A matrix of consonant-cluster-free monosyllabic words in English

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In language-related psychological research, it is often necessary to search for sets of words with certain well-controlled phonological properties. To aid in searches of this kind, this paper presents a matrix of consonant-cluster-free, monosyllabic English words that are classified according to their phonemes. The matrix is of considerable use in the construction of experimental stimuli. Its applications are discussed.

A frequent, masochistic activity in linguistically related psychology is to search for sets of stimulus words having certain systematic properties (phonological, orthographic, semantic, etc.). Construction of these word sets typically involves an open-ended mental search, often precipitating an extended episode of the tip-of-the-tongue state discussed by Brown and McNeill (1966). Clearly, a more systematic solution is desirable whenever the stimulus design problem is a recurrent one and the solution space is manageably small. The solution space to one such problem is provided in the Appendix, the main contribution of the present paper. The Appendix includes, in matrix form, all monosyllabic English words with simple CVC (consonant-vowel-consonant), CV, VC, or V phoneme structures (i.e., all monosyllabic words except words with consonant clusters). The listing can aid in the construction of sets of either phonologically uniform or phonologically varied word or nonword syllables. After the listing is described further, several examples of its application will be provided, and its limits will be discussed.

CONSTRUCTION OF THE MATRIX

The matrix (see Appendix) is based on the phonemes (sounds) of English, not the letters used to represent these sounds. In each section of the Appendix, the initial consonant is listed in the leftmost column, and the vowel sound is listed in the top row. The sections of the Appendix differ according to the final consonant. Diphthongs (the compound vowels [aɪ] as in *find*, [ɔɪ] as in *boil*, and [aʊ] as in *down*) and affricates (the compound consonants [dʒ] as in *judge* and [tʃ] as in *church*) are included, because there is evidence that they are generally perceived as single units (Cowan, Braine, & Leavitt, 1985). The nonlinguist can decipher the phonetic symbols by reading the words occurring in each row or column. The sym-

bol "ø" is used to represent the cases in which there is no initial or final consonant (i.e., in CV, VC, or V structures).

If a particular combination of phonemes does not form an English word, that cell of the table is left blank. For each set of homophonic words (e.g., *real* vs. *reel*), only one word is recorded, and words with two possible pronunciations (e.g., *vase*, pronounced [vez] or [vaz]) appear in two locations in the table. Slang words, common first names, and contractions are included, but are presented in parentheses. Finally, because of regional variations and individual differences in speech and English usage, the table cannot be totally accurate for all speakers, and it represents my dialect (Washington, DC area speech with influences in the past 15 years of New England and several midwestern states). A much larger table of monosyllabic and some disyllabic words, phonetically arranged according to a standard British dialect, also exists (Rockey, 1973).

SOME APPLICATIONS OF THE MATRIX

Investigators of speech perception often use sets of simple monosyllables as the stimuli (see, e.g., the classic readings edited by Lehiste, 1967). In these studies, it is often the case that some of the syllables form words and some do not. Although it is generally the phonetic properties of the syllables that are of interest in these studies, lexical recognition of some items might influence the results. To avoid this problem, the Appendix presented here makes it easier to determine whether, for a particular study, it would be possible to use a set of syllables entirely of word status or of nonword status.

It is sometimes necessary to devise stimuli containing matching phonetic properties in word and nonword sets. For example, Ganong (1980) and Fox (1984) examined the effects of lexical status on phoneme identification. They presented voiced-voiceless word pairs in which only the voiced member was a word (e.g., *dust* vs. *tust*) or only the voiceless member was a word (e.g., *dest* vs. *test*), and in Fox's study, pairs in which both or neither mem-

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ber was a word. The Appendix yields an exhaustive set of candidate stimuli that could be used to design studies such as these.

Several of my studies of speech memory further illustrate how the listing can be used. First, Cowan and Kielbasa (1986) presented young children with lists of non-sense syllables in order to examine memory for speech sounds. After each list, there was a variable silent delay period filled with a distracting task, and then the child was to respond by selecting pictures whose names rhymed with syllables on the spoken list (e.g., by pointing to a *bed* in response to the syllable *ged*). For this study, the matrix in the Appendix aided in finding the best word and nonword stimuli with similar phonetic properties. Second, in a study of young children's speech memory currently under way, it was necessary to find a set of monosyllabic words with a CV structure that could be scored independently for correct retention of the consonant and vowel. The matrix yielded a four-word set, including *bee*, *tea*, *bow*, and *toe*. Because the options can be examined exhaustively, this stimulus set can be used with the assurance that a better set of stimuli suitable for the children is not likely to be found.

A more detailed example can demonstrate the potential power of the Appendix, but some background is needed to appreciate the design problem. In an important paper on speech memory development, Conrad (1971) found that school-aged children (e.g., 8-year-olds) remembered sets of pictures much better when the pictures had acoustically dissimilar names (*fish*, *spoon*, *hat*, etc.) than when they had similar names (*bat*, *cat*, *hat*, etc.). In contrast, little effect of acoustic similarity was obtained in preschool children (e.g., 4-year-olds). It was thought that the developmental difference was in verbal labeling, but Hulme (1984) obtained a comparable effect when the same items were presented as spoken words. In the author's laboratory, this effect has been replicated with adults and 4-year-old children. The data appear to indicate that instead of a development merely in verbal labeling, there is an interesting development in the processing of speech between the preschool and school years.

However, the stimuli used in these studies include several complicating factors that make it impossible to specify the nature of the developing speech processes. First, the dissimilar words were phonetically longer than the similar words, so that word similarity and length were confounded. Second, the acoustic similarities occurred in both the vowel and the final consonant, and the contribution of each is unclear. If the basis of the similarity effect is in sensory memory, it should occur only if there is vowel similarity (Cowan, 1984; Crowder, 1971; M. J. Watkins, O. C. Watkins, & Crowder, 1974), whereas if an articulatory memory is involved, the effect should occur with either vowel or consonant similarity. With the help of the Appendix, better stimulus sets have been devised for a further study, described below.

Table 1
Series of Words for an Experiment on the Effects of
Consonant Similarity on Word Span

1. seed, said, sad, sod, sawed, sowed, sued, side
2. neat, knit, net, gnat, not, nut, note, night
3. deem, dim, dame, dam, dumb, dome, doom, dime
4. keep, kip, cape, cap, cop, cup, cope, coop
5. lick, lake, lock, luck, look, like, leak, lack
6. miss, mace, mess, mass, muss, moss, moose, mouse
7. bees, bays, buzz, bows, booze, buys, boys, boughs
8. peel, pill, pail, pal, pole, pull, pool, pile

The aim is to determine the nature of the acoustic similarity effect by repeating the Hulme (1984) procedure with adult subjects only, but with better controlled stimuli. Consonant and vowel similarity are to be manipulated in separate experiments, using stimuli constructed with the help of the Appendix. Illustrating these, Table 1 contains sets of words that can be used to examine the effects of intralist consonant similarity. Each of the eight sets of words contains eight items with the same consonants but different vowels. Stimulus lists are to be constructed using words within a set, for the acoustically similar condition (e.g., *neat*, *knit*, *net*, *gnat*, *not*, *nut*, *note*, *night*), or using only one word from each set, each with a different vowel, for the acoustically dissimilar condition (e.g., *seed*, *knit*, *mess*, *cap*, *lock*, *buzz*, *pole*, *dime*). Thus, across trials the same words are to be used in the acoustically similar and dissimilar conditions, but with the words grouped into lists differently in these conditions. Construction of this stimulus set and of other stimuli to examine the effects of vowel similarity would not have been feasible without the Appendix.

Finally, the Appendix might be of use to linguists (e.g., Bhat, 1978; Vihman, 1978) attempting to characterize the rules and tendencies of phoneme combination. An important aspect of the Appendix that enables all of these applications is the use of a matrix form. Rhyming dictionaries (e.g., Stein, 1960) provide a much wider variety of word types, but they are not appropriately organized for a systematic, phoneme-by-phoneme search.

LIMITS OF THE APPENDIX

Although the CVC solution space is relatively small (with 7,360 cells in the Appendix), the solution space for all monosyllabic English words is considerably larger. Based on descriptions of consonant clusters provided by Bloomfield (1933, pp. 127-138) and Greenberg (1978), it can be shown that a matrix accommodating all monosyllabic English words contains over 77,000 cells (cf. Rockey, 1973).

The Appendix is arranged best for comparisons of word sets with a common last consonant, whereas comparisons of words with different last consonants are somewhat less convenient. However, the entire matrix could be entered into a computer base to permit various types of searches. Alternatively, when one wishes to compare sections of

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A Matrix of Consonant-Cluster-Free Monosyllabic Words

Exemplary words from each of the 20 sections, in order of each section's appearance in this listing, are: bib, bead, big, beep, beet, beak, beam, bean, king, deal, beer, fizz, guess, dish, give, beef, teeth/teethe, page/beige, beach, bee .

[illegible]

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʌʊ
Words Ending in d																
b	bead	bid	bade	bed	bad	(bod)	bud	(baud)	(bode)	—	—	bide	buoyed	bowed	—	bird
d	deed	did	—	dead	(Dad)	—	dud	—	—	—	(dude)	died	—	—	—	—
g	—	—	—	—	gad	god	—	—	goad	good	—	guide	—	—	—	gird
p	peed	—	paid	—	pad	pod	—	pawed	—	—	—	pied	—	—	—	purred
t	teed	—	—	(Ted)	(tad)	(Tod)	—	—	toad	—	—	tide	toyed	—	—	(turd)
k	keyed	kid	cade	—	cad	cod	cud	cawed	code	could	cood	—	—	cowed	cued	curd
m	mead	mid	made	—	mad	(mod)	mud	—	mode	—	mood	—	—	—	mewed	—
n	need	—	neighed	(Ned)	—	nod	—	gnawed	node	—	nude	—	—	—	—	(nerd)
l	lead	lid	layed	led	lad	—	—	—	load	—	lewd	lied	(Lloyd)	loud	—	—
r	read	rid	raid	red	rad	rod	—	—	road	—	rude	ride	—	—	—	—
j	—	(Yid)	—	—	—	—	—	yawed	—	—	(you'd)	—	—	—	—	—
z	—	—	—	zed	—	—	—	—	—	—	—	—	—	—	—	—
s	seed	(Sid)	—	said	sad	sod	sudd	sawed	sowed	—	sued	side	—	—	—	surd
f	(she'd)	—	shade	shed	shad	shod	—	—	showed	should	shood	shied	—	—	—	—
v	—	—	—	—	—	—	—	—	—	—	—	vied	void	vowed	viewed	—
ʃ	feed	fid	fade	fed	fad	—	—	—	—	—	food	—	—	—	feud	furred
h	heed	hid	—	head	had	hod	—	—	hoed	hood	(who'd)	hide	—	(how'd)	—	heard
ð	—	—	(they'd)	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	thud	thawed	—	—	—	—	—	—	—	third
w	weed	—	wade	wed	—	wad	—	—	woad	would	wood	wide	—	(wowed)	—	word
dʒ	—	—	jade	—	—	—	—	jawed	—	—	(Jude)	—	—	—	—	—
tʃ	—	chid	—	—	(Chad)	—	—	—	—	—	chewed	chide	—	(chowed)	—	—
(ø)	—	id	aid	(Ed)	add	odd	—	awed	owed	—	—	eyed	—	—	(you'd)	—

[illegible]

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ɜ
Words Ending in p																
b	beep	—	—	—	—	(bop)	—	—	—	—	—	—	—	—	—	burp
d	deep	dip	—	—	—	—	—	—	dope	—	dupe	—	—	—	—	—
g	—	—	gape	—	gap	—	—	—	—	—	(goop)	—	—	—	—	—
p	peep	pip	—	pep	pap	pop	pup	—	pope	—	(poop)	pipe	—	—	—	—
t	—	tip	tape	—	tap	top	—	—	tope	—	—	type	—	—	—	—
k	keep	kip	cape	—	cap	cop	cup	—	cope	—	coop	—	—	—	—	—
m	—	—	—	—	map	mop	—	—	mope	—	—	—	—	—	—	—
n	—	nip	nape	—	nap	—	—	—	(nope)	—	—	—	—	—	—	—
l	leap	lip	—	—	lap	lop	—	—	lope	—	loop	—	—	—	—	—
r	reap	rip	rape	(rep)	rap	—	—	—	rope	—	—	ripe	—	—	—	—
j	—	(yip)	—	(yep)	(yap)	—	(yup)	—	—	—	—	(yipe)	—	—	—	—
z	—	zip	—	—	zap	—	—	—	—	—	—	—	—	—	—	—
s	seep	sip	—	—	sap	sop	sup	—	soap	—	soup	—	—	—	—	—
ʃ	sheep	ship	shape	—	—	shop	—	—	—	—	—	—	—	—	—	—
v	(VIP)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	—	—	—	—	—	fop	—	—	—	—	—	—	—	—	—	—
h	heap	hip	—	(hep)	—	hop	—	—	hope	—	hoop	(hype)	—	—	—	—
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	weep	whip	—	—	—	wop	—	—	—	—	whoop	wipe	—	—	—	—
dʒ	(Jeep)	gip	jape	—	(Jap)	—	—	—	—	—	—	—	—	—	—	—
tʃ	cheap	chip	chape	—	chap	chop	—	—	—	—	—	—	—	—	—	chirp
(ə)	—	—	ape	—	—	(op)	up	—	—	—	—	—	—	—	—	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ɜ
Words Ending in t																
b	beet	bit	bait	bet	bat	—	but	bought	boat	—	boot	bite	—	bout	—	(Burt)
d	—	—	date	debt	—	dot	—	—	dote	—	—	—	—	doubt	—	dirt
g	—	—	gate	get	gat	got	gut	ghat	goat	—	—	—	—	gout	—	girt
p	(Pete)	pit	pate	pet	pat	pot	putt	—	put	—	put	—	—	pout	—	pert
t	teat	(tit)	—	(Tet)	—	(tot)	(Tut)	taught	(tote)	—	toot	right	—	tout	—	—
k	—	kit	(Kate)	—	cat	cot	cut	caught	coat	—	coot	kite	—	—	cute	curt
m	meat	mitt	mate	met	mat	—	mutt	—	moat	—	moot	might	—	—	mute	—
n	neat	knit	—	net	gnat	not	nut	nought	note	—	newt	night	—	—	—	—
l	—	lit	late	let	—	lot	—	—	—	—	loot	light	—	lout	—	—
r	—	writ	rate	—	rat	rot	rut	wrought	wrote	—	root	right	—	route	—	—
j	—	—	—	yet	—	yacht	—	—	—	—	—	—	—	—	—	—
z	—	(zit)	—	—	—	—	—	—	—	—	zoot	—	—	—	—	—
s	seat	sit	sate	set	sat	sot	—	sought	—	soot	suit	sight	—	—	—	—
ʃ	sheet	(shit)	—	—	—	shot	shut	—	shoat	—	shoot	—	—	shout	—	shirt
v	—	—	—	(vet)	vat	—	—	—	vote	—	—	—	—	—	—	—
f	feet	fit	fate	—	fat	—	—	fought	—	foot	—	fight	—	—	—	—
h	heat	hit	hate	—	hat	hot	hut	—	—	—	hoot	height	—	—	—	hurt
ð	—	—	—	—	that	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	—	thought	—	—	—	—	—	—	—	—
w	wheat	wit	wait	wet	—	watt	what	—	—	—	—	white	—	—	—	—
dʒ	—	—	—	jet	—	jot	jut	—	—	—	jute	—	—	—	—	—
tʃ	cheat	chit	—	—	chat	—	—	—	—	—	—	—	—	—	—	—
(ə)	eat	it	ate	—	at	—	—	ought	oat	—	—	—	—	out	—	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ɜ
Words Ending in k																
b	beak	—	bake	beck	back	—	buck	balk	—	book	—	bike	—	—	—	—
d	—	(Dick)	—	deck	—	dock	duck	—	—	—	duke	dike	—	—	—	dirk
g	(geek)	—	—	—	—	—	—	gawk	—	(gook)	—	—	—	—	—	—
p	peek	pick	—	peck	pack	pock	puck	—	poke	—	—	pike	—	—	puke	perk
t	teak	tick	take	(tech)	tack	tock	tuck	talk	(toke)	took	—	(tyke)	—	—	—	(Turk)
k	—	kick	cake	—	—	cock	—	calk	(Coke)	cook	(kook)	—	—	—	—	(Kirk)
m	meek	(mick)	make	—	(Mac)	mock	muck	—	—	—	—	(Mike)	—	—	—	murk
n	—	nick	—	neck	knack	knock	—	—	—	nook	(nuke)	—	—	—	—	—
l	leak	lick	lake	—	lack	lock	luck	—	—	look	(Luke)	like	—	—	—	lurk
r	reek	(Rick)	rake	wreck	rack	rock	ruck	—	—	rook	—	—	—	—	—	—
j	—	—	—	—	yak	—	(yuck)	—	yolk	—	—	—	—	—	—	—
z	(Zeke)	—	—	—	(Zac)	—	—	—	—	—	—	—	—	—	—	—
s	seek	sick	sake	—	sack	sock	suck	—	soak	—	—	(Psych)	—	—	—	—
f	chic	—	shake	—	shack	shock	shuck	—	—	shook	—	—	—	—	—	shirk
v	—	(Vic)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	—	—	fake	—	—	—	(fuck)	—	folk	—	—	—	—	—	—	—
h	—	(hick)	hake	(heck)	(hack)	hock	(Huck)	hawk	—	hook	—	hike	—	—	—	—
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	thick	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	week	wick	wake	—	whack	—	—	walk	woke	—	—	—	—	—	—	work
dʒ	—	—	(Jake)	—	(Jack)	jock	—	—	joke	—	juke	—	—	—	—	jerk
tʃ	cheek	chick	—	check	—	chock	chuck	chalk	choke	—	—	—	—	—	—	—
(ə)	eke	—	ache	—	—	—	—	—	oak	—	—	—	—	—	—	irk

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ɜ
Words Ending in m																
b	beam	—	—	—	—	bomb	bum	balm	—	—	boom	—	—	—	—	—
d	deem	dim	dame	—	dam	(Dom)	dumb	—	dome	—	doom	dime	—	—	—	—
g	—	—	game	—	gam	—	gum	—	—	—	—	—	—	—	—	—
p	—	—	—	—	(Pam)	—	—	palm	—	—	—	—	—	—	—	perm
t	team	(Tim)	tame	—	—	(Tom)	—	—	tome	—	tomb	time	—	—	—	term
k	—	(Kim)	came	—	cam	—	come	calm	comb	—	—	—	—	—	—	—
m	—	—	maim	—	(mam)	(Mom)	mum	—	—	—	—	mime	—	—	—	—
n	—	—	name	—	—	—	numb	—	gnome	—	—	—	—	—	—	—
l	—	limb	lame	—	lamb	—	—	—	loam	—	loom	lime	—	—	—	—
r	ream	rim	—	—	ram	(ROM)	rum	—	roam	—	room	rhyme	—	—	—	—
j	—	—	—	—	yam	—	(yum)	—	—	—	—	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	(zoom)	—	—	—	—	—
s	seem	—	same	—	(Sam)	—	some	psalm	—	—	—	cyme	—	—	—	—
f	—	shim	shame	—	sham	—	—	—	—	—	—	—	—	—	—	—
v	—	vim	—	—	—	—	—	—	—	—	(voom)	—	—	—	—	—
f	—	—	fame	—	—	—	—	—	foam	—	—	—	—	—	fume	firm
h	—	him	—	hem	ham	—	hum	—	home	—	whom	—	—	—	—	—
ð	—	—	—	them	—	—	—	—	—	—	—	—	—	—	—	—
θ	theme	—	—	—	—	—	thumb	—	—	—	—	—	—	—	—	therm
w	—	whim	—	—	wham	—	—	—	—	—	womb	—	—	—	—	worm
dʒ	—	(Jim)	—	gem	jam	—	—	—	—	—	—	—	—	—	—	germ
tʃ	—	—	—	—	—	—	chum	—	—	—	—	chime	—	—	—	—
(ə)	—	—	aim	M	am	—	(um)	—	ohm	—	—	(l'm)	—	—	—	—

First	Vowel															
Consonant	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʔ
Words Ending in n																
b	bean	been	bane	(Ben)	ban	—	bun	—	bone	—	boon	—	—	—	—	burn
d	dean	din	(Dane)	den	(Dan)	(Don)	done	dawn	—	—	dune	dine	—	down	—	(durn)
g	—	—	gain	—	—	—	gun	—	—	—	goon	—	—	gown	—	—
p	—	pin	pain	pen	pan	—	pun	pawn	pone	—	poon	pine	—	—	—	—
t	teen	tin	—	ten	tan	—	ton	—	tone	—	tune	time	—	town	—	turn
k	keen	kin	cane	Ken	can	(con)	—	—	cone	—	coon	kine	coin	—	—	kern
m	mean	—	mane	men	man	—	—	—	moan	—	moon	mine	—	—	—	—
n	—	—	—	—	—	—	none	—	known	—	noon	nine	—	—	—	—
l	lean	—	lain	(Len)	—	—	—	lawn	loan	—	loon	line	loin	—	—	learn
r	—	—	rain	wren	ran	(Ron)	run	—	roan	—	rune	(Rhine)	—	—	—	—
j	yea	yin	—	yen	—	yon	—	yawn	—	—	—	—	—	—	—	yearn
z	—	—	—	(zen)	—	—	—	—	zone	—	—	—	—	—	—	—
s	seen	sin	sane	—	—	—	sun	—	sewn	—	soon	sign	—	—	—	—
f	sheen	shin	(Shane)	—	—	—	shun	—	shone	—	—	shine	—	—	—	—
v	—	—	vain	—	van	—	—	(Vaughn)	—	—	—	vine	—	—	—	—
f	—	fin	feign	—	fan	—	fun	fawn	phone	—	—	fine	—	—	—	fern
h	—	—	—	hen	—	—	(Hun)	—	hone	—	—	—	—	—	hewn	—
ð	—	—	—	then	than	—	—	—	—	—	—	(thine)	—	—	—	—
θ	—	thin	thane	—	—	—	—	—	—	—	—	—	—	—	—	—
w	wean	win	wane	when	—	wan	one	—	—	—	—	wine	—	—	—	—
dʒ	gene	gin	(Jane)	—	(Jan)	(John)	—	—	(Joan)	—	(June)	—	join	—	—	—
tʃ	—	chin	chain	—	—	—	—	—	—	—	—	chine	—	—	—	churn
(ø)	—	in	—	N	an	—	—	—	own	—	—	—	—	—	—	earn

[illegible]

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in l (Monosyllabicity of the words with diphthongs, e.g., <i>boil</i> , <i>tile</i> , <i>towel</i> , is debatable.)																
b	—	bill	bail	bell	—	—	—	ball	bowl	bull	—	bile	boil	bowel	—	burl
d	deal	dill	dale	dell	—	doll	dull	—	dole	—	—	dial	—	dowel	—	—
g	—	gill	gale	—	gal	—	gull	gall	goal	—	ghoul	guile	—	—	—	girl
p	peel	pill	pail	(pell)	pal	—	—	(Paul)	pole	pull	pool	pile	—	—	—	pearl
t	teal	till	tail	tell	—	—	—	tall	toll	—	tool	tile	toil	towel	—	—
k	keel	kill	kale	—	—	—	cull	call	coal	—	cool	chyle	coil	cowl	—	curl
m	meal	mill	mail	(mell)	—	(moll)	mull	mall	mole	—	—	mile	moil	—	mule	(Merle)
n	(Neal)	nil	nail	(Nell)	—	—	null	—	knoll	—	—	(Nile)	—	—	—	—
l	—	(Lil)	—	—	—	loll	lull	—	—	—	—	—	loyal	—	—	—
r	real	rill	rail	—	—	—	—	—	role	—	rule	rile	roil	—	—	—
j	—	—	(Yale)	yell	—	—	—	yawl	—	—	(Yule)	—	—	—	—	—
z	zeal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	seal	sill	sail	sell	(Sal)	—	—	(Sol)	sole	—	—	—	soil	—	—	—
f	(she'll)	(shill)	shale	shell	shall	—	—	shawl	shoal	—	—	—	—	—	—	(Shirl)
v	veal	—	veil	—	(Val)	—	—	—	vole	—	—	vile	—	vowel	—	—
f	feel	fill	fail	fell	—	—	—	fall	foal	full	fool	file	foil	foul	fuel	furl
h	heal	hill	hail	hell	(Hal)	—	hull	hall	hole	—	(who'll)	(heil)	(Hoyle)	howl	—	hurl
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	thill	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	wheel	will	whale	well	—	—	—	wall	—	wool	—	while	—	—	—	whirl
dʒ	—	(Jill)	jail	gel	—	—	—	—	—	—	jewel	—	—	jowl	—	—
tʃ	—	chill	—	—	—	—	—	—	—	—	—	—	—	—	—	churl
(ə)	eel	ill	ale	L	(Al)	—	—	all	—	—	—	aisle	oil	owl	you'll	(Earl)

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in r (Monosyllabicity of the words with diphthongs, e.g., <i>buyer</i> , <i>bower</i> , <i>foyer</i> , is debatable.)																
b	beer	—	bear	—	—	bar	—	bore	—	—	—	buyer	—	bower	—	—
d	deer	—	dare	—	—	—	—	door	—	—	—	dire	—	dour	—	—
g	gear	—	—	—	—	—	—	gore	—	—	—	—	—	—	—	—
p	peer	—	pair	—	—	par	—	pore	—	—	—	pyre	—	power	pure	—
t	tear	—	tear	—	—	tar	—	tore	—	—	—	tire	—	tower	—	—
k	—	—	care	—	—	car	—	core	—	—	—	—	—	cower	cure	—
m	mere	—	mare	—	—	mar	—	more	—	—	moor	mire	—	—	—	—
n	near	—	—	—	—	—	—	nor	—	—	—	—	—	—	—	—
l	leer	—	lair	—	—	—	—	lore	—	—	lure	lyre	—	—	—	—
r	rear	—	rare	—	—	—	—	roar	—	—	—	—	—	—	—	—
j	year	—	—	—	—	—	—	your	—	—	—	—	—	—	—	—
z	—	—	—	—	—	Czar	—	—	—	—	—	—	—	—	—	—
s	sear	—	—	—	—	—	—	sore	—	—	—	sire	—	sour	—	—
ʃ	shear	—	share	—	—	—	—	shore	—	—	—	—	—	shower	—	—
v	veer	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	fear	—	fare	—	—	far	—	for	—	—	—	fire	foyer	—	—	—
h	hear	—	hair	—	—	—	—	whore	—	—	—	hire	—	(how're)	—	—
ð	—	—	there	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	—	(Thor)	—	—	—	—	—	—	—	—
w	(we're)	—	wear	—	—	—	—	war	—	—	—	wire	—	—	—	—
dʒ	jeer	—	—	—	—	jar	—	—	—	—	—	gyre	—	—	—	—
tʃ	cheer	—	chair	—	—	char	—	chore	—	—	—	—	—	—	—	—
(ə)	ear	—	heir	—	—	are	—	or	—	—	—	ire	—	our	—	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in z																
b	bees	(biz)	bays	—	—	—	buzz	—	bows	—	booze	buys	boys	boughs	—	burrs
d	(D's)	—	days	—	—	—	does	—	doze	—	dues	dies	—	—	—	—
g	—	—	gays	—	—	—	—	gauze	goes	—	—	guys	—	—	—	—
p	peas	—	pays	—	—	—	—	paws	pose	—	—	pies	poise	—	pews	purrs
t	tease	'tis	—	—	—	—	—	taws	toes	—	(two's)	ties	toys	—	—	—
k	keys	—	cays	—	—	—	(cuz)	cause	—	—	coos	—	—	cows	—	curs
m	—	(Ms.)	maze	—	—	—	—	—	mows	—	moos	—	—	—	muse	—
n	knees	—	neighs	—	—	—	—	gnaws	nose	—	news	—	noise	—	—	—
l	lees	(Liz)	lays	—	—	—	—	laws	lows	—	lose	lies	—	—	—	—
r	—	—	rays	—	(razz)	—	—	—	rose	—	ruse	rise	—	—	—	—
j	—	—	—	—	—	—	—	yaws	—	—	use	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	sieze	—	—	says	—	—	—	saws	sows	—	sues	size	—	sows	—	sirs
f	(she's)	—	—	—	—	Shah's	—	—	shows	—	shoes	shies	—	—	—	—
v	—	—	vase	—	—	vase	—	—	—	—	—	—	—	vows	views	—
f	fees	fizz	faze	fez	—	—	fuzz	—	foes	—	—	—	—	—	fuse	furs
h	(he's)	his	haze	—	has	—	—	haws	hose	—	whose	—	—	house	hues	hers
ð	these	—	—	—	—	—	—	—	those	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	—	thaws	—	—	—	thighs	—	—	—	—
w	wheeze	—	ways	—	—	—	was	—	woes	—	woos	wise	—	(wows)	—	whirs
dʒ	—	—	—	—	jazz	—	—	jaws	(Joe's)	—	(Jews)	—	joys	—	—	—
tʃ	cheese	—	—	—	—	—	—	—	chose	—	choose	—	—	—	—	—
(ə)	ease	is	A's	—	as	(Oz)	—	awes	owes	—	ooze	eyes	—	—	use	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in s																
b	—	—	base	(Bess)	bass	—	bus	boss	—	—	—	—	—	—	—	—
d	—	—	dace	—	—	—	—	—	dose	—	deuce	dice	—	douse	—	—
g	geese	—	—	guess	gas	—	(Gus)	—	—	—	goose	—	—	gauss	—	—
p	piece	(piss)	pace	—	pass	—	pus	—	—	(puss)	—	—	—	—	puce	purse
t	—	—	—	(Tess)	(Tass)	—	—	toss	—	—	—	—	—	—	—	terse
k	—	kiss	case	—	—	—	(cuss)	cos	—	—	—	—	—	—	—	curse
m	—	miss	mace	mess	mass	—	muss	moss	—	—	moose	mice	—	mouse	—	—
n	niece	—	—	—	—	—	—	—	—	—	noose	nice	—	—	—	nurse
l	lease	—	lace	less	lass	—	—	loss	—	—	loose	lice	—	louse	—	—
r	—	—	race	—	—	—	(Russ)	—	—	—	—	rice	—	—	—	—
j	—	—	—	yes	—	—	—	—	—	—	use	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	(Zeus)	—	—	—	—	—
s	cease	(Sis)	—	cess	(sass)	—	—	sauce	—	—	—	—	—	souse	—	—
f	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
v	—	—	—	—	—	—	—	—	—	—	—	vice	voice	—	—	verse
f	—	—	face	—	—	fosse	fuss	fosse	—	—	—	—	—	—	—	—
h	—	hiss	—	—	—	—	—	—	—	—	—	—	—	house	—	hearse
ð	—	this	—	—	—	—	thus	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	thus	—	—	—	—	—	—	—	—	—
w	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	worse
dʒ	—	—	—	—	—	joss	—	—	—	—	juice	—	(Joyce)	—	—	—
tʃ	—	—	chase	chess	—	—	—	—	—	—	—	—	choice	—	—	—
(ə)	—	—	ace	S	ass	os	us	—	os	—	—	ice	—	—	use	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in f																
b	—	—	—	—	bash	—	—	—	—	bush	—	—	—	—	—	—
d	—	dish	—	—	dash	—	—	—	—	—	douche	—	—	—	—	—
g	—	—	—	—	gash	(gosh)	gush	—	gauche	—	—	—	—	—	—	—
p	—	(pish)	—	—	—	(posh)	—	—	—	push	—	—	—	—	—	—
t	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
k	quiche	—	—	—	cash	—	—	—	—	—	—	—	—	—	—	—
m	—	—	—	mesh	mash	—	mush	—	—	—	—	—	—	—	—	—
n	—	—	—	—	gnash	(nosh)	—	—	—	—	—	—	—	—	—	—
l	leash	—	—	—	lash	—	lush	—	—	—	—	—	—	—	—	—
r	—	—	—	—	rash	—	rush	—	—	—	—	—	—	—	—	—
j	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	—	—	—	—	sash	—	—	—	—	—	—	—	—	—	—	—
f	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
v	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	fiche	fish	—	—	—	—	—	—	—	—	—	—	—	—	—	—
h	—	—	—	—	hash	—	hush	—	—	—	—	—	—	—	—	—
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	—	wish	—	—	—	wash	—	—	—	(whoosh)	—	—	—	—	—	—
dʒ	—	—	—	—	—	(josh)	—	—	—	—	—	—	—	—	—	—
tʃ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(ə)	—	—	—	—	ash	—	—	—	—	—	—	—	—	—	—	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in v																
b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
d	—	—	(Dave)	—	—	—	dove	—	dove	—	—	dive	—	—	—	—
g	—	give	gave	—	—	—	—	—	—	—	—	—	—	—	—	—
p	peeve	—	pave	—	—	—	—	—	—	—	—	—	—	—	—	—
t	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
k	—	—	cave	—	—	—	—	—	cove	—	—	—	—	—	—	curve
m	—	—	—	—	—	—	—	—	mauve	—	move	—	—	—	—	(Merv)
n	—	—	knave	—	—	—	—	—	—	—	—	—	—	—	—	nerve
l	leave	live	lave	—	—	—	love	—	—	—	—	live	—	—	—	—
r	reeve	—	rave	—	—	—	—	—	rove	—	—	—	—	—	—	—
j	—	—	—	—	—	—	—	—	—	—	(you've)	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	—	sieve	save	—	—	—	—	—	—	—	—	—	—	—	—	serve
f	sheave	—	shave	—	—	—	shove	—	—	—	—	—	—	—	—	verve
v	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	—	—	—	—	—	—	—	—	—	—	—	five	—	—	—	—
h	heave	—	—	—	have	—	—	—	hove	—	—	hive	—	—	—	—
ð	—	—	(they've)	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	thieve	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	weave	—	wave	—	—	—	—	—	wove	—	—	—	—	—	—	—
dʒ	—	—	—	—	—	—	—	—	(Jove)	—	—	jive	—	—	—	—
tʃ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(ə)	(Eve)	—	—	—	—	—	of	—	—	—	—	(I've)	—	—	(you've)	(Irv)

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in f																
b	beef	(Biff)	—	—	—	—	buff	—	—	—	—	—	—	—	—	—
d	—	—	—	deaf	—	—	(duff)	doff	—	—	—	—	—	—	—	—
g	—	—	—	—	gaffe	—	guff	—	—	—	goof	—	—	—	—	—
p	—	—	—	—	—	—	puff	—	—	(poof)	(poof)	—	—	—	—	—
t	—	tiff	—	—	—	—	tough	toff	—	—	—	—	—	—	—	turf
k	—	—	—	—	calf	—	cuff	cough	—	—	—	—	—	—	—	—
m	—	miff	—	—	—	—	muff	—	—	—	—	—	—	—	—	—
n	—	—	—	—	—	—	—	—	—	—	—	knife	—	—	—	(nerf)
l	leaf	—	—	—	laugh	—	luff	—	loaf	—	—	life	—	—	—	—
r	reef	riff	—	—	—	—	rough	—	—	—	roof	rife	—	—	—	—
j	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	surf
ʃ	sheaf	—	—	chef	—	—	—	—	—	—	—	—	—	—	—	—
v	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	fief	—	—	—	—	—	—	—	—	—	—	fife	—	—	—	—
h	—	—	—	—	half	—	huff	—	—	hoof	—	—	—	—	—	—
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	thief	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	—	whiff	waif	—	—	—	—	—	—	(woof)	—	wife	—	—	—	—
dʒ	—	(jiff)	—	(Jeff)	—	—	—	—	—	—	—	—	—	—	—	—
tʃ	chief	—	chafe	—	chaff	—	—	—	—	—	—	—	—	—	—	—
(ə)	—	if	—	F	—	—	—	off	oaf	—	(oof)	—	—	—	—	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in ð or θ																
(Words with ð marked with an asterisk.)																
b	—	—	*bathe	(Beth)	bath	—	—	—	both	—	booth	—	—	—	—	birth
d	—	—	—	death	—	—	—	—	—	—	—	—	—	—	—	dearth
g	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	girth
p	—	pith	—	—	path	—	—	—	—	—	—	—	—	—	—	Perth
t	teeth/*teethe	—	—	—	—	—	—	—	—	—	tooth	*tithe	—	—	—	—
k	(Keith)	kith	—	—	—	—	—	—	—	—	couth	—	—	—	—	—
m	—	myth	—	—	math	—	—	moth	—	—	—	—	—	mouth/*mouth	—	mirth
n	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
l	—	—	*lathe	—	lath	—	—	—	—	—	—	*lithe	—	—	—	—
r	wreath	—	wraith	—	wrath	—	—	—	—	—	(Ruth)	—	—	—	—	—
j	—	—	—	—	—	—	—	—	—	—	youth	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	*seethe	—	—	(Seth)	—	—	—	—	—	—	*soothe	—	—	south	—	—
ʃ	sheath	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
v	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	—	—	faith	—	—	—	—	—	—	—	—	—	—	—	—	—
h	—	—	—	—	hath	—	—	—	—	—	—	—	—	—	—	—
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	—	with	—	—	—	—	—	—	—	—	—	—	—	—	—	worth
dʒ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
tʃ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(ə)	—	—	—	—	—	—	—	—	oath	—	—	—	—	—	youth	earth

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in dʒ or ʒ (Words with ʒ marked with an asterisk.)																
b	—	—	*beige	—	badge	—	budge	—	—	—	—	—	—	—	—	—
d	—	—	—	—	—	dodge	—	—	doge	—	—	—	—	—	—	dirge
g	—	—	gauge	—	—	—	—	—	—	—	—	—	—	gouge	—	—
p	—	—	page	—	—	—	—	—	—	—	—	—	—	—	—	purge
t	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
k	—	—	cage	kedge	cadge	—	—	—	—	—	—	—	—	—	—	—
m	—	(Midge)	—	—	—	—	—	—	—	—	—	—	—	—	—	merge
n	—	—	—	—	—	—	nudge	—	—	(nudge)	—	—	—	—	—	—
l	liege	—	—	ledge	—	lodge	—	—	—	—	—	—	—	—	—	—
r	—	ridge	rage	(Reg)	—	—	—	—	—	—	*rouge	—	—	—	—	—
j	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	siege	—	sage	sedge	—	—	—	—	—	—	—	—	—	—	—	surge
ʃ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
v	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	verge
f	—	—	—	—	—	—	fudge	—	—	—	—	—	—	—	—	—
h	—	—	—	hedge	hajj	—	—	—	—	—	—	—	—	—	huge	—
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
w	—	—	wage	wedge	—	—	—	—	—	—	—	—	—	—	—	—
dʒ	—	—	—	—	—	—	judge	—	—	—	—	—	—	—	—	—
tʃ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(ə)	—	—	age	edge	—	—	—	—	—	—	—	—	—	—	—	urge

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending in tʃ																
b	beach	bitch	—	—	batch	botch	—	—	(Butch)	—	—	—	—	—	—	birch
d	—	ditch	—	—	—	—	(Dutch)	—	—	—	—	—	—	—	—	—
g	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
p	peach	pitch	—	—	patch	—	—	—	poach	—	pooch	—	—	pouch	—	perch
t	teach	—	—	—	—	—	touch	—	—	—	—	—	—	—	—	—
k	—	—	—	ketch	catch	—	—	—	coach	—	—	—	—	couch	—	—
m	—	(Mitch)	—	—	match	much	—	—	—	—	mooch	—	—	—	—	—
n	—	niche	—	—	(natch)	notch	—	—	—	—	—	—	—	—	—	—
l	leech	—	—	letch	latch	—	—	—	loach	—	—	—	—	—	—	lurch
r	reach	rich	—	wretch	—	—	—	—	roach	—	—	—	—	—	—	—
j	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
z	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
s	—	—	—	—	—	—	such	—	—	—	—	—	—	—	—	search
ʃ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
v	—	—	—	—	—	—	—	—	—	—	—	—	—	vouch	—	—
f	—	fitch	—	fetch	—	—	—	—	—	—	—	—	—	—	—	—
h	—	hitch	—	—	hatch	—	hutch	—	—	—	—	—	—	—	—	—
ð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
θ	—	—	—	—	thatch	—	—	—	—	—	—	—	—	—	—	—
w	—	witch	—	—	—	watch	—	—	—	—	—	—	—	—	—	—
dʒ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
tʃ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	church
(ə)	each	itch	H	etch	—	—	—	—	—	—	—	—	—	(ouch)	—	—

First Consonant	Vowel															
	i	I	e	ɛ	æ	a	ʌ	ɔ	o	ʊ	u	aɪ	ɔɪ	aʊ	ju	ʒ
Words Ending With No Final Consonant																
b	bee	—	bay	—	—	—	—	—	bow	—	(boo)	buy	boy	bow	—	bur
d	D	—	day	—	—	—	—	daw	doe	—	do	die	—	dhow	—	—
g	—	—	gay	—	—	—	—	—	go	—	goo	guy	(goy)	—	—	—
p	pea	—	pay	—	—	(pa)	—	paw	(Poe)	—	(Pooh)	pie	poi	(pow)	pew	purr
t	tea	—	—	—	—	—	—	toe	—	—	two	tie	toy	tau	—	—
k	key	—	(Kay)	—	—	—	—	caw	—	—	coup	chi	coy	cow	cue	cur
m	me	—	may	—	—	(ma)	—	—	mow	—	moo	my	—	—	mew	myrrh
n	knee	—	neigh	—	—	—	—	gnaw	no	—	knew	nigh	—	now	—	—
l	(Lee)	—	lay	—	—	(la)	—	law	low	—	lieu	lie	—	—	—	—
r	—	—	ray	—	—	(rah)	—	raw	row	—	rue	rye	(Roy)	—	—	—
j	(ye)	—	(yay)	—	—	—	—	—	(yo)	—	you	—	—	—	—	—
z	Z	—	—	—	—	—	—	—	—	—	zoo	xi	—	—	—	—
s	see	—	say	—	—	—	—	saw	sew	—	sue	sigh	soy	sow	—	sir
ʃ	she	—	shay	—	—	shah	—	—	show	—	shoe	shy	—	—	—	—
v	V	—	—	—	—	—	—	—	—	—	—	vie	—	vow	view	—
f	fee	—	(Fay)	—	—	—	—	(faugh)	foe	—	foo	(fie)	—	—	few	fur
h	he	—	hay	—	—	—	—	haw	hoe	—	who	high	—	how	hew	her
ð	thee	—	they	—	—	—	the	—	though	—	—	thy	—	thou	—	—
θ	—	—	—	—	—	—	—	thaw	—	—	—	thigh	—	—	—	—
w	we	—	way	—	—	—	—	—	woe	—	woo	why	—	(wow)	—	were
dʒ	G	—	J	—	—	—	—	jaw	(Joe)	—	(Jew)	—	joy	—	—	—
tʃ	—	—	—	—	—	—	—	—	—	—	chew	—	—	chow	—	—
(ø)	E	—	A	—	—	(ah)	a	(aw)	owe	—	—	I	(oy)	(ow)	you	(er)

Note: Letters of the alphabet (e.g., Z, E above) represent the spoken forms of the letters ([zi], [i]). Proper nouns, compound words, and slang words appear in parentheses.

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