

## English Phonetics-II

### 7- Approximants, nasals and syllabic consonants

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#### Lecture outline

- Approximants. Definition
  - Their phonetic classification
  - English approximants. Inventory
- English semivowels /j-w/
- Lateral /r/
  - Phonetic realizations of /r/.
- Lateral /l/
  - RP main allophonic varieties of /l/.
- Nasals
- Syllabic consonants.
- English vs. Spanish approximants

## 1. WHY APPROXIMANTS?

- **Approximants**, a term used by some phoneticians in the classification of speech sounds on the basis of the articulations involved: **not audible friction**. They correspond to what in other approaches would be called 'frictionless continuants'.
- Although all English vowels are frictionless continuants, this term is restricted to those vowel-like sounds which are consonantal in function, i.e. semivowels, laterals and nasals.
- **Semivowels** are vowel sounds occurring at the margins of a syllable. They have less duration than that typical of vowels.

## 2. THEIR REPRESENTATION AND CLASSIFICATION IN THE IPA

### THE INTERNATIONAL PHONETIC ALPHABET (revised to 2005)

CONSONANTS (PULMONIC)

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	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

### 3. ENGLISH APPROXIMANTS: INVENTORY

- /w/ voiced labial-velar central approximant  
(e.g. wet /wet/, whale /weɪl/, one /wʌn/)
  - /j/ voiced palatal central approximant  
(e.g. yet /jet/, few /fju:/, pure /pjʊ:/)
  - /r/ voiced post-alveolar central approximant  
(e.g. ray /reɪ/, sorry /'sɒri/, write /raɪt/)
  - /l/ voiced alveolar lateral approximant  
(e.g. leaf /li:f/, call /kɔ:l/)
- } Semi-vowels  
or  
Glides
- } Liquids

### 4. SEMIVOWELS /W/- /J/

#### Why 'semivowels'?

- Never nuclear
- Differ from pure vowels in their distribution, force of articulation and length.
- Unique after plosive or S+stop
- Brief sounds (hence the term 'glide')
- Lack friction, but /j/
  - ◆ May have friction word-initially after plosive: e.g. *don't you, how do you do...*
  - ◆ May have friction word-medially: e.g. *educate, christian,*

#### 4.1 SEMIVOWEL /j/

- **Articulation:** palatal if followed by [+high]: *huge*
- **Pronunciation:** Not after affricates (e.g. *June*), C+l (e.g. *blue*), nor R (e.g. *rule*), but **VARIATION** after [l,n,θ,s/z] (e.g. *value, news, enthusiasm, suit...*). But obligatorily inserted after **STOPS, /h/ or LABIODENTALS:** *music, beauty, queue, huge...*
- It is never followed by a consonant and never occurs finally in a word
- **Phonetic representation:** Never [j]
  - ◆ Word-initial, unstressed syll. + stressed syll.: e.g. *theological, realistic...*
  - ◆ After R: e.g. *criteria, material...*
  - ◆ In stressed syllable (including secondary stress): *serious, deterioration...*
 But: *familiar* [i]/[j]

#### 4.2 SEMIVOWEL /w/

**Articulation:** labio-velar (more labial than 'hueso').

- In some accents of English, there is an approximant related to /w/. This is the voiceless labial-velar approximant /w̥/ (double-articulated like /w/, equivalent to [w]).

Not pronounced before 'r': e.g. *write, wring, etc.*

- \* **[M]** is typically spelled <wh>. Speakers who use it distinguish between words like *whine-wine*. Although few speakers in England produce [M] - mostly those who do have often undergone speech training of some kind- **all words spelled <wh> can alternate their pronunciation** (labio-velar /labio-velar approximant) and so are represented in the main pronunciation dictionaries (except where the alternation has frozen favouring [hw] as is the case of *who* and *whose*. Sociolinguistically, its presence in ordinary speech is 'negligible' (Wells, *Whatever happened to RP..*)

### 4.3 COMPRESSION (WELLS, EPD, 173)

- A sequence of sounds may have two pronunciations: as two separate syllables or as single one (i.e. compressed).  
E.g. *lenient*= 'li:ni ənt (uncompressed) / 'li:njənt (compressed);  
*diagram*: 'daɪ əgraem (uncompressed) / 'dægraem (compressed)
  - The uncompressed form is more usual in slow speech and in rare words, the compressed is more common in casual speech
- **COMPRESSION RULES:**
  - A weak **i / u** → **j -w ('semivowel')**: 'ɪnfluənts → 'ɪnflwənts ('*influence*'), thus resulting in an opening 'diphthong')
  - A syllabic C → **non-syllabic**: 'dʌb-əl-ɪŋ → 'dʌb-ɪ-ɪŋ (no superscript schwa between /b/ and /l/)
  - A long V or diphthong → **the former loses its length and the latter its second element**: *ruinous*: 'ru:ɪnəs → 'rʊɪnəs; *scientist*: 'saɪəntɪst → 'sæntɪst.
  - With two potential syllabic Cs, the first undergoes compression: *national, liberal, etc.*: 'næʃnəl → 'næʃnəl/. **Notice**: *simpler*= 'sɪmplə (no \* ['sɪmpələ]), *remembrance*= rɪ'membərəns (no\* [...bərəns] – also shown in the spelling: no\* *rememberance*).

### 4.4 SEMIVOWELS: THEIR ALLOPHONES

/j/      voiced palatal

[ç]      voiceless fricative after aspirated /p, t, k/ and for /hj.../

[j]      elsewhere

/tjʊ:m/ [tçʊ:m]; /hju:dʒ/ [çʊ:dʒ]

(limited distribution - syllable-initial position only)

/w/      voiced labial-velar

[ʍ][w̥] voiceless after aspirated /p, t, k/

[w]      elsewhere

/kwɪn/ [kʍɪ:n] (or [kwɪ:n])

(limited distribution - syllable-initial position only)

## 5. LATERAL /r/

**Articulation:** post-alveolar frictionless continuant (O'Connor, 149).

**Spelling:** <r> (*very*), <rr> (*arrow*), <rh> (*rhythm*), <rrh> (*catarrh*, *hemorrhage*).

### \* VARIANTS:

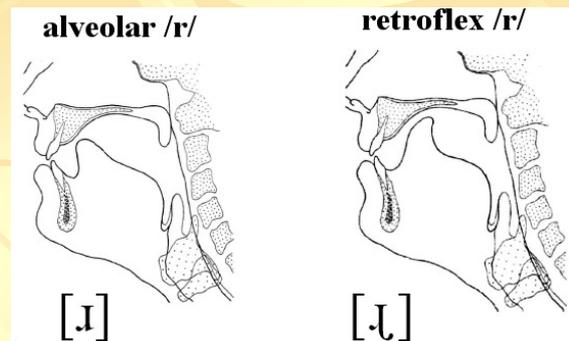
- \* **Neutral** [r]: as in *red* (a post-alveolar approximant)
- \* **Mute** (non-rhotic, see below)
- \* **Intrusive** (*the window –r– is open*, –not recommended to foreigners, but very common)
- \* **Linking:** e.g. *beware of the dog*. But linking is disallowed if two Rs occur: *nearer-and-nearer*, *further-and-further...*
- \* (cont'd)

### 5.1 LATERAL /r/: its main variants (cont'd)

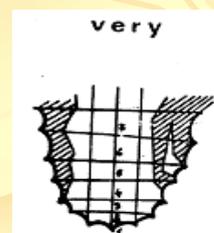
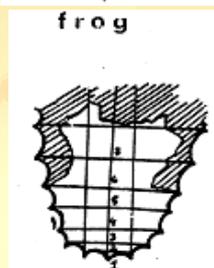
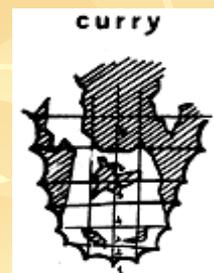
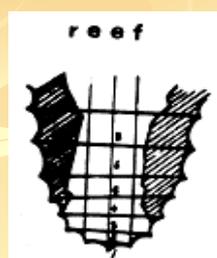
- \* **Retroflex** (not in RP, but the type of R-colouring found in North Lancaster, Somerset and South Ireland): e.g. *bærd* (*bird*).
- \* **Rolled or trilled r** (not in RP except in emphatic speech, singing, etc. Common in Scottish and Irish accents)- [r̄] (because not an RP sound, it is used to represent the **r** phoneme in RP).
- \* **Approximant** (ɹ), no tongue contact). Between vowels: *very*, *curry*, etc.
- \* **Flapped or tapped r:** in RP between two vowels (e.g. *very*= [r̩]). Now nearly lost in current RP, becoming an ordinary approximant (ɹ) [Wells, *Whatever happened..*]
- \* **Devoiced /r/:** after /p,t,k/ in stressed position (e.g. *cry*).
- \* **Syllabic /r/** (rare in RP) : e.g. 'bʌt̩r (' *butter*).
- \* **Fricative:** only after /d/: *dream*, *dry*, etc.

### 5.1.1 PHONETIC REALIZATIONS OF /r/

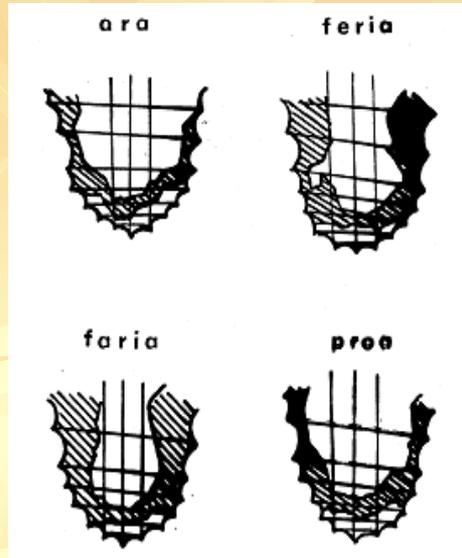
In RP it is a voiced post-alveolar central approximant (also described as a *frictionless continuant*), but in GA is a retroflex sound



### 5.2 SAMPLES OF ENGLISH /r/ (Monroy, 1981)



### 5.3 SAMPLES OF SPANISH /r/ (Monroy, 1981)

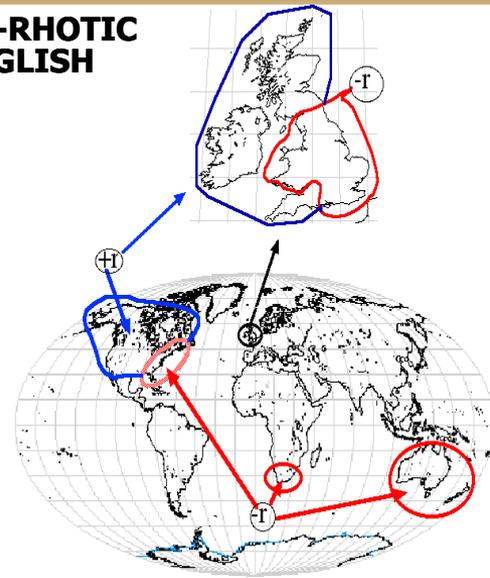


### 6. RHOTIC VS. NON-RHOTIC VARIETIES OF ENGLISH

- *store* /stɔ:/
- *stork* /stɔ:k/

(no /r/ since <r> is followed by a pause –*store*– or consonant sound –*stork*–)

- — *storing* /stɔ:rɪŋ/
- — *store it* /stɔ:rɪt/



## 6.1 ALLOPHONIC VARIANTS OF /r/

[r] tap after /θ, ð/  
 [ɹ] fricative after /d/  
 [ɹ̥] devoiced after aspirated /p, t, k/  
 [ɹ] elsewhere  
 /θri:/ [θri:]; /draɪ/ [dɹaɪ]; /preɪ/ [pɹeɪ]; /rɛd/ [ɹɛd]  
 (limited distribution - syllable-initial position only)

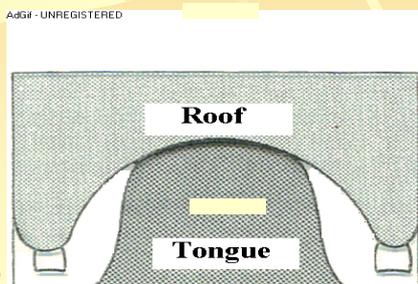
[ʊ] semivowel: *red* (mind the symbol: it is not [ʊ])

In Scotland, voiced alveolar trill [r]. The symbol **r** stands for a trill in the IPA, but it's typically used in *phonological* transcriptions of English irrespective of the actual pronunciation

## 7. LATERAL /l/

- **Articulation:** /l/ is defined as an alveolar sound in English. Median approximants have no complete closure anywhere on the side-line of the vocal tract, therefore there is no turbulence of the air.

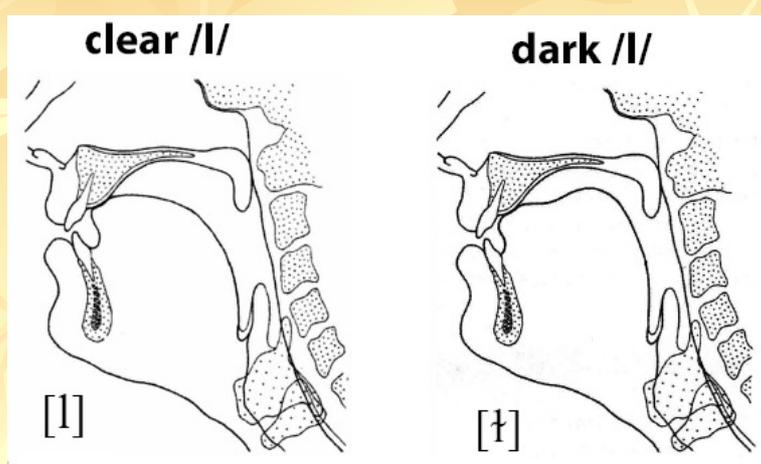
- Lateral approximants have a complete closure on the midline of the vocal tract, with simultaneous wide approximation at one (unilateral) or both (bilateral) sides of the tongue so the air leaves the oral cavity *laterally* without turbulence.



## 7.1 ALLOPHONIC VARIANTS OF /l/

- **Dental** [l̪] (intrinsic): *health, tell those*.
- **Palatal** [lʲ] ('clear l'): USA, Australia, South Africa in all positions. In RP, initially and medially in a word (*lip, filling*).
- **Velar** [ɫ] ('dark l'): Ireland, High Scotland, South Wales, in all positions. In RP, always after vowels: *fill, railway, etc.*
- **Vocalised** [ɫ]: transcribed [o], [ʊ] (e.g. *milk*=[mɪʊk] in Cockney and Estuary English).
- **Devoiced** [l̥]: after a fortis plosive, /f/ (e.g. *fly*) or even /s/ (e.g. *slain*).
- **Syllabic** /l/ (see below)

### 7.1.1 RP MAIN ALLOPHONIC VARIANTS OF /l/.



### 7.1.2 ALLOPHONIC VARIANTS OF /l/ (cont'd)

- One important characteristic of these allophones is that they are in complementary distribution **in pairs**, that is
  - Clear vs. dark /l/
  - Voiced vs. devoiced /l/
  - Dental vs. alveolar /l/
  - Syllabic vs. non-syllabic /l/

#### SPECIAL CASES:

- ☞ l+l (e.g. *solely, wholly, skill-less...*)
- ☞ Mute: *salmon, Lincoln, Holmes, folk, golf (?), walk...*

### 8. FRICATIVE REALIZATIONS OF APPROXIMANTS

When preceded by a syllable-initial voiceless plosive (i.e. /p, t, k/), approximants are *devoiced* (i.e. become partially voiceless) and slightly fricative

	Phonological transcription	Phonetic transcription
<i>play</i>	/pleɪ/	[p̚leɪ]
<i>cry</i>	/kraɪ/	[k̚raɪ]
<i>twin</i>	/twɪn/	[t̚wɪn]
<i>pure</i>	/pjʊː/	[p̚jʊː]

## 9. ENGLISH NASALS

- **Definition:** Sounds produced with a complete closure in the mouth (=stops), all the air escaping through the nose.
- **Characteristics:**
  - Not pronounced initially nor finally in a word: mneumonia, autumn (but they are if second is head: autumnal, damnable).
  - Produce drop of homorganic stop: empty, distinction, anxious. In a few cases, intrusive plosive: bramble, number, chamber...
  - Can be replaced by a stop: *Tom is hurting me.*
  - Their vocalic nature: they may perform a syllabic function.
- **/m/**
  - Bilabial: word-initially (e.g. man).
  - Labiodental [ɱ]: comfort, in vain.
  - Syllabic: after [s,θ,ð,z]: rhythm, spasm, ... also following /p/ -/b/: *happen, open...*
- **/ŋ/ (never in initial position)**
  - Velar: sing, song (but in north-west Midlands =[ŋg] (singing). So here [ŋ] is an allophone of /n/ (G+Cr,199).
  - Labiodental [ɱ]: comfort, in vain.
  - -ing =[ɪŋ] low class; intermediate class may use in familiar speech.

### 9.1 NASAL /n/

One of the most versatile phonemes  
ALLOPHONIC VARIANTS (assimilation):

- ☞ Dental: before dental /θ, ð/: *tenth* [tenθ]). **Obl.**
- ☞ Bilabial: as in *ten pounds* [tɛn pʰaʊndz]), *impossible*, ... **Opt.**
- ☞ Labio-dental: as in *in vein* [ɪŋveɪn]), *infant*, ... **Obl**
- ☞ Post-alveolar: as in *French*, ... **Obl**
- ☞ Velar: *England* [ˈɪŋɡlənd],... **Opt.**

#### NOTE:

- a) the case of [ŋ]-[ŋg]: *singer vs. anger* (but notice the comparative and superlative forms: always [ŋg], *longer, longest...*
- b) ***incline, engage, include...*** [NO assim. in careful speech].
- c) English disallows two nasals in onset or coda position **within the same syllable**: e.g. *Solemn, hymn, etc.* (only [...m] sounds)
- c) No geminated Cs in English, so ***innate, immature***= n / m (as in Spanish [inato] vs. innato).

## 9.2. NASALS: THEIR MAIN ALLOPHONES

/m/ voiced bilabial

[m̥] labiodental before /f, v/

[m] elsewhere

/kʌmfət/ [kʰʌm̥fəʔtʰ]

/n/ voiced alveolar

[n̪] dental before dental consonants

[m̥] labiodental before /f, v/

[n] elsewhere

/tɛnθ/ [tʰɛn̪θ]; /kən'vɜ:s/ [kʰɛm̥'vɜ:s]

/ŋ/ voiced velar

(limited distribution - before /k, g/ or in syllable-final position only)

## 10. SYLLABIC CONSONANTS

A **syllabic consonant** is a consonant which either forms a syllable of its own, or is the nucleus of one (e.g. sʌd n li).

The **syllabic consonants in English** are the **nasals** and the **liquids** (the most common ones are /n/ - /l/ -r in AmE)

### THEIR REPRESENTATION:

- It is always possible –though not always usual– to pronounce ə+l instead of syll. [l]: 'ribn / 'ribən (Wells: -ən =not recommended vs. -ən, recommended: e.g. *distant*).
- /r/ most often in rhotic accents; not common in RP, but when it occurs, there are alternative pronunciations besides using a syllabic consonant (e.g. *water in here* [wɔtər ɪn hɪə] or [wɔtr ɪn hɪə]. In AmE, use of special symbol: [ə̃]. Rhythmic cum stylistic factors play a fundamental role in the use of syllabic consonants.

## 10.1 ENGLISH SYLLABIC CONSONANTS. THEIR REPRESENTATION

The IPA diacritic for 'syllabicity' is an under-stroke <sub>̩</sub> (it can be dispensed with in phonological transcription since syllabic consonants are fairly predictable)

	Phonological transcriptions			
<i>button</i>	/ˈbʌt.ən/	/ˈbʌt.ən̩/	/ˈbʌt.n̩/	/ˈbʌt.n̩/
<i>cattle</i>	/ˈkæt.əl/	/ˈkæt.əl̩/	/ˈkæt.l̩/	/ˈkæt.l̩/
	not common because schwa is rare	means ə can be found but is typically elided	indicates explicitly that /n, l/ are syllabic because there's no ə	not indicating explicitly that /n, l/ are syllabic

## 10.2 SYLLABIC Cs. GENERAL RULES (Monroy, 1984)

- ◆ **Vowel (stressed) + C** other than [r, -l, -m, -b, -g] = syllabic (*lesson, people, often...*)
- ◆ **V (stressed) + r, l, m, b, g** = schwa (*melon, lemon, ribbon, organ...*)
- ◆ **V (stressed) + N+N / or homorganic** = schwa (*London, Camdem, cannon, human...*)
- ◆ **V (stressed) + CC** = syllabic (*symbol, quarrel, ...*)

### 10.3 SYLLABIC Cs. Their reflection in Dict's

(BrE)	EPD	LPD	ODP
<i>bottle</i>	'bɒt.l	'bɒt ə'l	bɒtl
<i>glottal</i>	'glɒt.əl	'glɒt ə'l	'glɒtl
<i>garden</i>	'gɑː.dən	'gɑːd ən	'gɑːdn
<i>distant</i>	'dɪs.tənt	'dɪst ənt	'dɪst(ə)nt
<i>Clinton</i>	'klɪn.tən	'klɪnt ən	'klɪntən

(BrE)	EPD	LPD	ODP
<i>generally</i>	'dʒen.ər.əl.i	'dʒen ər.əl i	'dʒen(ə)rəli, 'dʒen(ə)rli
<i>naturally</i>	'nætʃ.ər.əl.i	'nætʃ ər.əl i	'natʃ(ə)rəli, 'natʃ(ə)rli
<i>gardener</i>	'gɑː.dən.ə, 'gɑːd.nə	'gɑːd nə	'gɑːdnə(r), 'gɑːdnə(r)
<i>gluttony</i>	'glʌt.ən.i	'glʌt ən i	'glʌtəni, 'glʌt ni

### 10.4 Syllabic consonants (cont'd)

	EPD	LPD	ODP
<i>convenient</i>	kən'viː.ni.ənt US -'vɪn.jənt	kən 'vɪn i.ənt ʃkɒn-	kən'vɪn.jənt AM kən'vɪnjənt
<i>glorious</i>	'glɔː.rɪ.əs	'glɔːr i.əs	'glɔːrɪəs AM 'glɔːrɪəs
<i>annual</i>	'æ.n.ju.əl	'æ.n ju.əl	'anjʊəl, 'anjəl
<i>fire</i>	'faɪə	'faɪə	'faɪə(r) AM 'faɪ(ə)r

### 10.5 SYLL Cons. SOME EXAMPLES

1. As men conversing with babes use their **BROKEN** speech. (‘\_ ən ‘\_)
2. But surely you wouldn't **OPEN** the letter.
3. They had **STOLEN** gold and silver.
4. Let it not be **FORGOTTEN** that Henry paid.
5. The blow was so heavy that its effect was to **DEADEN** rather than **QUICKEN** the girl's sensibility.
6. He sat beside the **STRICKEN** girl and treated her for **CHICKEN-POX**.
7. He was sent to **PRISON** for **TREASON**.
8. He turned **HEAVEN** into hell.
9. The woman was **BEATEN** by her **DRUNKEN** husband.
10. She chopped the **TABLE** into **LITTLE** pieces.

### 11. ENGLISH VS. SPANISH APPROXIMANTS

- Spanish has no /w/ and /j/ as consonantal phonemes.
- Spanish /l/ is like English 'clear l'. Dark 'l' is only used in the speech of Catalans speaking Spanish or Catalan.
- Spanish has two rhotics, the voiced alveolar tap /r/ and the voiced alveolar trill /r̄/, which books in the Spanish tradition often represent as /r̄/ (and the tap as /r/) but the diacritic is not IPA practice (cf. *pero* /pero/ vs. *perro* /perro/).

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