli]	oil on troubled waters [ɔɪl]
dull [dʌl]	dullest [dʌlɪst]	dull as ditch-water [dʌl]

Results:

**(8) Activity II: Voicedness of fricatives in Old and Modern English**

**a.**

[f]	findan ['findan] 'find'	fōt [fo:t] 'foot'
	sceaft [ʃaft] 'creation'	wīf [wi:f] 'wife'
	wulf [wulf] 'wolf'	lyffettan ['lyf:et:an] 'flatter'
[v]	wulfes ['wulves] 'wolf, gen. sg.'	giefan ['jevan] 'give'
	earfoð ['æarvoθ] 'work'	nifol ['nivol] 'dark'
	æfen ['æ:ven] 'evening'	
[θ]	þegn [θe:ɲn] 'nobleman, thane'	þēod [θe:od] 'nation'
	bæð [bæθ] 'bath'	fýlb[fy:lθ] 'filth'
	scedðan ['ʃeθ:an] 'harm'	
[ð]	bæðe ['bæðe] 'bath, dat. sg.'	cýðan ['ky:ðan] 'make known'
	weorðan ['weorðan] 'become'	hoðma ['hoðma] 'darkness'
[s]	sellan ['sel:an] 'give'	spor [spor] 'trail, spoor'
	bletsian ['bletsian] 'bless'	prēost [pre:ost] 'priest'
	læssa ['læ:s:a] 'less'	
[z]	wesan ['wezan] 'be'	cēosan [tʃe:ozan] 'choose'
	hāses ['ha:zes] 'hoarse, gen. sg.'	horsum ['horzum] 'horse, dat. pl.'
	wīse ['wi:ze] 'wisely'	

**b.**

a.	other ['ʌðə]	southern ['sʌðən]
	father ['fa:ðə]	weather ['weðə]
b.	apathy ['æpəθi]	author ['ɔ:θə]
	pithy ['pɪθi]	ether ['i:θə]
c.	sleuth [slu:θ]	oath [əʊθ]
	labyrinth ['læbɪrɪnθ]	hyacinth ['haɪəsɪnθ]
d.	smooth [smu:ð]	loathe [ləʊð]
	breathe [bri:ð]	bathe [beɪð]

Results:

**(9) Activity III: Nasal sounds vs. nasal phonemes in English,** The data:

[m] [mʌðə], [neim], etc.

[ŋ] [kʌŋfət], [emvɪloup], etc.

[n] [nɪk], [p<sup>h</sup>n], etc.

[ŋ] a. sun [sʌn] – some [sʌm] – sung [sʌŋ], win [wɪn] – whim [wɪm] – wing [wɪŋ]

b. finger [ˈfɪŋɡə] anger [ˈæŋɡə] mango [ˈmæŋɡəʊ]  
anchor [ˈæŋkə] monkey [ˈmʌŋki] donkey [ˈdɒŋki]

c. sing [sɪŋ] / sink [sɪŋk] bring [brɪŋ] / brink [brɪŋk]

!!! d. long [lɒŋ] longer [lɒŋɡə] longer [lɒŋə]  
sing [sɪŋ] singer [sɪŋə]  
stronger [strɒŋɡə]

Results:

## Homework: nasal sounds in Polish

Let us try and establish some players, definitions, and laws concerning the distribution of nasal sounds in Polish on the basis of what we know about Polish and the following data.

### What nasal sounds (phonetically speaking) can we enumerate?

ręka	pompa	Pan Bóg
koń	ponton	Pan Wachowski
koni	tamta	Pan Kowalski
miotła	klamka	Pan Cimoszewicz
komsomoł	kanwa	Pan Hilary
firanka	konfitura	Pan Kita
konserwa	omsknąć	