

On stress and accent in English

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Take-home message

The available evidence shows that *stress* and *accent* are different phenomena, not just a matter of terminology

There is a need for a closer investigation of

- the segmental processes that surround stress
- the interaction between stress and accent

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Stress and accent

Considerable terminological confusion regarding the two terms (Fox 2000: §3.1.1; Schane 2007; van der Hulst 2012, 2014)

In recent years, there has been a convergence on the idea that they are two distinct objects

We argue that distinguishing them allows for better comprehension across different theoretical frameworks, and avoids potential misunderstandings or unjustified disagreements about the ‘nature of stress’

Stress and accent

For example, we find disagreements for the stress patterns of words such as the following words

“American tradition” e.g. Pater (2000)	“British tradition” e.g. Wells (2008)
<i>còndèmnátion</i>	<i>còndemnátion</i>
<i>Òctóber</i>	<i>Octóber</i>
<i>prìvátion</i>	<i>privátion</i>
<i>rétrogràde</i>	<i>rétrograde</i>

Acute accent = primary stress; grave accent = secondary stress

The “disagreement” can be solved by assuming that those transcriptions do not deal with the same phenomenon

Stress and accent

Kenyon & Knott (1953)	Guierre (1979)	Cruttenden (2014)
Main stress	[+Acc] Main stress	Primary accent (final pitch prominence)
Secondary stress	[+Acc] Secondary stress	Secondary accent (non-final pitch prominence)
Unstressed full vowel	[-Acc] [+acc] Unstressed full vowel	Minor prominence (full vowel without pitch prominence)
Reduced vowel	[-Acc] [-acc] Reduced vowel	Non-prominent syllable (reduced vowel)

There is agreement on the main prominence and on the least prominent syllables, but disagreements on the boundary between them

Stress and vowels

In all traditions, there are vowels which may or may not be stressed (some say full vs. reduced, or strong vs. weak)

	Wells (2008)	Hayes (1995)	Szigetvári / Lindsey
Always stressed / strong	i: e æ ɜ: ʌ əʊ u: ɔ: ɒ ɑ: eə ɪə ʊə	eɪ ε æ a ɔ ʌ ʊ u i ow before C	ɪ: ε(j) ε: a(j/w) ə: o: ɔ oj ɑ:
Variably stressed / strong	ɪ ʊ	i ow before V or # ɪ before ŋ yʊ ~ yə	ɪ(j) ʊ(w) ə(w)
Always unstressed / weak	ɪ u ə	ə	

Diagnosing stress

Phonologists have developed analyses to identify stressed syllables that do not bear primary stress, because the nature of the vowel alone cannot always reveal whether or not a vowel is stressed.

Moreover, [Hayes \(1995\)](#) notes that stress is “**parasitic**”: it involves phonetic resources used by other phonological phenomena such as *pitch*, *intensity* and *duration*.

Let us review some of those processes.

Diagnosing stress

A first series of processes have to do with the allophones of voiceless stops and the distribution of /h/ and /ɹ/ (in ‘broad’ non-rhotic varieties)*

		Word							
		Initial			Non-initial				
Stressed syllable	Initial	(1)	h	t ^h	ɹ	(3)	h	t ^h	ɹ
	Non-initial	(2)	h	t ^h	ɹ	(4)	h	ʔ/r/t ^ɹ	ɹ

(1) [t^h]érrible

(2) [t^h]omáto

(3) dáven[p^h]órt

(4) á[r]om

[h]ábit

[h]orízon

álco[h]ól

véhicle

[ɹ]ún

[ɹ]evíve

Lé[ɹ]óy

hú#ricane

*This excludes voiceless stops after /s/ or followed by a sonorant + the third syllable of initial dactyls, e.g. *Mèditerráneau*

(Davis & Cho 2003; Harris 2004, 2013; Jensen 2000)

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“Strong” variants / presence word-initially or at the start of a stressed syllable

*This excludes voiceless stops after /s/ or followed by a sonorants + the third syllable of initial dactyls, e.g. *Mèditerránean*

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“Strong” variants / presence word-initially or at the start of a stressed syllable

“Weak” variants / absence elsewhere

*This excludes voiceless stops after /s/ or followed by a sonorants + the third syllable of initial dactyls, e.g. *Mèditerránean*

(Davis & Cho 2003; Harris 2004, 2013; Jensen 2000)

Diagnosing stress

For example, /t, d/ flapping can be found in the onset of unstressed syllables, but it does not occur in the onset of primary stressed syllables in General American

magnetic [mæg'nɛɾɪk] cp.

magnetism ['mægnət^hɪzəm]

vanity ['vænəɾɪj]

manatee ['mænət^hɪj]

mosquito [mə'skɪjɾow]

ketone ['k^hɪjt^hown]

Stressed?

Diagnosing stress

Epenthesis of a stop between a nasal and a fricative

Applies in the coda position or if the second vowel is unstressed

prince ['pɹɪn(t)s]

cp.

insane [ɪn'seɪn]

censure ['sɛn(t)ʃə]

insect ['ɪnsɛkt]

Gimson ['gɪm(p)sən]

Gimsonian [gɪm'səwnɪjən]

length ['lɛŋ(k)θ]

nymphet [nɪm'fɛt]

Stressed?

(Hayes 1995; Szigetvári 2020)

Diagnosing stress

Yod dropping in GA

Possible in stressed syllables but not unstressed syllables

volume ['vɒljʊwm] cp.

Danube ['dænjʊwb]

assiduous [ə'sɪdjʊwəs]

value ['væljʊw]

continue [kʰən'tɪnjʊw]

venue ['venjʊw]

voluminous [və'l(j)ʊwmɪnəs]

Danubian [də'n(j)ʊwbɪjən]

assiduity [,æsɪ'd(j)ʊwəri]

constitute [kʰənstətʰ(j)ʊwt]

absolute ['æbsəl(j)ʊwt]

revenue ['revən(j)ʊw]

Stressed?

(Szigetvári 2020)

Diagnosing stress

Loss of [w]

In certain environments, /ɹw/ may lose its glide (and will be realized as [ə] or [e])

fortunate ['fo:tʃənət]

fortune ['fo:tʃɹwɪn] ~ ['fo:tʃən]

botulin ['bɒtʃəlɪn]

botulism ['bɒtʃɹwɪlɪzəm] ~ ['bɒtʃəlɪzəm]

stimulus ['stɪmjələs]

stimulate ['stɪmjɹwleɪt] ~ ['stɪmjələɪt]

[Szigetvári \(2020\)](#) argues that this happens obligatorily if the following vowel is unstressed, but only variably if it is stressed or if there is no following vowel

Diagnosing stress

Syncope

Unstressed syllables are often subjected to syncope. There is conditioning on the nature of the following consonant (usually it is a sonorant), but also of the following vowel

opera ['ɔp(ə)rə]

general ['dʒɛn(ə)rəl]

memory ['mɛm(ə)rɪ]

separate (adj.) ['sɛp(ə)rət]

barbarous ['bɑ:b(ə)rəs]

cp.

operatic [ˌɔpətɪk]

generality [ˌdʒɛnərələtɪ]

memorize ['mɛməraɪz]

separate (v.) ['sɛpəreɪt]

barbarism ['bɑ:bərəɪzəm]

Following syllable stressed?

(Hammond 1999; Szigetvári 2007; 2020)

Diagnosing stress

Compensatory lengthening

defer [dɪ'fə:] cp. *differ* ['dɪfə] *[-fə:]

intern [ɪn'tə:n] *pattern* ['pʰatən] *[-tə:]

Smoothing

idea [aj'dɪjə] ~ [aj'dɪ:] cp. *India* ['ɪndɪjə] *[-dɪ:]

secure [sɪ'kjʊwə] ~ [sɪ'kjɔ:] *jaguar* ['dʒagjʊwə] *[-gjo:]

Syllabic consonant formation

tunnel ['tʰənət] ~ ['tʰənɾ] *annul* [ə'nət] *[-'nɾ]

caramel ['kʰaɹəmət] ~ ['kʰaɹəmɾ] *philomel* ['fɪləmɛɾ] *[-mɾ]

(Szigetvári forthcoming)

Diagnosing stress

All those diagnostics show that there may be (non-primary) stresses pretonically and posttonically

So we can have **/12/ (left-prominent)** and **/21/ (right-prominent)** patterns

How do those stresses interact with accents (pitch accent/prominence)?

The interaction of stress and accent

Some of the recent literature on those issues assumes that accents anchor onto a subset of stressed vowels (Gussenhoven 2004, 2011; Szigetvári 2020)

There are recent phonetic studies that have shown that left-prominent and right-prominent words behave differently in accented positions with regards to accent:

	Right-prominent	Left-prominent	
Compounds	<i>Pàrk Ávenue</i>	<i>wíndshíeld</i>	(Kunter 2011)
Derivatives	<i>viólátion</i>	<i>rándomìze</i>	(Plag et al. 2011)
	Two accents	One accent	

But no phonetic differences between primary and secondary stress was found in unaccented positions!

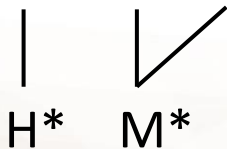
The interaction of stress and accent

The chanted vocative

However, in certain intonational contours, the position of posttonic secondary stresses affects the position of tones

Poindexter!

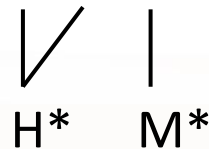
/ˈpoɪnˌdɛkstə/



/120/ ≠

Annabel!

/ˈanəˌbeɪ/



/102/ =

Pamela!

/ˈpamələ/



/100/

(Gussenhoven 2004: 57; Hayes 1995: §2.3.3; Liberman 1975: 30)

The interaction of stress and accent

Multiple pretonic stresses

Hayes (1995: 18) notes that there can be variation when there are /2201(-)/ patterns with the “surprise redundancy” contour

sensationality!

/,sɛn,sɛjʃə'nælətɪj/

┆ ┆ ┆
L* or L* H*

Constantinople!

/,kɒn'stəntə'nəwpəl/

┆ ┆ ┆
L* or L* H*

But we found nothing on words /221(-)/, e.g. *importation* /,ɪm,pɔ:'tɛjʃən/

➤ Two or three accents?

The interaction of stress and accent

Rhythm

According to [Gussenhoven \(1991, 2011\)](#), at the word-level, pretonic secondary stresses get accented when they immediately precede primary stress if:

the word is disyllabic

^{*} ^{*}
sardine /,sɑ:'dɪjn/

the word is prefixed

^{*} ^{*}
unmodest /,ən'mɒdəst/

but not **in other configurations**

^{*}
October /,ɒk'təwɪbə/

Where * represents an accent

The interaction of stress and accent

Rhythm

At the phrase-level, the “Rhythm Rule” can be seen as a post-lexical accent deletion rule (Bolinger 1986; Gussenhoven 1991; Horne 1990)

e.g. ^{*} ^{*} *thirteen* /,θə:'tɪjn/ vs. ^{*} ^{*} *thirteen men*

^{*} ^{*} *Japanese* /,dʒapə'nɪjz/ ^{*} ^{*} *Japanese chairs*

In that analysis, there is no “stress shift” or “reversal”

The interaction of stress and accent

Thus, there may be several accents per word (*contra* Szigetvári 2020)

There are two available options to view this interaction:

Accent first

An accent entails a stress, and there may be other sources of stress

Stress first

Some stresses receive an accent, in which case stress cannot be binary as we have seen that right-prominent /21/ ↔ **

left-prominent /12/ ↔ * -

What about pronunciation dictionaries?

Pronunciation dictionaries like [Wells \(2008\)](#) or [Roach \(2009\)](#) are used as references for the CAPES, the agrégation and many phonetics and phonology courses

It is worth asking what exactly is represented by , and ' in those dictionaries

In the light of what we've seen, it seems they mostly mark accents ([see Schane \(2007\), Abercrombie \(1976\) for similar views](#))

What about pronunciation dictionaries?

However, they are inconsistent in their treatment of posttonic ,

Wells uses it **in compounds if the second constituent is at least disyllabic**

e.g. *countrywoman* / 'kʌntr i ,wʊm ən/

but *countryside* / 'kʌntr i saɪd/

in words ending in *-ism*

e.g. *activism* / 'ækt ɪv ,ɪz əm/ in Wells (2008)

But not in words such as

absolute / 'æb sə lu:t/

conjugate / 'kɒndʒ u geɪt/

Concluding remarks

The available evidence points to the existence of two phenomena related to prominence in English, stress and accent

Only certain stressed vowels may be accented

Only a subset of vowels may be unstressed

However, a considerable amount of the evidence that we have reviewed relies heavily on intuition or anecdotal examples. There is a great need for more data on those issues, especially :

- the segmental correlates of stress
- to disentangle stress and accent
- which pretonic secondary stresses receive accents

Concluding remarks

To take but one example, flapping in North American varieties has been found to:

- Apply in environments in which it was not thought possible (Altmann-Richer *et al.* to appear)

e.g. /lt(#)V/ *faculty*
difficult is

- Display variation (Hannisdal 2022)

- **Lexical:** items in /nt/ which are more frequent have flaps more often
- **Sociolinguistic:** men use flaps more often than women in words in /nt/ and /lt/
- **Related to phonological structure**

e.g. *relative* [r] 14% of cases vs. *positive* [r] 90% of cases
preceding /l/ no preceding /l/

Thank you!

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