

English Phonetics-II

10. Lexical stress

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Lecture outline

- Stress vs. Accent
- Views about English stress
- Levels of stress
- Lexical stress in English
 - Rule keeping and stress attracting suffixes
 - Stress rejection to one/two preceding syllables
 - Clusters and echo stress rule
 - Dynamic and rhythmic stress
 - Lexical function
 - The role of grammar
 - Double stress and stress shift
 - Stressing in succession
 - Stress beyond the word domain.

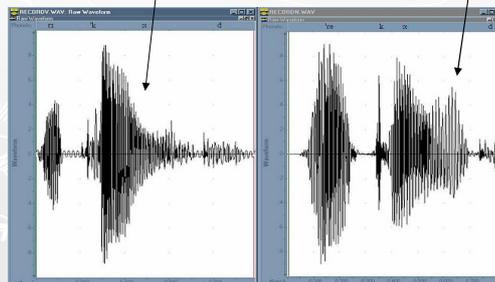
1. STRESS VS. ACCENT

- ▶ **Stress**= **Phonetically**, degree of force used in producing a syllable (phonetic term). **Phonologically**, it distinguishes degrees of emphasis /contrast (e.g. *'increase* vs. *in 'crease*). In **rhythm** the notion of stress-timed L's is often heard.
- ▶ **Accent**: a feature of the word/utterance (e.g. a strongly accented speech).
 - Acoustic cues:
 - **vowels** are **longer** (greater duration)
 - **intensity** and **amplitude** are **greater** (loudness)
 - **fundamental frequency (F0)**: **higher** pitch.

1.1 ACOUSTIC CUES

re'cord (v)

'record (n)



Oscillogram displays evolution of amplitude against time

2. VIEWS ABOUT ENGLISH STRESS

- ▶ **Pessimistic:** "No rules...the foreign student is obliged to learn the stress of each word individually (Jones, *Outline*)
- ▶ **Optimistic:** "English orthography despite its often cited inconsistencies, comes remarkably close to being an optimal orthographic system for English (Chomsky & Halle, 1968).
- ▶ **Pedagogical approach: Stress, reasonably amenable to rule:**
 - Kingdon (1958): *Groundwork of E. Stress* (too complex)
 - Greven, H.A. (1972): *Elements of E. Phonology*. PUF.
 - Guièrre, L. (1975): *Drills in E. Stress-Patterns*. [EPD]
 - Fudge, (1984). *English Word Stress*. Allen & Unwin.
 - Monroy (2004 [1991]): *El acento léxico inglés. Reglas de acentuación*. Buenos Aires: LibrosEnRed.

3. LEVELS OF STRESS

- **Three levels: primary, secondary and no stress** (in the USA structuralist tradition, four levels –four phonemes: 1-primary, 2-secondary, 3-tertiary, 4-weak, e.g. **2op4er1at4or**)
- Non-primary stresses never occupy final position

<i>letter</i>	'letə
<i>full-time</i>	,fʊl'taɪm
<i>demographic</i>	,demə'græfɪk
<i>maternity</i>	mə'tɜːnɪ.ti
<i>extraterritoriality</i>	,ekstrə'terɪtɔːrɪ'æləti

4. STRESS NOTATION

ˌɔːɡnaɪz'eɪʃn

- Standard IPA phonetic notation:
 - high vertical stroke ['..] (primary stress)
 - low vertical stroke [,...] (secondary stress) -if marked-
 - No mark for unstressed syllables
- Other conventions (textbooks, monolingual dicts, etc.)
 - prime mark after the stressed syllable (/la'-dy/ -not common.
 - acute accent on a syllable's vowel (e.g. lády)
 - bold, capitals, underlining, etc. (e.g. **lady**, **LADy**, lady)

5. STRESS PLACEMENT

- ▶ Where does the primary stress fall?
- **Fixed-stress** languages (always on a given syllable)
 - On the same syllable: 1st (e.g. Finnish), penultimate (e.g. Polish), final (e.g. Czech), etc.
 - On different syllables but predictably (e.g. Latin)
- **Variable-stress** languages (-at least partly- unpredictable though orthography may help)
 - E.g. English, Spanish, Italian, German, etc. Notice the case of French, where stress –unlike Spanish: *mando-mandó*– is not contrastive.

6. LEXICAL STRESS IN ENGLISH

- ▶ **Rule 1: RULE OF PERMANENCE:** In primitive words of Saxon origin (mostly monosyllabic or disyllabic words), and some of Latin origin (eg *Necessary* -' *necessarily* (only 32%) stress remains on the root. This permanence is not affected by any prefix or suffix . Eg *'lovely* , *'loveliness* . *'Like* - *'likely* , *'likelihood* ; *play- playfully- playfulness*, etc.
- ▶ **Rule 2: MOBILITY RULE:** In words of Latin origin (mostly polysyllabic) , the focus is at the mercy of prefixes and suffixes. Those suffixes that change the position of the primary stress on the primitive form , leave a 'signal' of it as a secondary stress . Ex. *fa¹miliar* (primitive word) becomes *fa²mili¹arity*.
- ▶ Rhythmical reasons **inhibit the presence of two consecutive stresses** When this happens, the secondary stress disappears: Ex - *²mathe¹matics* → *²mathema²tician*. If the root word carries secondary stress (eg. *²indi¹vidual*), both stresses, primary and secondary, become secondary: *²indi ²vidu¹ality*) .

6.1- STRESS-KEEPING SUFFIXES

- ▶ **Inflexional forms:**
 - Plural markers: *di'sasters*, *judges*, etc.
 - Verbal endings in (**-ed, -ing**): *su'specting*, *caring*, *'telephoned*, etc.
- ▶ **Names of trades in -er, -or, -ist/ism**: *manu'facturer*, *'loyalist*, etc.
- ▶ **Words endings in -ful, -fold, -ment, -dom, -less, -ness, -monger, -ship, -wards, -ways, -wise** (*movement*, *careless*, *carelessness*, etc.

STRESS-ATTRACTING SUFFIXES

-EE (R), -ESE, -ETTE, EE_n
 -ESQUE
 -OO(N)

Ejs: *agree*, *drawee*, *devotee*,
engineer, *serviette*, *canteen*,
burlesque, *lagoon*, *taboo*

EXCEPTIONS:

- omelette, coffee, etiquette
 - jubilee, pedigree, committee,
 yankee.

6.2 ROOT-KEEPING AND STRESS-ATTRACTION SUFFIXES

- ▶ Suffix **–ABLE (–ABLY), –IBLE** (equivalent very often to Spanish words in **–ible**), as well as the endings in **–IZE, –ISM, –IST** **keep their stress on the primitive word**
 - **a)** In words derived from **nouns** or **verbs**: *re¹ly –re¹liable, ap¹ply- a¹pplicable, re¹mark- re¹markable.*
 - **EXCEPTIONS:**

<i>¹admirable</i>	<i>¹disputable*</i>	<i>¹refutable*</i>
<i>¹lamentable*</i> ,	<i>¹comparable</i>	<i>¹applicable*</i>
<i>¹transferable*</i>	<i>¹preferable</i>	<i>¹despicable*</i>
		<i>¹reputable</i>
 - *(ir)¹reparable* (BUT *repairable* –from *repair*– follows the rule: *re¹parable*)
- ▶ **b) Bisyllabic non-verbal forms**, bear stress on **–A...:** *er¹able, dis¹able.*
- ▶ **c)** If the word **has no primitive form**, it has a pro-paroxitonic stress: *¹capable, ¹probable.*
- ▶ **d)** In words ending in **–ABILITY**, the primary stress falls on **–bi.....**, the original **primary stress** becoming **secondary**:. *¹probable – ²proba ¹bility.*

6.3. STRESS DISPLACEMENT TO PRECEDING SYLLABLE

- ▶ **i/e +vowel**
 - -ia(l)-, -ian-, -ion-, -ious
 - -eal-
- ▶ **-ity, -ety, -ify, -efy** (-ity is specially powerful: it overrides –ic (electric), -ial, -iar (speciality))
 - ▶ *Cafeteria, diphtheria, crucial, jovial, potential; comedian, vegetarian, civilian; aviation, prohibition, allusion; notorious, ambitious,...*
 - **EXCEPT:** *i'dea, 'television, 'spiritual*
- ▶ **-ic** (-icise, -icism, -icist)
 - ▶ *Electricity, horrify, society, nullify, satiety,*
- ▶ **-ion** (and derived forms)
 - ▶ *Fanatic(ism), critic(ise), classicist*
 - **EXC:** *'politics, 'catholic, 'heretic, ...*
- ▶ **-ary, -ery, -ory** (if 3 syll)
 - ▶ *Nation(al)/ -ist /ism*
- ▶ **-ate**, (if 3 syll!!)
 - ▶ *Primary, surgery...BUT ca'nary*
- ▶ **-logy, -graphy, -nomy**
 - ▶ *Vibrate, innate, frustrate,*
 - ▶ *Philology, geography, astronomy,*

6.4 STRESS DISPLACEMENT TO TWO PRECEDING SYLLABLES

- ▶ -ARY, -ERY, -ORY (if + 3 syll -if 3, on the first: *surgery, primary...*)
- ▶ -ACY, -MA(N)CY, -MONY
- ▶ -ATE
- ▶ -TORY, -DOXY, -GOGY
- ▶ -ATURE, -ATIVE
- ▶ *Preliminary, monastery, voluntary, baptistery, oratory, CATEGORY!!!, ... (a few exceptions –see my book-: accessory, centenary, machinery....*
- ▶ *Contumacy, legitimacy, matrimony, ceremony, testimony, ...*
- ▶ *Illustrate, tergiversate, educate, contemplate, tolerate, fortunate, ...*
- ▶ *Pre'paratory, 'Dormitory, 'ambulatory, 'orthodoxy, 'pedagogy, ...*
- ▶ *'Temperature, co'operative, 'generative, ...*

6.5 CLUSTERS AND ECHO STRESS RULES

a) CONSONANT CLUSTERS

Stress in preceding Vowel if not final:

con¹sensus, a¹genda, u¹tensil, fra¹ternal, un¹iversal, etc.

b) VERBAL ENDINGS IN C + t or dʒ:

a¹ffect, a¹ssist, co¹nnect, a¹rrange...

- ▶ Echo accent rule: certain derivative forms **keep a trace of their original stress**. This is a fundamental difference with stress behaviour in Spanish!
 - *'mountain → mountai'neer*
 - *Apendix apendi'citis*
 - *Rely relia'bility*
 - *Pronounce pronunci'ation*
 - *Available availa'bility*
 - *Simplify simplifi'cation, etc.*
 - What about
 - ▶ Electricity
 - ▶ Elasticity
 - ▶ Detestation, etc.?

6.6 DYNAMIC RHYTHMIC ACCENT

CHANGED STRESS PATTERN:

- ▶ Adapt → adaptation (,æ-æ-)
- ▶ Compose → composition (ɒ)
- ▶ Exclaim → exclamation (ɪ-e)
- ▶ Combine → combination (ɒ)
- ▶ Confirm → confirmation (ə-ɒ)
- ▶ Derive → derivation (ɪ-e)
- ▶ Reserve → reservation (ɪ-e)
- ▶ Horizon → horizontal (ə-ɒ)
- ▶ Spontaneous → spontaneity (ɒ)
- ▶ Electric → electricity (ɪ-e)
- ▶ Access → accessory (æ-ə)
- ▶ elastic → elasticity (ɪ-ɪ)
- ▶ explore → exploration (ɪ-e)

Echo pattern

- ▶ paradox → paradoxical
- ▶ discriminate → discrimination
- ▶ satisfy → satisfactory
- ▶ educate → education
- ▶ familiar → familiarity *
- ▶ superior → superiority
- ▶ expert → expertise
- ▶ sentiment → sentimentality
- ▶ product → productivity
- ▶ original → originality
- ▶ irreparable → irreparability
- ▶ experiment → experimental
- ▶ NOTE: 'access → a ,ccesi' bility

6.7 LEXICAL FUNCTION

- ▶ **-ING (gerund=finality, purpose=para /de)**
- ▶ 'racing ,car
- ▶ 'Leaning ,post
- ▶ Pro 'nouncing ,dictionary
- ▶ 'Writing ,paper...
- ▶ **-ING (part.=attribute, =que / -ente)**
- ▶ ruling 'class
- ▶ Revolving 'door
- ▶ Sleeping 'beauty
- ▶ Running 'water,.

6.8 LEXICAL/WORD STRESS: THE ROLE OF GRAMMAR

- Grammatical category of the word (N, V, Adj)

Word-class pairs
(notice vowel quality changes)

	/ ' . . /	/ . ' . /
Adj.	Noun	Verb
abstract	abstract	abstract
	conduct	conduct
	contract	contract
	contrast	contrast
	desert	desert
	entrance (way in)	entrance (bewitch)
	escort	escort
	export	export

6.9 DOUBLE STRESS AND STRESS SHIFT

▶ Double stress

- Words with a prefix:
¹post-¹war, ¹anti-¹nuclear, ¹pro-¹Obama...
- Two independent words**
 - ▶ **Double stressing:**
¹lady¹ doctor, ¹mother ¹tongue
 - ▶ **Stress on first word** if
 - Contrast: flute player,
 - Restricted sense: Holy Week
 - New idea: washing machine
 - ▶ **Stress on second** if
'ingredients' and thoroughfares.
 - Exceptions:
 - **street:** Oxford St.
 - **cake:** cheese cake
 - **juice:** orange juice
 - **water:** soda water

- ▶ **Stress shift**, at the expense of their grammatical position:

- *Sardine, Piccadilly, princess, Vauxhall, Waterloo, -teen numbers, etc.*
- Ej. A ¹sardine tin vs. a tin of sar¹dines
- ¹ Fifteen girls vs. She's fif¹teen

7. STRESSING IN SUCCESSION

- ▶ **TWO MAIN STRESSES IN SUCCESSION ARE USUALLY DISALLOWED,**

EXCEPT:

- ▶ Verb + adv: ¹sit-¹in, ¹make-¹up, ¹turn-¹over...
- ▶ Productive prefixes: ¹dis¹organize, ¹re-¹cover, ¹re-¹sign (compare with ¹resign')...

8. PHRASES VS. COMPOUNDS

▶ ¹.....¹.....

▶ **PHRASES**

- ▶ English teacher
- ▶ Holy land
- ▶ Paper bag
- ▶ Blue bottle
- ▶ White house
- ▶ Mad doctor
- ▶ Match box
- ▶ Hot dog
- ▶ Green land
- ▶ Hot potato

▶ ¹.....¹.....

▶ **COMPOUNDS**

- ▶ English teacher (de)
- ▶ Holy Land
- ▶ Paper bag
- ▶ Bluebottle
- ▶ White House
- ▶ Mad doctor
- ▶ Match box
- ▶ Hot dog
- ▶ Greenland
- ▶ Hot potato (tema de actualidad)

9. STRESS BEYOND THE WORD DOMAIN

Lexical stress vs. Rhythmic stress

- ▶ Lexical stress patterns are 'potential' stresses (they only tell us what syllable/s would be stressed/unstressed if the word *is stressed* and under 'normal' conditions)
- In connected speech (in the context of a tone/intonation unit), any word can be
 - stressed (=accented, and shows a predictable stress pattern): this 'car is ,brand 'new vs. a 'brand ,new 'car, etc.
 - stressed (but have a different stress pattern for different reasons, e.g. stress shift): 'university of Murcia' vs. Murcia uni'versity.
 - unstressed (no prominence at all)

10. SPECIAL CASES (FOR SPANISH SPEAKERS!)

- ▶ **Titles are stressed:**
 - *Mr Jones, Mrs Jones,*
 - *Ms Jones* (this, together with **the** in its citation form, the only cases where [ə] is stressed),
 - *President Obama, Baroness Trefgarne, etc..*
- ▶ **Initially** in a SENTENCE, 'because' is stressed /bɪ'kɒz/. The same applies to 'when', 'while':
 - Ej. *When the time comes... =as if we said in Spanish 'Cuándo' llegue la hora*

11. French approach (Guierre, Viel & Lily)

- ▶ 1. Any isolated word= 2
- ▶ 2. 00- , impossible word initially,
- ▶ 3. 12- or 11- are not allowed.
- ▶ COROLARIES:
 - An only pre-tonic syllable will be /0-/ (**ej. combine**)
 - Two-pretonic syllables: /10-/ (**ej. indigestion**)
 - Three-pretonic sylls: /100-/ or /010-/ (**characteristic, discrimination...**)
- **THE PLACEMENT OF 2: Ruled by strong endings: -ic, -ion, etc.**

REFERENCES

Compulsory reading:

- Monroy Casas, R. 2004. *El acento léxico inglés. Reglas de acentuación*. Buenos Aires: LibrosEnRed.
- Roach, P. 2001. *English Phonetics and Phonology. A Practical Course*. CUP. Chaps. 9, 10, 11 & 12 (Strong & Weak Syllables; Stress in simple words; Complex word stress; Weak forms).

Recommended readings:

- ▶ Arnold, G.F. 1956-57. "Stress in English words". *Lingua*, vol. 6. Special Issue.
- Clark, J., & Yallop, C. 199]. *An Introduction to Phonetics and Phonology*. Oxford, UK: Basil Blackwell. Chap. 8. Prosody: section 8.6. Stress in English & section 8.7. Stress assignment.
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