

ENGLISH VOWELS

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outline

1. the vowel inventory of (British) English
2. categorization of vowels
3. why diphthongs must be VC
4. why diphthongs are thought to be VV
5. (time allowing) long vowels as VC?

dramatis personae

1. KIT, DRESS, TRAP, **STRUT/COMMA/LETTER**, LOT/CLOTH, FOOT
2. NEAR, SQUARE, START/PALM/BATH, NURSE, FORCE/NORTH/THOUGHT, CURE
3. **FLEECE/HAPPY**, FACE, PRICE, MOUTH, GOAT, CHOICE, GOOSE

categories: tense/long/free vs lax/short/checked

checked vowels do not occur word/syllable(?) finally, free vowels do

	_#	_.CV	_C.V?	_C.
checked (eg KIT)	* bi.	* bi.tter	bitt.er	bit.
free (eg FLEECE)	bee.	be.ta	?bet.a	beat.

so

- set 1 consists of checked vowels, sets 2 & 3 consist of free vowels
- note 1: COMMA/LETTER occurs word finally, STRUT does not
- note 2: FLEECE occurs preconsonantly, HAPPY does not

refining the categorization

	_#	_.CV	_C.V?	_.V	_C.
checked (eg KIT)	*bi.	*bi.tter	bitt.er	*bi.an	bit.
free (eg FLEECE)	bee.	be.ta	?bet.a	pae.an	beat.
R vowels (eg NEAR)	beer.	Sibe.ria	?Siber.ia	* beer.an	beard.

so

- set 1 consists of checked vowels, which occur **_C** only
- set 2 consists of R vowels, which occur **_C and _#**
- set 3 consists of free vowels, which occur **_C and _# and _V**

categories by distribution

	_C	_#	_V
checked: KIT, DRESS, TRAP, STRUT, LOT, FOOT	✓	✗	✗
R: NEAR, SQUARE, START, NURSE, FORCE, CURE	✓	✓	✗
free: FLEECE, FACE, PRICE, MOUTH, GOAT, CHOICE, GOOSE	✓	✓	✓

systems that miscategorize

Gimson 1962

- checked vowels: ɪ e æ ʌ ɒ ʊ = short vowels
- R vowels: ɪə eə ɑː ɜː ɔː ʊə = long vowels and centring diphthongs
- free vowels: iː eɪ aɪ aʊ əʊ ɔɪ uː = long vowels and closing diphthongs

Giegerich 1992 (≈ Gimson without :))

- checked vowels ɪ ɛ ʌ ɒ ʊ = lax(?) vowels
- R vowels: ɪə ɛə ɑ ɜ ɔ ʊə = lax(?) vowels and centring diphthongs
- free vowels: i e aɪ aʊ o ɔɪ u = tense vowels and closing diphthongs

a properly categorizing system

Lindsey 2012

- checked vowels: ɪ ɛ ʌ ə ɔ ʊ = short vowels
- R vowels: ɪː ɛː ʌː əː ɔː ʊː = long vowels
- free vowels: ɪj ɛj ʌj aʊ əw ɔj ʊw = diphthongs

notes

- Sweet 1900 has FLEECE ɪj and GOOSE ʊw
- FORCE ɔə and NORTH ɔː have merged “between” Sweet 1900 and Jones 1918
- SQUARE eə has also monophthongized, but there was no merger
- CURE uə has monophthongized and merged with FORCE for many
- NEAR ɪə is intensively monophthongizing

the inventory

checked		R		free	
KIT	i	NEAR	i:	FLEECE	ij
DRESS	e	SQUARE	e:	FACE	ej
TRAP	a	START	a:	PRICE	aj
				MOUTH	aw
STRUT	ə	NURSE	ə:	GOAT	əw
LOT	o	FORCE	o:	CHOICE	oj
FOOT	u	CURE	u:	GOOSE	uw

why free vowels must be VC

- epenthesis
- hiatus filling
- vowel + glide sequences
- the distribution of weak vowels

epenthesis in English

simp<ə>l ~ simplə , rið<ə>m ~ riðmik , fit<ə>d , fiʃ<ə>z , g<ə>nuw , aθ<ə>lijt

fij<ə>l ~ fijlin , pej<ə>l ~ pejlə , maj<ə>l ~ majlidʒ , foj<ə>l ~ fojlidʒ

waj<ə>ř ~ vajrəs , koj<ə>ř ~ mojrə , flaw<ə>ř ~ dawrij (ř is lost in nonrhotic E)

(fawl , fəwl , fuwl : w and l homorganic?)

cf other accents: fil<ə>m , gər<ə>l , nəw<ə>n

⇒ free vowels pattern with **vowel** + **consonant** sequences

simple(r), rhythm(ic), fitted, fishes, gnu, athlete; feel(ing), pale(r), mile(age), foil(age);

wire~virus, coir~Moira, flour~dowry; foul, foal, fool; film, girl, known

hiatus filling

checked vowels

do not occur word finally

R vowels (and unstressed ə)

boring bo: + iŋ → bo:riŋ

drawing dro: + iŋ → dro:riŋ

picturesque piktʃə + esk → piktʃəresk

Kafkaesque kafkə + esk → kafkəresk

hiatus filling

free vowels

seeing sij + iŋ → sijiŋ (* sijjiŋ)

payee pej + ij → pejiij (* pejjij)

higher haj + ə → hajə (* hajjə) (= *hire*)

boyish boj + iʃ → bojiʃ (* bojjiʃ)

Taoist taw + ist → tawist (* tawwist)

lower ləw + ə → ləwə (* ləwwə)

gluey gluw + ij → gluwij (* gluwwij)

no hiatus filling after diphthongs ⇒ no hiatus after diphthongs, ie these words do **not** end in a vowel, but in a consonant

VG(lide) sequences that exist

weak (=short) vowel + glide

beyond **bijónd**, *reward* **riwó:d**, *away* **əwéj**, *Mallorca* **məjókə**

R vowel + glide

narwhal **ná:wəl**, *Gerwig* **gə:wig**, *Norway* **nó:wej**, *fedayeen* **fədá:jijn**,
lawyer **lo:jə** ~ **lojə**

free vowel (= diphthong) + glide

Taiwan **tájwón**, *Ewok* **íjwok**, *kiwi* **kíjwij**, *alleluia* **álilúwjə**, *oyez* **əwjéz**

VG sequences that do not exist (= are very rare)

checked vowel + glide

Dewi déwɨj

ij / **ej** / **aj** / **oj** + **j** , **aw** / **əw** / **uw** + **w**

sukiyaki súwkiɨjǰá:kɨj , *Beowulf* béjəwwulf (compounds or -ijǰá:- , -əwu- ?)

Beyoncé LPD3 bi'jɒnseɪ = biɨjǰónsej ?

why are some vowel + glide sequences missing?

checked vowel + glide sequences are analysed as diphthongs

neon níjon , *crayon* kréjon , *lion* lájən , *vowel* váwəl , *royal* rojəl , *poem* pəwəm ,
fuel fjúwəl

ij / ej / aj / oj + j , aw / əw / uw + w do not exist

because they would constitute a **geminate consonant**

are these meaningfully different?

beyond **bijónd** and *Sion* **sijón**

(LPD **bɪ'jɒnd** also **bi:'ɒnd** (!) vs **si'õ** = **si'ɒn**)

Ottawa **ótəwə** and *Genoa* **dʒénəwə**

(LPD **'ɒtəwə** vs **'dʒenəʊə**)

put it away, sis **-əwéjsis** and *this is an oasis* **-əwéjsis**

(LPD **ə'weɪsɪs** vs **əʊ'eɪsɪs**)

weak (= unstressed) vowels

i as in *intent* **intént**, *vanish* **vániʃ**

ə as in *offend* **əfénd**, *Venus* **víjnəs**, *vicar* **víkə**

u as in *volume* **vóljum** (also **vóljuwm**)

ij as in *create* **krijéjt**, *happy* **hápij**

əw as in *obey* **əwbéj** (also **əbéj**), *Genoa* **dʒénəwə**, *NATO* **néjtəw**

uw as in *unite* **juwnájt** (also **junájt**), *jaguar* **dʒágjuwə**, *value* **váljuw**

other vowels may **not be weak**:

- checked **e**, **a**, **o**
- free **ej**, **aj**, **aw**, **oj**
- R **i:**, **e:**, **a:**, **ə:**, **o:**, **u:**

vowel unstressability: quality

“nonlow”	i	ə	u
“nonhigh”	e	a	o

the unstressability of a vowel is related to sonority (= vowel height, cf Kenstowicz 1997)

“nonlow”	ij	əw	uw
“nonhigh”	ej	aj , aw	oj

the unstressability of **ij** , **əw** , **uw** follows from the unstressability of **i** , **ə** , **u**
(especially if **ij** = **i** + **j** , etc)

variation in weak position

i, **u** ~ **ə**

- *ticket* tíkɪt ~ tikət, *purchase* pə:tʃɪs ~ pə:tʃəs
- *accurate* ákjurət ~ ákjərət, *fortune* fó:tʃu(w)n ~ fó:tʃən

i is retained before palatal and velar C

- *manage* mánɪdʒ, *ostrich* óstrɪtʃ, *punish* pə'nɪʃ, *panic* pánɪk, *happy* hápɪj (!)

u is retained before labial C

- *volume* vóljuwm, vóljum; *value* váljuw (!)

vowel unstressability: quantity

V\$ > VC\$, VV\$

taboo təbúw vs *bamboo* bámbúw , *Corfu* kó:fúw ; *begin* bigín vs *Berlin* bé:lín

bámboo fúrniture, *Córfu* Próto**col**; *Bérlin* Wá**ll**

platoon plætúwn vs *pontoon* póntúwn , *cartoon* ká:túwn

póntoon brídge, *Cártoon* Nétwork

VC\$ > VV\$

contend kənténd vs *quartet* kwó:tét , *torment* tó:mént

quártet táble, *tórment* míce

V\$ > VC\$ > VV\$ (cf Hayes 1995)

weak “diphthongs”

juw (> **ju** > **jə** / **C**)

stimulate stímjuwlèjt ~ -mju- ~ -mjə- ; *stimulus* * stímjuwləs ~ -mju- ~ -mjə-

əw (> **ə** / **C**)

advocaat ádvəwkà: ~ ádvəkà: ; *advocate* ádvə*(w)kət

ij (< **i** / {**V,#**})

create krijéjt ; *happy* hápij

this is a very odd development if **ij** is a diphthong: **fortition in weak position**

the distribution of weak “diphthongs”

	_Cv	_CV	_#	_V	history
ij	✗	✗	✓	✓	i > ij
əw	✗	~	✓	✓	əw > ə
uw	✗	~	✓	✓	uw > u
	=VC\$	=VC\$	=V\$	=V\$	

- v = weak vowel, V = strong vowel
- a word-final consonant is “extrametrical”
- short vowels are dispreferred **_#** and **_V**

btw, “high vowel gliding” is a case of syncope

syncope	high vowel gliding	
separate(a) sép(ə)rət	recipient risíp(i)jənt	✓
temperate témp(ə)rət	champion tʃámp(i)jən	✓
ignorant ígn*(ə)rənt	igneous ígn*(i)jəs	✗
sandarac sánd*(ə)rək	zodiac zəwd*(i)jək	✗

interim summary

1. V epenthesis between free V and C \Rightarrow free V = VC
2. no hiatus filling after free V \Rightarrow free V = VC
3. no checked V + glide \Rightarrow free V *is* V+glide
4. * **ij** / **ej** ...+ **j** , * **uw** / **aw** ...+ **w** = *geminate \Rightarrow free V = VC
5. unstressed **ij** / **əw** / **uw** is unstressed **i** / **ə** / **u** + **j** / **w**
6. HAPPY tensing only where **j** does not add to weight \Rightarrow weak **ij** is VC

<off> the development of R vowels

short → long by compensatory lengthening (CL)

park park → pa:k , *pork* pork → po:k , *perk* pærk → pə:k

“diphthong” → long by schwa epenthesis, glide loss, coalescence=CL

peer pijr → pijər → pijə → piə → pi:

pear pejr → pejər → pejə → peə → pe:

pyre pajr → pajər → pajə → paə → pa:

sour sawr → sawər → sawə → saə → sa:

pore powr → powər → powə → poə → po:

poor puwr → puwər → puwə → puə → po:

pure pjuwr → pjuwər → pjuwə → pjuə → pju: / pjo:

CL only in stressed position

<i>prefer</i> prifé:	vs	<i>differ</i> dífə
<i>guitar</i> gitá:	vs	<i>vicar</i> víkə
<i>grantor</i> grántó:	vs	<i>mirror</i> mírə
<i>idea</i> ajdíjə → ajdí:	vs	<i>India</i> índijə → *índi:
<i>secure</i> sikjúwə → sikjú:	vs	<i>jaguar</i> dzágjuwə → *dzágju:

since R/long vowels cannot occur unstressed

</off>

standard counterarguments against free V = VC

- tradition, history, pandialectalism, spelling, lexical alternations
 - many current diphthongs are reflexes of ME long vowels (ej is “long A”)
 - BrE ej vs SSE e
 - ej is often spelled A
 - *shade~shadow*
- constraints on V and G cooccurrence

constraints on VG: a devastating blow?

V	_ :	_ j	_ w
i	i:	ij	
e	e:	ej	
a	a:	aj	aw
ə	ə:		əw
o	o:	oj	
u	u:		uw

similar constraints on CC

_ j	_ w	_ j	_ w
pj	* pw	ej	* ew
* tj	tw	* əj	əw
kj	kw	aj	aw

this does not entail that **pj**, **tw**, **kj**, **kw** are “diphthongs”

current trend in BrE 1: L “vocalization”

_j	_w
ij	iw <i>bill</i>
ej	ew <i>bell</i>
aj	aw
	əw
oj	ow <i>ball</i>
	uw

current trend in BrE 2: glide fronting

_j	_w
ij	iw <i>bill</i>
ej	ew <i>bell</i>
aj	aw
əj <i>go</i>	əw <i>null</i>
oj	ow <i>ball</i>
uj <i>two</i>	uw <i>fool</i>

Altendorf & Watt 2004:191; Geoff Lindsey *voce*

long vowels

- Trager & Bloch (1941) and Trager & Smith (1957) argue that long vowels are Vh
- indeed, h (also r) and : are in complementary distribution (h and r only $_V$, : only $_C$ and $_\#$)
- but :h (geminate) in *maharaja* má:hərá:dʒə , *parhelia* pa:híjlijə , *yahoo* já:huw , etc; :r in *Amhara* amhá:rə , *glory* gló:rij , *hero* hí:rəw , etc
- : is a C with a peculiar distribution (like η)
- “representationalist” proposal: h is “empty” C followed by V, : is empty C not followed by V

so the six vowels may be followed by all kinds of C

	_ :	_ j	_ w	_ n	_ θ	_ s	etc.
i	i: here	ij see	iw sill	in sin	iθ myth	is hiss	...
e	e: care	ej say	ew sell	en hen	eθ meth	es mess	...
a	a: car	aj sigh	aw sow	an scan	aθ math	as gas	...
ə	ə: fir	əj “so”	əw sulk	ən sun	əθ ?	əs bus	...
o	o: four	oj soy	ow salt	on swan	oθ moth	os loss	...
u	u: sure	uj “sue”	uw school	un ?	uθ ?	us puss	...

Combinations of (Y) and (W) with the Simple Vowels.

Pin	i	yi yes	iy me	yiy ye	yiw — —	wi will	iw — —	wiw — —	wiy we
Met	e	ye yet	ey may	yey yea	yew — —	we well	ew — —	wew — —	wey way
Rostrum	u	yu minion	uy — —	yuy — —	yuw — —	wu — —	uw — —	wuw — —	wuy — —
But	u	yu young	uy my	yuy shy	yuw — —	wu won	uw — —	wuw — —	wuy why
Pan	a	ya yarrow	ay ay	yay — —	yaw — —	wa wag	aw — —	waw — —	way — —
Park	a	ya yard	ay — —	yay — —	yaw — —	wa — —	aw — —	waw — —	way — —
Horn	o	yo york	oy — —	yoy — —	yow — —	wo wall	ow — —	wow — —	woy — —
Pot	o	yo yon	oy toy	yoy joy	yow shower	wo wan	ow now	wow wound	woy buoy
Regue	e	ye show	cy — —	yey — —	yew show	wc woe	cw no	wcw woke	wcy — —
Full	ü	yü yew	üy — —	yüy — —	yüw you	wü wool	üw new	wüw woo	wüy — —

Batchelor 1809

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thank you for bearing with me till

THE END