

Once a consonant, always a consonant

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palindromes

- *pit/tip* pit/tip

palindromes

- ▶ *pit/tip* pit/tip
- ▶ *kill/lick* kil/lik

palindromes

- ▶ *pit/tip* pit/tip
- ▶ *kill/lick* kil/lik or *kill/wick* kiw/wik?

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- ▶ *pit/tip* pit/tip
- ▶ *kill/lick* kil/lik or *kill/wick* kiw/wik?
- ▶ *d/yid* dij/jid
- ▶ *say/yes* sez/jes
- ▶ *pie/yap* paj/jap
- ▶ *boy/yob* boj/job
- ▶ *mouse/swam* maws/swam
- ▶ *go/wug* gəw/wəg
- ▶ *loo/wool* luw/wul
- ▶ *do/would* duw/wud
- ▶ *no/one* nəw/wən

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- ▶ *no/one* nəw/wən
- ▶ *Glenelg* glenelg (village in Scotland)

vowels of current British English

the apparent diversity of the vowel system results from the combination of 6 vowels and 3 glides

i	kit	ij	fleece		ih	near	
e	dress	ej	face		eh	square	
a	trap	aj	price	aw	mouth	ah	palm
o	lot	oj	choice		oh	thought	
u	foot			uw	goose	(uh cure) 	
ə	strut			əw	goat	əh	nurse

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the apparent diversity of the vowel system results from the combination of 6 vowels and 3 glides

i kit	ij fleece	New!	ih near
e dress	ej face	New!	eh square
a trap	aj price	aw mouth	ah palm
o lot	oj choice	New!	oh thought
u foot		uw goose	(uh cure) ↑
ə strut		əw goat	əh nurse

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the apparent diversity of the vowel system results from the combination of 6 vowels and 3 glides

i kit	ij fleece	iw bill	ih near
e dress	ej face	ew bell	eh square
a trap	aj price	aw mouth	ah palm
o lot	oj choice	ow ball	oh thought
u foot		uw goose	(uh cure) ↑
ə strut		əw goat	əh nurse

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i kit	ij fleece	iw bill	ih near
e dress	ej face	ew bell	eh square
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u foot	New! ←	uw goose	(uh cure) ↑
ə strut	New! ←	əw goat	əh nurse

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the apparent diversity of the vowel system results from the combination of 6 vowels and 3 glides

i kit	ij fleece	iw bill	ih near
e dress	ej face	ew bell	eh square
a trap	aj price	aw mouth	ah palm
o lot	oj choice	ow ball	oh thought
u foot	uj goose	New!	(uh cure) ↗
ə strut	əj goat	New!	əh nurse

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the apparent diversity of the vowel system results from the combination of 6 vowels and 3 glides

i kit	ij fleece	iw bill	ih near
e dress	ej face	ew bell	eh square
a trap	aj price	aw mouth	ah palm
o lot	oj choice	ow ball	oh thought
u foot	uj goose	uw bull	(uh cure) ↑
ə strut	əj goat	əw dull	əh nurse

arguments against the diphthong analysis

1. vowels and glides freely combine (nb this is not a sine qua non for treating their combinations as units)

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6. **NEW!** unstressed syllables may contain **ə i u**, **as well as əw ij uw**

Cruttenden (2014:99f) for the diphthong analysis

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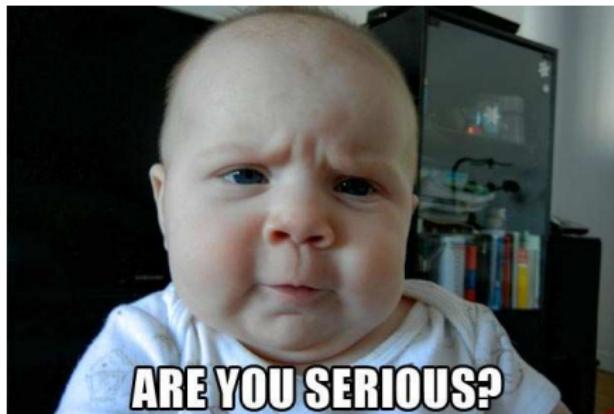
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tune [tçuwn]/[tʃuwn], *queen* [kmijn]

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word-initial consonant(cluster)s: tokens/10⁶ | types

142776	V	17579	V	2297	sdr	509	dr	13	ʃd	14	sj
47777	s	6970	k	2004	bl	506	θ	10	sv	13	sbj
41920	m	6167	s	1883	kw	501	sl	9	sf	12	ʃm
36991	w	5748	m	1790	tw	431	sdr	8	dw	12	sgl
36961	r	5609	d	1700	θr	363	sw	7	ʃj	11	θj
33043	k	5457	r	1603	vj	360	gl	6	ʃn	11	pw
32401	l	5262	p	1321	sl	357	z	6	lj	9	θw
30929	t	4677	b	1161	dj	312	sn	6	hw	8	ts
30140	p	3740	h	1159	dr	275	nj	5	dv	8	jw
25080	b	3470	l	1059	sw	231	sm	4	bw	8	ʃn
24819	h	3343	t	1036	sm	220	sgr	3	ʃw	8	ʃl
20824	d	3178	f	975	z	171	θr	3	sj	6	zw
19165	n	2851	w	794	fl	146	sgw	2	sgl	6	vl
18998	f	1966	n	691	mj	143	tw	2	sgj	6	ʃd
17282	j	1910	pr	597	hj	135	θw	1	θw	5	sv
14041	ð	1828	g	572	gl	132	mj	1	zl	5	sr
13706	pr	1571	v	543	sn	127	sbr	1	vr	5	ʃb
13197	ðʒ	1492	dʒ	438	fj	122	kj	1	sbj	5	hw
10065	sd	1411	sd	435	sdj	115	pj	1	ʃb	4	kn
9858	v	1267	tr	388	kj	104	tj	1	ʃm	3	vr
9034	ʃ	1217	ʃ	370	sgr	99	fj	1	ʒw	3	ʃbr
8499	g	1067	kr	367	tj	98	hj	1	ʃv	3	dv
7551	tr	966	br	307	sgw	89	ʃr	1	ts	3	bw
4709	sb	921	tʃ	255	sbr	73	sbl	<1	km	2	zl
4147	pl	839	gr	228	bj	70	bj	<1	kn	2	zj
4068	fr	799	kl	192	sbl	62	ð	<1	tb	2	tsw
3928	br	791	sb	145	pj	44	gw	<1	mw	2	ʃv
3850	tʃ	766	sg	133	gw	43	sdj	<1	vw	2	mw
3811	kl	756	j	79	ʃr	37	z	<1	nd	2	gj
3392	nj	674	fl	56	vl	26	dw	<1	gi	1	ʒw
2902	sg	653	fr	54	pw	23	sf	<1	ʃl	1	vw
2830	gr	628	bl	23	sr	20	sgj	<1	blw	1	tm
2704	θ	588	pl	21	ʒ	15	lj	<1	zw	1	tl
2531	kr	547	kw	16	θj	14	vj	... 17 clusters omitted			

word-initial consonant clusters: tokens | types

165562080368	P	30102	P
142801490792	V	17581	V
79092425957	J	8934	PL
69374654803	L	8928	L
61084833083	N	7780	S
57807335852	S	7714	N
45601198930	F	7347	J
42237193988	PL	5317	F
17689133103	SP	2980	SP
6618192587	FL	1507	FL
6161065718	PJ	1322	PJ
4083597222	NJ	866	SPL
3116320127	SPL	605	SL
2058038199	FJ	563	SN
1585436280	SN	410	NJ
1424118966	SL	395	SJ
1071829312	SJ	222	SPJ
744568290	SPJ	135	FJ
602983282	JJ	103	JJ
20042436	SF	30	SF
6241930	LJ	15	LJ
5251250	PF	11	PS
956472	PN	7	PN
585599	PS	4	PF
380000	PP	2	PSJ
248960	NP	2	PLJ
216800	PLJ	2	NP
52140	PSJ	1	SNJ
25800	NPL	1	SFL
20700	SNJ	1	PP
3870	SFL	1	NPL

Plosive (p t f k b d ʃ g),
nonstrident Fricative (f θ v ð),
Strident fricative (s ʃ z ʒ),
Nasal (m n),
Liquid (l r),
glaJd (j w h)

word-final consonant(cluster)s: tokens/10⁶ | types

81262	j	10995	j	4408	ns	504	ld	1312	jp	181	gz	678	lp	94	fs
60011	V	8594	V	4136	jm	489	ʃ	1307	ð	179	pd	663	gz	91	hnz
49232	n	7343	n	4047	js	458	sdz	1281	wld	178	wlz	656	ʃd	91	hmz
37546	w	6789	ŋ	3786	f	414	ŋz	1267	wnd	177	hs	645	jf	91	hg
32198	l	5386	z	3655	ɸ	398	wt	1209	ksd	168	jv	608	wb	90	fd
26595	ŋ	4358	l	3383	hk	380	hn	1207	ŋks	164	tʃ	601	bz	87	wzd
25785	h	3705	s	3094	jts	377	ps	1180	ŋz	163	b	587	jndʒ	87	mp
24670	z	3572	d	3057	ws	372	jnz	1167	hmz	162	wnd	579	wk	83	jps
22463	t	2940	jz	2897	lz	370	mz	1160	ndz	161	gk	570	hvd	76	wps
20777	d	2736	k	2745	hd	362	wd	1160	JKS	158	hm	529	hf	72	jnt
18764	s	2227	nz	2685	wsd	360	ɸ	1153	jsd	155	hts	520	lt	71	md
13616	m	2081	w	2674	hʃ	347	kd	1120	hθ	152	hsd	500	wdz	69	mps
11236	nt	1904	m	2616	ʃ	328	g	1094	hm	150	JKS	491	jvz	69	hfd
10647	k	1778	t	2591	wd	327	jzd	1091	wnt	143	jp	490	lts	69	gd
9774	jt	1685	sd	2567	hz	326	wl	1054	jdz	142	kdz	475	wnz	67	jmd
9754	jz	1601	jt	2532	jv	320	ht	1052	wp	141	wld	471	lm	66	jvd
9199	nd	1533	h	2282	hsd	312	dz	1051	ld	141	hlz	469	mp	65	wθ
8455	jn	1276	nt	2171	jłz	300	hl	1033	jłd	139	jsd	448	lθ	65	sg
8102	sd	1154	lz	2084	hn	296	js	1030	wθ	132	jvz	427	wts	65	ɸd
7772	jl	1132	jn	2021	nts	293	jk	1028	hłd	128	hks	415	nθ	64	wks
7625	jd	1037	jd	2020	wm	289	f	999	kdz	118	wmz	412	hnz	63	hld
7400	p	997	ks	1965	b	269	hk	910	pd	118	ŋks	388	hnt	57	θs
7280	v	868	ts	1911	wl	263	ws	901	hks	118	jmz	385	wbz	56	jg
7262	wz	835	wz	1856	g	259	jdz	860	jnt	117	wp	373	ŋkd	53	nʃ
5777	ht	831	jts	1766	ŋk	234	wts	838	dz	116	hf	368	nsd	52	wf
5652	nz	712	nd	1751	j mz	233	jłz	823	θ	115	bz	364	wmz	52	ŋkd
5650	ks	649	p	1537	hts	229	jm	797	lf	109	ʃd	356	hlz	50	ksd
5193	wn	590	nts	1524	jf	228	θ	775	hdz	105	wk	346	vz	49	wv
4913	kd	580	hz	1475	hs	224	jłd	753	wv	104	jf	334	hns	49	nsd
4531	hl	578	hd	1433	mz	209	jnd	752	sdz	103	wdz	318	hnd	49	tʃd
4520	wt	569	v	1414	jnz	208	wm	748	wlz	101	wsd	318	jb	48	mpd
4510	jk	552	jl	1337	jg	204	wnz	735	wzd	101	vz	314	nđ	48	lts
4508	ts	536	ns	1332	jnd	200	hđz	702	fd	98	lt	300	hkd	48	hp
4504	tʃ	512	wn	1322	ps	198	ndz	686	hđg	96	hθ	286	jzd	48	hnd

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4504	tʃ	512	wn	1322	ps	198	ndz	686	hđg	96	hθ	286	jzd	48	hnd

word-final consonant clusters, cont'd: tokens/10⁶ | types

283	wfj	48	hð	97	wg	26	lvz	44	wldz	15	wfjd	12	ldz	9	hnsd
281	nθs	47	wndz	96	wf	26	jb	44	jlsd	15	vd	11	hfdz	8	sb
270	ntʃ	47	If	96	jndz	25	sgz	40	jkd	15	hps	10	hðz	8	mf
259	wð	47	hmd	92	hg	25	ŋd	39	lmz	14	wvd	10	ŋθs	8	jnθs
258	jps	47	hkd	88	hntʃ	25	ntʃd	38	jbd	14	wg	10	dsd	8	jgz
246	sg	44	hsdz	86	mps	25	jsdz	36	hzd	14	wðd	10	jʃ	8	hsb
239	wndʒ	44	hnt	86	lv	25	jʃ	35	jtʃd	14	lvd	10	ndʒd	8	hpđ
235	jvd	43	jθ	85	vd	25	jldz	35	sgz	14	lks	10	sb	8	dsd
231	gd	43	htʃ	82	hsgd	25	jðd	33	lpd	14	jbd	9	wʒ	7	wbd
219	jmd	42	hfs	82	hb	25	jð	32	hʃ	14	hʃ	8	ŋsd	7	tθ
210	jθ	41	wb	79	tθ	25	hvz	32	mpdz	13	wʃ	8	hlt	7	sbz
208	jg	41	jkd	79	θs	24	wðz	27	mf	13	wð	7	hθs	7	ŋθ
188	hʒ	40	jnts	78	mpd	24	hnts	27	wns	13	lp	7	ŋd	7	lθ
178	wsdz	39	ndʒ	76	wvz	23	wlt	26	lmd	13	jðd	7	jnθ	7	lʃ
166	wnts	37	jpd	75	lk	23	wbz	25	wkd	13	jʃd	6	wtʃd	7	lpđ
159	ŋθ	37	bd	68	hðd	23	hðd	24	pθ	13	hsgz	6	hmθ	7	jʒ
158	ðd	35	jʃ	67	wks	22	wkd	24	fs	13	hntʃ	6	psd	6	zd
157	wps	35	hʒ	67	hnsd	22	lk	24	hldz	12	nθs	6	ln	6	wθs
149	ls	35	hns	67	hfd	22	jbz	23	ksθ	12	ls	5	jlt	6	wgz
149	wvd	34	wfj	65	hfs	22	hvd	23	jbz	12	jnðd	5	lb	6	sgd
148	wndz	32	hv	61	hp	21	lv	21	hndz	11	wnsd	5	jtθ	6	psd
134	pdz	32	hb	60	jpd	21	hfdz	21	jfs	11	wns	4	wfs	6	ln
133	lvz	31	wldz	57	lps	20	nðd	19	jgz	11	wlts	4	wlts	6	lkd
133	jnts	29	pdz	57	hvz	20	hbz	19	hbz	11	ldz	4	wʃ	6	lfs
130	tʃd	29	nθ	55	fdz	19	wfs	18	wpd	11	jnθ	4	ldʒ	6	jgd
125	hmd	28	wpd	54	hsdz	18	hsg	17	htʃd	11	hbd	4	hbd	6	hsgd
122	hv	28	wnt	52	wlt	18	hðz	16	fθ	11	ð	3	sbz	6	hndz
122	lʃ	28	jndʒ	49	hsgz	17	wnts	15	jʒ	10	wʒ	3	hsb	6	hgz
121	jðd	28	jg	48	jndʒd	17	lm	15	lʃ	10	wfd	3	hpđ	5	tθs
118	hsg	28	jfs	47	hnts	17	jndz	14	wmd	10	lps	3	jðd	5	ŋθs
118	lvd	27	wmd	47	bd	17	hθs	13	jsdz	10	lmz	2	lks	5	mpdz
115	jldz	27	fdz	46	hntʃd	16	jðz	13	jð	10	hlt	2	jðz	5	lsd
107	wð	26	wvz	46	wðz	16	hʃd	13	ksdz	9	lʃ	1	jgd	5	ldʒ
102	wnsd	26	wsdz	44	md	15	wðʒ	12	ntʃd	9	jfd	... 99 clusters omitted			

word-final consonant clusters: tokens | types

144630698175	J	16036	N	1133547777	PPS	317	JPP	23800000	PSF	8	NPPS
89445000095	N	14613	J	1030640332	JFP	252	FS	16800000	FF	8	JNFS
73270983800	P	9750	P	793043353	SPS	225	JFP	14350600	JNF	6	PFS
60011218135	V	9584	S	787880153	FP	171	PPS	13203400	PSPS	6	LSP
51077431592	JP	8594	V	784956608	JFS	151	JNPS	11448168	JFPS	5	JPSP
46051781078	S	5734	JP	743749964	JPP	145	NPP	5053800	JPF	4	PSPS
32198251120	L	5194	JS	615030255	JNPS	113	JSPS	2103099	PFS	3	NPF
28426375222	JS	4358	L	603986186	NF	108	FP	1210000	LFF	3	LNP
23309823981	NP	3551	NS	564995625	LPS	86	LPS	730085	SPP	3	JLN
22984687616	JN	2851	PS	477459510	LN	75	LF	688585	JLN	2	NFP
14215335450	JL	2620	JN	474684493	NPP	75	JLPS	482000	NPFS	2	LPPS
13586317760	PS	2430	NP	450178806	FS	68	PSP	373002	LSP	2	JPF
13198334770	F	2383	JPS	377539267	NSP	59	NSP	280053	NFP	2	JLSP
12674998552	NS	1874	SP	296917766	JSPS	45	NF	128900	NPF	1	PSFS
10388218539	JPS	1178	JL	293858588	NFS	34	LFS	127000	PSFS	1	PSF
9016231303	SP	1174	LS	189196713	JLPS	27	FPS	126100	JPSP	1	NPSP
8194850389	JF	1097	F	169604360	JNSP	23	LN	111000	JPPS	1	NPFS
7303635925	JSP	1042	JNS	134116228	LFS	22	JFPS	91100	NLS	1	NLS
6533134924	JNP	978	NPS	119101188	LFP	21	NFS	71520	LPPS	1	LFFS
6392493926	PP	844	JSP	105505100	PF	21	LPP	65544	JNFS	1	LFF
5947788077	JNS	764	JF	96340538	JNPP	21	JNSP	42800	FFS	1	JPPS
4477404422	NPS	751	JNP	82255400	JSPP	19	LFP	27400	NPSP	1	JPFS
3410654697	JLP	746	PP	55492652	FPS	18	JNPP	23900	FSP	1	JLF
3275985583	JLS	656	LP	44037600	JLSP	14	LNS	6440	JPFS	1	FSP
3168848729	LS	554	JLS	39654703	LNS	12	JNF	5680	JLF	1	FFS
2350531151	LP	493	SPS	34770800	LPP	11	PF	4890	LFFS	1	FF
1332945408	LF	464	JLP	33333990	NPPS	10	JSPP				
1227277376	PSP	357	JFS	26052000	LNP	8	SPP				

Plosive; nonstrident Fricative; Strident fricative; Nasal (m n ŋ); Liquid (l); glaJd

	p	t	k	b	d	g	ʈ	ɖ	f	θ	s	ʃ	v	ð	z	ʒ	m	n	ɳ	l	r	j	w	h			
p						9				6	8				10												
t						*					8				10												
k						10									10												
b						8									9												
d						*									9												
g						9									9												
ʈ						9									*												
ɖ						9									*												
f						9						8			8												
θ						6									8												
s						8	10	9							*												
ʃ						9									*												
v						8									9												
ð						0									0												
z						6									*												
ʒ						3									*												
m	9	6		4	8						8				10												
n		11			10		9	9	7	9	10	6			10	4											
ɳ			10		7	6				9					10												
l	9	9	8	7	10	6	8	7	9	9	9	9	8	0	10	0	9	7									
r																											
j	10	10	10	9	10	9	9	10	10	9	10	8	10	8	10	8	10	10	6	10							
w	10	10	9	9	10	8	9	9	8	10	10	7	9	9	10	7	10	10		10							
h	8	10	10	8	10	8	10	9	9	10	10	8	9	5	10	9	10	10		10							

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- ▶ simplest explanation: VCCC is the maximal word-final sequence and $j, w, h \in C$