PHONOLOGICAL ADAPTATION IN THE SPEECH OF JAMAICANS IN THE LONDON AREA

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E R R A T A

page 27 feature matrix ADD lines as follows

[front]*	+	+	-	-	-	+	+	-	-	-
[rounded]*	-	-	-	+	+	-	-	-	+	+

*redundant

page 68 line 5 from bottom /r/ SHOULD READ r

page 79 line 1 at end ADD legislation

page 282 line 12 SHOULD READ

h, θ, ɔ, t, d, r5, ɔ', j/w, ð, r2, r3/4, ɔ:),...

ABSTRACT

This is a study of the pronunciation of thirty-six young adults who were born in Jamaica and later came to live in the London area. It explores to what extent they have modified their pronunciation to fit in with their new surroundings.

In Part One a brief description of the social background and of the phonology of Jamaican Creole and Received Pronunciation are followed by a discussion of phonological adaptation, which is seen as the rule-governed modification of a speaker's competence. Hyperadaptation (hypercorrection) occurs when the environment in which a rule is to operate is imprecisely specified.

In Part Two the method of investigation is described. From each informant a battery of 190 selected words were elicited by questionnaire in the course of a tape-recorded interview. The pronunciation of each such keyword was analysed and transcribed phonetically. Each respondent's score was calculated for each of fifteen phonetic/phonological variables. A high score corresponded to a pronunciation relatively similar to that of an Englishman, a low score to that of a speaker of broad Jamaican Creole.

The respondents were classified by sex, occupation, age on arrival in England, length of time in England, and parish of origin. The correlations between scores and these classifications were then investigated statistically. A high score was

found to be strongly associated with non-manual occupation and, less strongly, with Eastern rather than Western parishes of Jamaica. Also, unexpectedly, those who had been here less than ten years tended to score higher than those who had been here longer; but this factor, like age on arrival and sex, had relatively little effect.

Three appendices contain, respectively, transcriptions of connected speech recorded in Jamaica and in London, a discussion of phonological theory and the distinctive features underlying it, and statistical calculations.

ACKNOWLEDGEMENTS

I am grateful to two groups of people for their assistance: my informants and my colleagues.

The thirty-six Jamaicans whose answers to the questionnaire I recorded endured with courtesy and good humour what must sometimes have seemed very silly questions. I am indebted to all of them, and to all who put me in touch with them, but particularly to Pedro Patterson. He it was whose speech first aroused my interest in Jamaican Creole and in the problem of phonological adaptation; it was he who accompanied me on my visit to Jamaica in 1966 and there introduced me to his family and friends, so enabling me to accomplish much more than I should otherwise have been able to. I must also record my thanks to the University of London Central Research Fund, which paid my fare to Jamaica and back.

My supervisor, J.D. O'Connor, has not only given me the benefit of his great experience and wise advice, but also provided the occasional tactful prodding which stimulated me to get on with the research. In this latter task he was backed up by my colleagues Olive Tooley and Gordon Arnold. Professor R.B. Le Page kindly advised me when I first embarked upon the subject of Jamaican speech. The idea of using a standardized questionnaire to bring some system into what till then were casual observations came from Professor Alva L. Davis, with whom I had some interesting discussions. His questionnaire (Davis, 1969) was the inspiration and model for my own. Lastly I must thank my uncle, Gilbert Peaker, CBE, who supervised the statistical part of this thesis.

DECLARATION

My uncle, Gilbert Peaker, of Grasmere, Westmorland, provided a model for working out t-tests on my data. He also calculated the first part (T1 to T8) of each of the tables [1.1], [1.2], [1.3], and [3.1] in Appendix III, leaving me to do the calculations for T9 to T15. He also compiled or calculated the matrices [2.1], [2.2], [2.3], and [2.4], and is responsible for the wording describing them. The rest of the statistical work, and everything else in the thesis, is my own.

London, December 1970 John Wells

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Part I BACKGROUND

Chapter I.1

The social background

Jamaica is an island situated in the Caribbean Sea between 17°45′ and 18°32′ N. latitude and 76°11′ and 78°21′ W. longitude. It extends over an area of 4,411 square miles, having a length of 146 miles and a maximum width of 51 miles. Its distance from England is just over 4,000 miles. At the 1960 census its population was estimated at 1,624,400; by 1968 this figure was believed to have grown to about 1,939,650. Of this population, 28 percent (an estimated 542,432 in 1968) lived in the capital, Kingston, and its surrounding parish of St Andrew*.

Columbus discovered Jamaica in 1494, and the Spanish occupied the island from 1509 until 1655, when it came under British rule, remaining a British possession until independence in 1962. The Arawak people who populated the island before the arrival of the Europeans had disappeared by the end of Spanish rule, and the present population is largely descended from Africans brought in as slaves in the seventeenth and eighteenth centuries and, to a lesser extent, from European colonists (planters, indentured servants and others) and from

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* Handbook of Jamaica, 1964; West Indies and Caribbean Year Book, 1970.

East Indian and Chinese labourers. The history of Jamaica's population is recounted in some detail by Le Page (1960).

In the late 1950's and early 1960's there occurred considerable migration from the West Indies to Britain. In consequence of this London, in common with several other large cities in England, now has a fair number of residents of Jamaican birth. It is they whose speech is the subject of this thesis.

There do not appear to be any precise statistics available which would give the number of Jamaican-born people living in London. The 1966 Sample Census, however, shows a figure of 161,940 people born in the British Caribbean and resident in the Greater London conurbation (London having some 60 percent of the whole British-Caribbean-born population of Great Britain).

Now Jamaicans form about 40 percent of the population of the West Indian territories that are, or were until their recent independence, British*. If one is right in guessing that the proportion of Jamaicans to other British West Indians in London is comparable to the proportion in the West Indies, then it follows that the Jamaican-born population of the

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* Waddell, 1967, gives population figures for Jamaica, Trinidad and Tobago, Guyana, Barbados, and the twelve then British Dependencies in the Caribbean, based on estimates for 1964-66. From these one can calculate that the 1966 Jamaican population of 1,827,000 represents about 40 percent of the total of 4,477,000.

Greater London conurbation is of the order of 40 percent of 162,000, i.e. somewhere in the region of 65,000 people. The 56 informants who answered the questionnaire (Chapter II.1-3) may therefore constitute a sample of about 0·05 percent.

The 1966 Sample Census (HMSO, 1969) also gives tables breaking down the British-Caribbean-born population of Great Britain by socio-economic class. The relevant figures can be summarized as follows.

Employers, managers, professional (classes 1-4)	2,830
Intermediate and junior non-manual, personal service workers (5-7)	37,370
Non-manual total	40,200
Foremen, skilled and semiskilled manual (8-10)	111,570
Unskilled manual (11)	30,810
Manual total	142,180
Others, including armed forces (12-17)	6,910
Total economically active	189,380

(HMSO, 1969: Table 7)

Excluding "others", we have the following percentages: non-manual 22 p.c., manual 78 p.c.

People of West Indian parentage born in the United Kingdom are not considered in the present study. The speech of such so-called immigrant children is the subject of research elsewhere, notably at Birmingham University, where a Schools Council project on the Teaching of English to West Indian Children is in progress. The investigators involved in this project

state that they have found inter alia "that the English born children of West Indian parents have learning problems that are almost identical with those of children born in the Caribbean" (Wight, 1970).

Those whose speech is being studied in this present thesis mostly came to the United Kingdom in order to find employment and improve their prospects. A small proportion came with their parents or to accompany a spouse. A few came as students. Whether they will stay only a short time or for the rest of their lives is impossible to say. Of the sample whose speech was recorded, one or two have already returned to Jamaica. One might guess that most will stay in England indefinitely.

Chapter I.2

THE LINGUISTIC BACKGROUND

English has been the language of virtually all Jamaicans for more than two centuries--English, that is, in the broadest sense. The home speech of country folk and lower-class townspeople in Jamaica is a form of English known to linguists as Jamaican Creole, whereas the officially recognized language of the island is Standard English. Educated and middle-class Jamaicans tend to use a form of English which is close to Standard but shows Creole influences, particularly in pronunciation and vocabulary. In Jamaica one can hear all degrees of intermediate stages between the broadest Creole and Standard English.

Some have claimed, or implied, that Creole is not English: that Jamaican Creole is best regarded not as a dialect of English but as a separate language.

> A given speaker is likely to shift back and forth from Creole to English or something closely approximating English within a single utterance, without ever being conscious of this shift. [...] The lines between Jamaican Creole and English ... are not as clearly defined as structural linguists would like them to be.
>
> (Bailey, 1966: 1)

Calling Creole a separate language may be politically justified insomuch as people may then be less reluctant to admit to its

having a grammar, lexicon, and phonology which can be described for themselves and not just as distortions or corruptions of Standard English. Against this it must be said that Jamaicans consider themselves speakers of English, and are offended when ignorant English people inquire what their mother tongue might be. When they come to live and work in England they expect no language difficulties such as they know would await them in, say, Panama or Cuba. Jamaicans usually claim to be able to understand everything said in Standard English; it comes as something of a shock to many of them to find that English people can by no means always understand them.

Jamaican Creole has been rather well described by linguists. Following Le Page's introductory survey (Le Page, 1957), we have had the historical background and some transcribed texts (Le Page and De Camp, 1960), an excellent popularization dealing mainly with matters of lexical interest (Cassidy, 1961), a discussion of social factors and some word-and-thing dialect geography (De Camp, 1961), a transformational syntax (Bailey, 1966), and most importantly the definitive Dictionary of Jamaican English*(Cassidy and Le Page, 1967). Where descriptive linguistics trod, applied linguistics was not far behind: we have had articles discussing the problems of teaching Creole to speakers of other forms of English (Lawton, 1964) and the more urgent question of how and whether to teach Standard English to speakers of Creole (Le Page, 1968). Other articles dealing with Jamaican Creole include Cassidy and Le Page, 1961; Cassidy, 1957, 1966, 1967; De Camp, 1969; Lawton, 1963, 1968; Stewart, 1962; and Wells, 1967.

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*Hereinafter referred to as DJE.

For this study it is not only the linguistic situation in Jamaica which is relevant, but also that in England--more particularly, in London. Furthermore we are not concerned with questions of syntax, morphology, or lexicon, but only with those of phonology and phonetics. We must therefore now proceed to discuss the accents* relevant to this study.

In both Jamaica and the London area considerable variations in pronunciation are to be heard. It is believed that these can largely be correlated with non-linguistic variables such as age, sex, regionality, and socio-economic class (defined by criteria such as income, education, and occupation). It seems desirable to recognize two such variables as being of particular importance: class and regionality.

Class Social groups vary in status. The forms of speech associated with such groups tend to show a corresponding variation in prestige. As mentioned above, and ignoring all questions of grammar and vocabulary, accents in Jamaica range from a broad Creole (JC) to what we may call an educated Jamaican accent (JE). A JC accent (and of course JC grammar) are associated with the working classes--the peasantry and the urban proletariat--while a JE accent is associated with the non-manual, clerical, commercial, professional and managerial classes. As mentioned, many Jamaicans are to a greater or lesser degree bidialectal (and 'biaccental'). In Jamaica, a JC accent has

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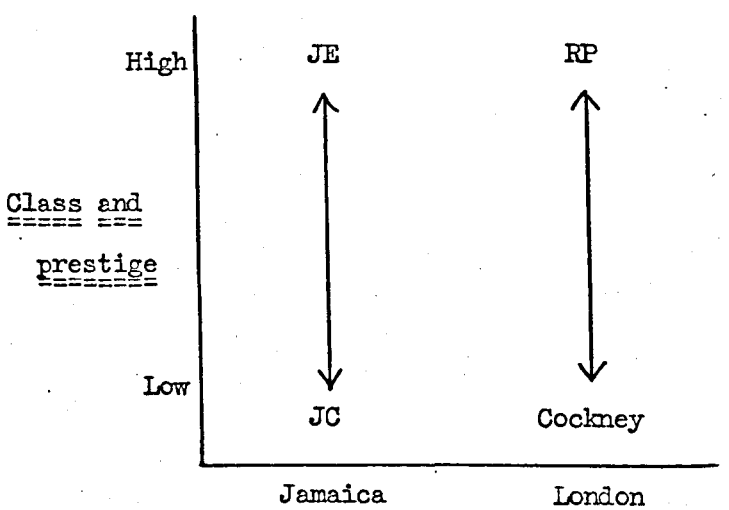
* 'Accent' differs from 'dialect' in concerning only pronunciation. For this distinction, see Abercrombie, 1967: 7-8, also Wells, 1970: 251.

low prestige, a JE accent high prestige; in London, both are referred to as a West Indian accent, the difference being that the JE accent is easier for an Englishman to understand.
In London, too, the speech of native Londoners exhibits accents which range from a broad Cockney, which is associated with the working classes and has low prestige, up to the accent variously known as Received Pronunciation, Southern British Standard, etc. (RP), which has high prestige.

Regionality A speaker's pronunciation suggests to an interlocutor not only what social class he is from but also what part of the world or of the country he comes from. No Jamaican born and bred and living in Jamaica sounds like a native Londoner, or vice versa. Nor, on a finer scale, does an East Ender sound precisely like a Cockney from South London, nor a Kingstonian like someone from Mandeville.

We start therefore with a fourfold classification of accents relevant to Jamaicans in London, arranged along two continua:



In this diagram the vertical scale is clearly continuous; but the horizontal scale is, generally speaking, discrete--except insofar as the picture is muddied by speakers who move from one place to another, as exemplified by precisely those whose speech is the subject of this study, namely Jamaicans in London.

However, our simple diagram needs modification on at least two grounds: first, that there is reason to suppose that the continuum-lines are not parallel, and second, that other prestige accents than JE and RP may play a part.

It is clear that a JE accent is closer to RP than a JC accent is to Cockney. There are several variables which show JC and Cockney as being at opposite extremes of a scale, with JE and RP somewhere between them. This is true, for example, of the vowels in words such as day and know (which we shall symbolize as /e:/, /o:/). In broad Creole, these are opening (downgliding) diphthongs, in educated Jamaican speech they are monophthongs or narrow closing (upgliding) diphthongs (see discussion of this point in DJE: xl), in RP they are narrowish closing diphthongs, and in Cockney they are wide closing diphthongs. Or again, nonprevocalic /l/ is clear in all forms of Jamaican speech, dark but still lateral in RP, and 'dark' (sc. back, half-close) but vocoid in Cockney. The vowel in a word such as short is fully open in JC, not quite fully open in JE, about mid in RP, and half-close in Cockney. The initial consonant in thin is a coronal plosive in JC, a coronal fricative in JE and RP, but often a labiodental fricative

in Cockney. There are many other cases where three of the four accents agree, and the odd man out is either JC or Cockney. Thus the final vowel in words such as happy is /i/ for JC, JE, and RP, but /i:/ for Cockney; the vowel in words such as bird is unrounded for Cockney, RP, and JE, but rounded for JC. So the diagram ought to show JE and RP relatively close to one another, JC and Cockney relatively far apart.

It appears that American speech exerts some influence on Jamaican English. There are three principal factors which might be invoked to account for this: (i) the example of Jamaicans who have worked, studied, or otherwise lived in the United States or Canada and later returned to the island with speech habits adopted in North America; (ii) the influence of radio broadcasts, perhaps particularly sponsored evangelistic programmes originating in the United States and widely listened to in Jamaica; (iii) the model of speech furnished by the many American tourists who vacation in Jamaica, especially along the North coast. As one of the questionnaire respondents recorded in London remarked,

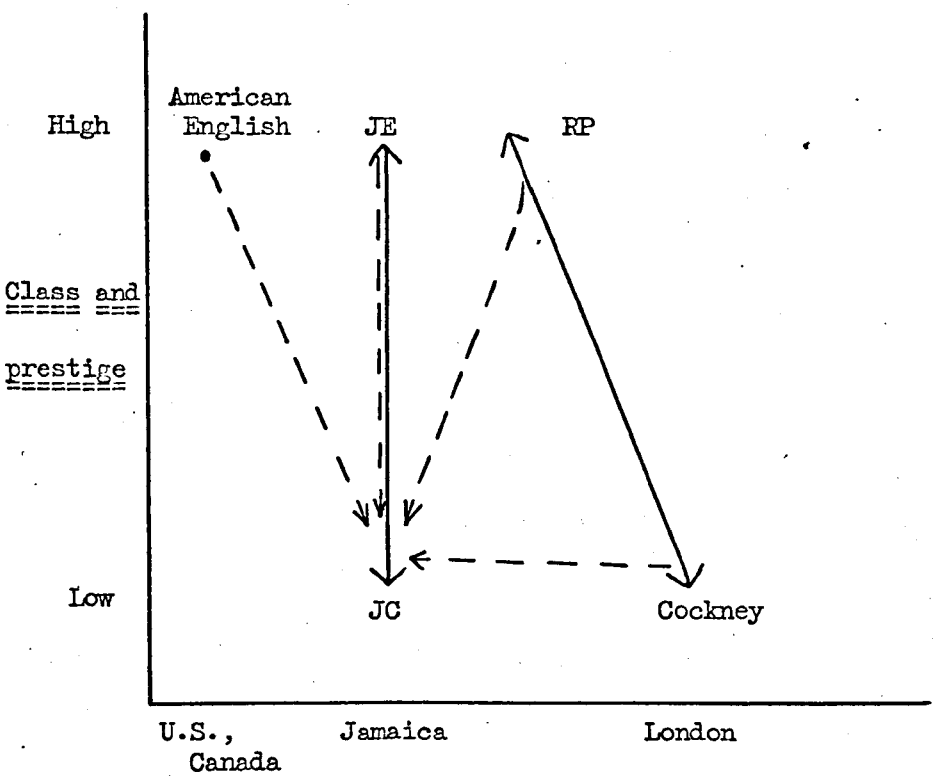
> All Jamaicans are trying to speak like Americans, and I don't like it.

Notwithstanding such opinions, American speech--indeed, everything American--is held in generally high prestige in Jamaica. Among pronunciation features which may be due to American influence are the pronouncing of an /r/ in words like park*, and the sporadic use of /a/ rather than /a:/ in words like grass, dance--or, indeed, the

*Or should this be attributed to Barbadian influence?

belief among those who use the /a:/ shared by JC, JE, RP, and Cockney that /a/ is what they 'ought' to use, a view expressed to me by a Westmoreland peasant woman à propos of the word basket.

We may accordingly revise the diagram as shown below. Solid lines, as before, represent accent continua; broken lines represent possible sources of influence upon a Jamaican living in the London area and susceptible to some degree to pressures upon him to modify his speech in the direction of the prestige accent concerned.



We turn now to the description of Jamaican Creole phonetics and phonology--the presumed starting-point for many of the London informants whose speech is studied in Part III. (The first part of this description is not original, since it repeats what has been published elsewhere, e.g. Le Page, 1957, Cassidy and Le Page, 1967. I have, of course, checked the facts myself.)

The vowel system of Jamaican Creole comprises five short vowels paired with five long vowels, plus two diphthongs. The short vowels differ both quantitatively and qualitatively from the corresponding long vowels.

i	u	i:	u:		
e	o	e:	o:	ai	ou
a		a:			

These are exemplified as follows:

bit	foot	beat	shoot		
bet	cut	wait	boat	bite	(a)bout
pat,pot		start,short			

and in sentences such as the following, noted during my stay in Westmoreland*:

/hou ju neva ta:k se ju goin a ʃo:/ 'How come you didn't say you were going to the show?'

* I spent two months in Jamaica in the summer of 1966 studying JC.

/ju kjar i go a sku:l mek pikni ti:f i we fra:n ju/

'Are you going to take it to school and let some child steal it from you?"

/no bre:k i a:f/ 'Don't break it off!'

/ef mi no wain it, wa i wi du/ 'If I don't wind it (sc. a watch), what will it do?'

The phonetic realization of the vowels is as follows. *

/i/ [ɪ] front, close, unrounded; considerably lowered and retracted from Cardinal 1; like RP /i/.

/e/ [ɛ̝] front, mid, unrounded; between Cardinals 2 and 3; like RP /e/.

/a/ [a̠] front to central, open, unrounded; somewhat retracted from Cardinal 4.

/o/ [ɔ] back, mid, rounded; somewhat advanced from Cardinal 6, with varying degrees of lip-rounding.

/u/ [ʊ] back, close, rounded; considerably lowered and advanced from Cardinal 8; like RP /u/.

/i:/ [i:] front, close, unrounded, long; near to Cardinal 1; not diphthongal at times like RP /i:/.

/e:/ [ɪ̝ɛ̝] front, mid, unrounded, long; an opening diphthong moving from a quality closer than JC /i/ to one like JC /e/ or rather less open. (This vowel is transcribed /ie/ by other writers.)

/a:/ [ʌ:] central, open, unrounded, long; degree of tongue advancement rather variable.

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* Phonetic symbols throughout are those of the IPA.

/o:/ [ʊɔ] back, mid, rounded, long; an opening diphthong moving from a quality closer than JC /u/ to one between Cardinal 7 and Cardinal 6; lip rounding usually decreasing from a closely rounded startingpoint. (This vowel is transcribed /uo/ by other writers.)

/u:/ [u:] back, close, rounded, long; near to Cardinal 8; close lip rounding; not diphthongal at times like RP /u:/.

/ai/ [aɛ̆] front, unrounded, closing diphthong; startingpoint around Cardinal 4; endpoint anything from a centralized Cardinal 3 to closer than Cardinal 2.

/ou/ [ɔʊ] back, rounded, closing diphthong; startingpoint usually around Cardinal 6 and rounded (similar to JC /o/), but sometimes rather opener and unrounded, near Cardinal 5; endpoint like JC /u/ or closer.

These vowels show very little allophonic variation. One such variation observed in Westmoreland, and perhaps not found elsewhere, is the use of backer qualities for /a/ and /a:/ when adjacent to labials.

In the JC consonant system there are from 19 to 21 phonemes: six plosives, two affricates, three nasals, 4 (or 5) fricatives, two liquids, two semivowels (and sometimes /h/).

p	t	k	tʃ	f	s	ʃ	r	l	
b	d	g	dʒ	(v)	z				
m	n	ŋ					w	j	(h)

These are exemplified as follows:

pot	take	cup	chair	face	side	ship	reach	leaf	
bad	dog	good	jail	(1)	zinc				
man	name	thing					west	yard	(2)

The questions of /v/ and /h/ are discussed directly.

(1) In an idealized, maximally broad Jamaican Creole, [v] would not occur and has no place. Words which in other forms of English have /v/ are found with /b/ instead. This is exemplified in the following words and sentences I noted in Westmoreland:

/mi go doŋ a riba ebri ma:nin/ 'I go down to the river every morning.'

/mi no no: homotʃ eg udpe:ka hab, bot im hab eg/ 'I don't know how many eggs a woodpecker has, but he does have eggs.'

/im neba lib/ 'He never lived.'

/benta/ Venture (proper name)

/mi lob ju/ 'I love you.'

It was stated that town people said /lov/ for love, but the usual form in the country was /lob/. On the other hand speakers did

not simply lack [v]. Certain words apparently always have [v] and never [b] --words which may be presumed to be relatively recent borrowings from Standard English, e.g. /vo:t/ vote, /vortʃa/ voucher (a word important in connection with migration to England, though in being incorporated into JC it seems to have got partly confused with virtue). Several country informants confirmed that vote and boat are consistently distinguished. But the use of [v] in long established words where JC has /b/ is a stylistic matter subject to inconsistency and hypercorrection (e.g. /trovl/ trouble, /gja:vidʒ/ garbage). See further DJE, p. lvii, lx.

(2) Le Page, 1957, described [h] as noncontrastive,

> liable to attach itself to any word beginning with a vowel in RP, particularly when the first syllable is stressed, and to be lost from any word beginning with /h/ in RP.
>
> (Le Page, 1957: 383)

This view is shared by Cassidy (1961: 36-37), and is certainly true of the speech of Kingston and much of the island. But my own findings lead me to conclude that it is not true of the Westernmost parishes (Manchester, St Elizabeth, Westmoreland; about Trelawny, St James, and Hanover I have no evidence). In Westmoreland I quickly established that it was phonemic for even the broadest speakers, and this was confirmed by data collected in London from West Jamaica respondents (see below, Part III). Generally speaking, Westmoreland /h/ corresponds in incidence to RP /h/, except that it may be absent from the pronoun im and present in (h)it. There are also one or two other words where

the incidence of /h/ differs from that in RP:

/wa:fous/ wharfhouse (evidently monomorphemic, with syllabic division /wa: - fous/, and not connected in the speaker's mind with wharf or house. Cf /hous/ consistently from the same speaker for house.)

/a no mi ju no -- ju kja:n lik mi, a ho:/ 'It's not me, you know--you can't beat me, I bet' (where the last word, presumably owe with its archaic sense of 'own, confess, aver', consistently has /h/, making it homophonous with hoe.)

Minimal pairs for /h/ vs. zero in Westmoreland included:

/an/ and : /han/ hand

/e:r/ air : /he:r/ hair

/ud/ wood, would : /hud/ hood

The phonetic realization of the JC consonant phonemes is as follows.

/p/ [p] voiceless bilabial fricative

/b/ [b] voiced bilabial fricative

/t/ [t] voiceless alveolar plosive

/d/ [d] voiced alveolar plosive

/k/ [k] voiceless velar plosive

/g/ [g] voiced velar plosive

/tʃ/ [tʃ] voiceless palato-alveolar affricate (written /ch/ in DJE)

/dʒ/ [dʒ] voiced palato-alveolar affricate (written /j/ in DJE)

/f/ [f] voiceless labiodental fricative

(/v/ [v] voiced labiodental fricative)

/s/ [s] voiceless alveolar fricative

/z/ [z] voiced alveolar fricative

/ʃ/ [ʃ] voiceless palato-alveolar fricative (written /sh/ in DJE)

/m/ [m] voiced bilabial nasal

/n/ [n] voiced alveolar nasal

/ŋ/ [ŋ] voiced velar nasal (written /ng/ in DJE)

/r/ [ɹ] voiced post-alveolar approximant

/l/ [l] voiced alveolar lateral

/w/ [w] voiced labio-velar semivowel

/j/ [j] voiced palatal semivowel (written /y/ in DJE)

(/h/ [h] voiceless glottal fricative)

These realizations represent phonemic norms. Some more striking allophonic variants are outlined below.

/p, t, k/ are usually aspirated as in RP. Some Westmoreland informants, however, used unaspirated varieties.

/k, g/ are palatalized before /j/, as in /kjaŋglstik/ candle-stick, /plakja:d/ placard, /gjada/ gather. In fact the sequences /kj, gj/ may be realized as slightly affricated palatal plosives, [c, ɟ]. Some palatalization may also be heard before /i:, e:/, so that the place-name Cascade /kjaske:d/ may twice have [c]. /n/ may also be palatalized before /j/, as /njam/ 'eat'*

* Perhaps to be consistent one ought to analyse it as /ŋj/ rather than /nj/. But /ŋ/ otherwise never occurs initially.

Voiced obstruents may be devoiced when adjacent to a voiceless segment or pause, as in RP; my impression is that such devoicing is often less extensive in JC than in RP.

The sequence vowel plus nasal is sometimes realized as a nasalized vowel. Examples noted in Westmoreland:

/a:l dẽ sintiŋ ja no kra:siz/ 'All these things are a burden!'

/ju wã: sli:p/ 'Do you want to sleep?'

/brouni ga:n, ĩ ga:n/ 'Brownie (name of a hen) has gone, she's gone.'

/fran ĩ le: ĩ no kom fe:s mi/ 'Ever since she (sc. Brownie) has been laying, she doesn't come and face me.'

It is not strictly correct in orthodox phonemics to place these transcriptions between slants, since the nasalized vowels are certainly not contrastive with the sequence vowel + nasal. In fact, it seems that there is a neutralization of the three nasals which can occur, optionally, if two conditions are met: (i) the item concerned is either a 'grammatical item' ('form word', 'keneme') or one of a small set of common lexical items; and (ii), that the following sound is not a vowel. Thus before a consonant the pronoun (h)im may be [ĩ] or, depending on the place of articulation of the following consonant, any of [im, in, iŋ]. (When one starts to press the informant, though, it reverts to [im].) On the other hand, most lexical items do not have this assimilation/neutralization--so hymn, thin, sing remain

[him, tin, siŋ], do not rhyme, and exhibit neither neutralization to [ĩ] nor assimilation. The sequence /oŋ/ is also optionally realized as a nasalized vowel [õ̃], e.g. [dõ̃] /doŋ/ down. By assimilation and nasalization in successive syllables we may have, e.g., [kõndõ̃] /kon doŋ/ , from /kom/ plus /doŋ/, come down! Certain other nasalized vowels are regarded as falling outside JC phonology, being paralinguistic. Examples are the interjections discussed in DJE s.v. e-e, ee, iim, iin-hiin, in-in.

/r/ is fricative in the sequences /tr, dr/, realized as in RP as post-alveolar affricates. But /tr, dr/ are not altogether consistently contrastive with /tʃ, dʒ/ (cf. DJE p. lx-lxi). An unexpectedly large number of confusions between post-alveolar and palato-alveolar affricates turned up in the London-recorded material--see below, Part III.

/l/ is usually clear, i.e. weakly palatalized. I am at a loss to account for De Camp's calling it "so strongly velarized..." (Le Page and De Camp, 1960: 137), since the Westmoreland informants made it fairly clear even in /ku:l/ cool and /ko:l/ cold, coal.

/w/ is strikingly front, [ŭ] or [ў], before front non-open vowels, e.g. /wi:k/ week, /wes/ West. Before back vowels and /a(:)/ it is back, [ŭ], as in RP.

/j/ palatalizes preceding consonants: see above, p. 24.

/n/ and /l/ may be syllabic between a consonant and a morpheme boundary or consonant, e.g. /likl/ little, /hapndik/ hopping-dick (bird), /sipl/ 'make slippery', /wedn/

wedding, /esn/ essence 'scent', /notn/ nothing. Syllabic and non-syllabic /l/ and /n/ are in complementary distribution. Verbs ending in /t/ or /d/ may have syllabic /n/ optionally instead of /in/ for their ing-form: /be:d(i)n/ bathing. Syllabic /m/ also occurs, but is less common: /o:pm/ open (also /o:pin/).

In Appendix II questions of phonological theory are discussed. A model based on a modification of Jakobsonian distinctive features is adopted. We now specify the distinctive feature arrays assumed for the phonemes of JC.

Vowels are specified as $[^{+syll}_{-cons}]$, and further as follows. The features are explained and discussed in Appendix II.

	i	e	a	o	u	i:	e:	a:	o:	u:
[high]	+	-	-	-	+	+	-	-	-	+
[low]	-	-	+	-	-	-	-	+	-	-
[back]	-	-	-	+	+	-	-	-	+	+
[long]	-	-	-	-	-	+	+	+	+	+

Various phonological questions affect the vowels. Whatever one may think about the proper treatment of vowel alternations in standard accents, the question hardly arises in JC, since JC has extremely little allomorphic or morphophonemic alternation. It follows that the lexical representation of a JC word or morpheme may in most cases be considered as identical with its phonemic transcription. This assumes that alternations such as

those given in (1) below are either regarded as Standard English borrowings not really part of JC as such or else treated as fossilized relics of a no longer productive process.

(1)	explain--explanation	/e:--a/
	serene--serenity	/i:--e/
	divine--divinity	/ai--i/
	harmonious--harmonic	/o:--a/
	critical--criticize	/k--s/
	allegation--allege	/g--dʒ/
	divide--division	/d--dʒ/

(Chomsky and Halle, 1968: Chapter 4 passim.)

Nevertheless certain questions do arise about vowel length and vowel incidence. Various words exhibit alternation between a short vowel and the corresponding long vowel; thus /mi, mi:/ me; /in, i:n/ in; /we, we:r/ where; /fran, fra:n/ from; /kjan, kja:n/ can, can't; /do, do:/ though; /koko, ko:ko, ko:ko:/ coco (vegetable); /tʃo:tʃo:, tʃotʃo/ chocho (DJE s.v.); /ju, ju:/ you; and others. But other words show no such alternation. In the sentence

/a no fi ju:, a fi di tu: a wi/ 'It isn't yours, it belongs to us both'

only the pronouns /ju(:), wi(:)/ could have their vowel length altered. It seems that the negative particle is consistently /no/, whereas the adjective and verb are consistently /no:/. The opposite of yes is also pronounced long, /no:/. Thus

we have the contrasts between /no/ and /no:/ in

/ju no no: se a me: pen ju de/ 'Don't you know you're at May Pen?'
/ʃi no go tu no: da:ns/ 'She didn't go to any dance.'
/no:, no bre:k i a:f/ 'No, don't break it off!'

With words that do exhibit the alternation, the conditioning factors are not clear. In unstressed positions, the short vowel seems obligatory; but in stressed position either may occur, the short one being possibly associated with a more relaxed manner of speech. Compare /mi/ and /mi:/ in the following sentences--both were strongly stressed.

/a no mi/ 'It wasn't me!'
/unu a pik a:n mi: fa/ 'Why are you lot picking on me?'

The best we can do for a formulation of the rule governing this alternation is accordingly a confession of ignorance:

(2)* $\left[\begin{smallmatrix}+\text{syll}\\-\text{cons}\end{smallmatrix}\right] \rightarrow [+\text{long}] \,/\, \left[\begin{smallmatrix}\_\_\\+\text{str}\end{smallmatrix}\right]$ in certain cases

(Vowels are lengthened under stress in certain cases.)

It may even be that an adequate formulation would require the converse of (2) as well, to account for pronunciations like /tʃotʃo/. Compare also /sno:/ snow, but /snoko:n/ snow-cone (a synonym of DJE's snowball, 'shaved ice refreshment').

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*Notation and other conventions as in Chomsky and Halle, 1968.

But in many other cases there are minimal pairs available to demonstrate the contrastiveness of vowel length. This applies not only in closed but also in open syllables. We have already mentioned /no/ vs. /no:/; other examples are:

/bi:ta/ beater	/bita/ bitter
/li:k/ leak	/lik/ lick
/fi:/ fee	/fi/ 'for', etc.
/be:d/ bathe; beard	/bed/ bed
/le:ta/ later	/leta/ letter
/fe:/ Fay (proper name)	/fe/ expression of defiance
/ha:t/ heart	/hat/ hat; hot; hurt
/ma:ta/ mortar; martyr; Martha	/mata/ matter
/sa:/ saw (n.)	/sa/ sir (vocative)
/ko:t/ coat; court	/kot/ cut
/mo:ta/ motor	/bota/ butter
/lo:/ low	/tʃo/ expression of annoyance
/tu:/ two	/ku/ 'look!'
/su:da/ soother 'dummy'	/uda/ 'would'
/lu:s/ loose	/pus/ puss

In unstressed syllables, the short vowels can all occur freely. They can even occur in final open syllables, a position where RP admits only /i, u, ə/ and some accents of English admit only /ə/.

/flanil/ flannel

/aki/ ackee

/tʃini/ 'Spathodea tree'

/stu:pidnes/ 'stupidity'

/abe/ 'oil-palm tree'

/satide/ Saturday

/sense/ 'kind of hen'

/leman/ lemon

/leta/ letter

/baka/ 'behind (prepn.)'

/kiŋston/ Kingston

/maŋgo/ mango

/bombo/ indecent word

/hatful/ hurtful

/badu/ 'kind of coco'

/gutu/ 'kind of fish'

The question of long vowels in unstressed syllables is problematic. A statement that has the merit of simplicity, if not that of absolute truth, is that long vowels occur only in stressed syllables. If we make allowance for loss of stress in compounds and sentences, considering only morpheme stress, the statement is very nearly true--true enough, no doubt, for us to set it up as a morpheme structure condition, listing the exceptions as being just that, exceptional. Those I have noted include:

/korsi:n (ail)/ kerosene (cf /korsin/ cursing, alongside /kosin/)

/daʃi:n/ dasheen (cf /daʃin/ dashing. DJE gives the stress pattern /dàʃí:n/, but in Westmoreland I specifically noted this word for its unstressed /i:/.)

/plakja:d/ placard

/torli:n/ Terylene

/bufra:g/ bullfrog (though this approaches the ordinary front-stressed compound type such as /naitse:dʒ/ night-sage.)

/maho:/ mahoe (in Westmoreland front-stressed, though in other parts can be end-stressed. DJE gives no pronunciation.)

/ka:tu:n baks/ 'carton'

Half a dozen exceptions are clearly unimportant in view of the very characteristic restriction on long vowel distribution in JC which is captured by the morpheme structure condition suggested.

We can formalize it as (3):

(3) $$\begin{bmatrix} +\text{syll} \\ -\text{cons} \end{bmatrix} \rightarrow [-\text{long}] \; / \; [\underline{\quad}_{-\text{str}}]$$

(Vowels are short if not stressed.)

Another constraint on the distribution of JC vowels applies in the context /—r/. It seems correct, first of all, to say that in broad JC /r/ never occurs before a consonant within the same morpheme. (We assume pronunciations such as /be:rd/ beard, /pa:rk/ park, /bord/ bird to be some way up the stylistic continuum towards Jamaican Educated--in broad Creole we admit only /be:d/, /pa:k/, /bod/.) In the terminology I proposed recently (Wells, 1970), broad JC agrees with RP in being non-rhotic in this respect. Formulaically, broad JC has a morpheme structure condition (4)...

(4) $$X \rightarrow \left\{ \begin{bmatrix} +\text{syll} \end{bmatrix} \atop \begin{bmatrix} -\text{seg} \end{bmatrix} \right\} / \begin{bmatrix} +\text{son} \\ +\text{cont} \\ +\text{cons} \\ -\text{lat} \end{bmatrix} \; \underline{\quad}$$

(Anything occurring in the context "after /r/" must be either a syllabic--e.g. a vowel--or else a boundary. In other words, /r/ is always either prevocalic or final.)

... which rules out phonological matrices having (5) in their structure.

(5) $$\ldots \begin{bmatrix} +\text{son} \\ +\text{cont} \\ +\text{cons} \\ -\text{lat} \end{bmatrix} \begin{bmatrix} -\text{syll} \\ +\text{seg} \end{bmatrix} \ldots$$

(/r/ followed directly by a consonant).

There are no restrictions phonologically on the vowels preceding prevocalic /r/, i.e. on the V́ in the sequence V́rV. Thus spirit, very, married, curry, buru (DJE s.v.), serious /si:rios/, Mary /me:ri/, baara (cryptically mentioned in DJE s.v.), story, furious. Only the diphthongs /ai/ and /ou/ are excluded.

Unlike RP, JC admits /r/ in morpheme-final position, but only after certain vowels*. These vowels are /e:, a:, o:/ and /o/, as in

/tʃe:r/ chair; cheer

/dʒa:r/ jar

/fo:r/ four

/for/ fur 'fluff' .

The historical process whereby /r/ was lost before consonants but not morpheme-finally has given rise to one interesting minimal pair:

/fo:t/ fort : /fo:rt/ fourth .

As one progresses up the sociolinguistic continuum, this pair may become homophonous either through r-insertion in fort or through r-deletion in fourth: the latter seems higher in prestige than the former, and in my view neither can be considered 'broad' pronunciations.

I here find myself in disagreement with other writers, e.g. Cassidy and Le Page in DJE, p. liii, who transcribe four, door, and more without /r/. I went to Jamaica expecting to find this kind of /r/-distribution, and it came as something of a shock

* Of course RP does admit final /r/ after certain vowels, but only in connected speech where the next word begins with a vowel. This is 'linking' or 'intrusive' /r/.

to find, in Westmoreland at any rate, that pairs such as snow and snore, jaw and jar, day and dear were firmly distinguished--not, indeed, by their vowels, but by the presence or absence of final /r/. In some of my early efforts to talk JC I had to be corrected on this score...

Some words exhibit stylistic alternation, having either a long vowel with /r/ or a short vowel without it. Cassidy and Le Page's more is one such, being either /mo:r/ or /mo/; another is where, /we:r/ or /we/.

/we:r unu did go la:s nait/ 'Where did you lot go last night?'
/mi no wa:n nomo/ 'I don't want any more.'

Concerning the possible final sequence /ar/ there is some uncertainty. On the one hand, words like letter, mother, etc., clearly have no final /r/ in broad JC: /leta/, /mada/. On the other hand the word carry, a very common word with a variety of common pronunciations, is sometimes /kjar/ , and this form occurs in a text transcribed in Appendix I, p. 248. It seems to me that this isolated instance must again be treated as an exception. Morpheme structure conditions can then be formulated as follows.

$$(6) \quad \begin{bmatrix} +\text{syll} \\ -\text{cons} \\ +\text{long} \end{bmatrix} \rightarrow [-\text{high}] \; / \; \_\_ \; \begin{bmatrix} +\text{son} \\ +\text{cont} \\ +\text{cons} \\ -\text{lat} \end{bmatrix} \; [-\text{syll}]$$

(A long vowel must be nonhigh if followed by /r/ and then a nonsyllabic. By (4) this nonsyllabic cannot be anything but a boundary.)

(7) $$\begin{bmatrix}+\text{syll}\\-\text{cons}\\-\text{long}\end{bmatrix} \rightarrow \begin{bmatrix}-\text{high}\\-\text{low}\\+\text{back}\end{bmatrix} / \_\_ \begin{bmatrix}+\text{son}\\+\text{cont}\\+\text{cons}\\-\text{lat}\end{bmatrix} [-\text{syll}]$$

(In the same context as for (6), a short vowel must be /o/.)

Rules (6) and (7) may conveniently be combined in the schema (8):

(8) $$\begin{bmatrix}+\text{syll}\\-\text{cons}\\\langle-\text{long}\rangle\end{bmatrix} \rightarrow \begin{bmatrix}-\text{high}\\\langle-\text{low}\rangle\\\langle+\text{back}\rangle\end{bmatrix} / \_\_ \begin{bmatrix}+\text{son}\\+\text{cont}\\+\text{cons}\\-\text{lat}\end{bmatrix} [-\text{syll}]$$

Less broad kinds of Jamaican accent involve the loss of condition (4), with the consequence that the last term in (8), namely [-syll], no longer implies just "boundary", but can take on either of the values "consonant" or "boundary". Hence beard, bird, etc., with /r/.

The feature specification of the diphthongs /ai/ and /ou/ has not yet been discussed. The question arises whether they should be regarded as single-column matrices like the long vowels ('single sounds') or as two-column sequences ('sequence of two sounds').

We have already implicitly identified the phonetically diphthongal [iĕ, uŏ] as the long congeners of /e, o/, i.e. as /e:, o:/. It is tempting to apply an analogous phonological analysis to [aĭ] and [oŭ]. They do not correspond phonologically to any short vowel, but they would neatly round off the table of feature specifications (p. 27) if assigned the matrix entries

	ai	ou	
[high]	+	+	
[low]	+	+	
[back]	-	+	
[long]	(+)	(+)	redundantly

--that is, combining the features [+high] and [+low] in the way usually ruled out a priori (Chomsky and Halle, 1968: 505). An interpretative rule would be needed at some stage to specify that the [+high] phonetic segment comes second, after the [+low] one; low-level rules will adjust the precise heights of all the segments involved. This treatment would fit in nicely with rule (6), since /ai/ and /ou/, being [+high], are thereby prevented from occurring before /r#/.

The more orthodox alternative is to regard the diphthongs as sequences of short vowel plus semivowel:

	ai	ou
[high]	- +	- +
[low]	+ -	- -
[back]	- -	+ +
[long]	-	-
[syll]	+ -	+ -

This analysis may be felt to impose an unjustified over-precision on the first element of each diphthong--for example the first element of /ou/ is not in contrast with, say, /a/ in the way that

this analysis implies. For rule (6), this analysis is just as good as the alternative one; we can in fact make a more general rule accounting also for the constraint mentioned at the top of p. 34, since /ai/ and /ou/ can never occur before /r/:

(9) $$[+\text{seg}] \rightarrow \begin{bmatrix} \alpha\text{syll} \\ -\alpha\text{cons} \end{bmatrix} / \_\_ \begin{bmatrix} +\text{son} \\ +\text{cont} \\ +\text{cons} \\ -\text{lat} \end{bmatrix}$$

(A segment occurring before /r/ must be either a true consonant--not a semivowel--or a vowel.)

Broad JC bears witness to the working of a historical sound change which deleted /j/ before /i:, i, e:/ and /w/ before /u:, u, o:/. Examples are

/e:r/ year
/uman/ woman
/ud/ wood; would
/so:l/ 'swollen'

Some other forms recorded in Westmoreland suggest that this change was either never completed or else partly reversed by the influence of educated accents:

/wuda/ 'would' (alternative to /uda/)
/uzi/, /u:zi/, /wuzi/ (personal nickname)

Cf also DJE, p. lxi. In the special pronunciation used for things Anancy said in a story told me by one informant, a sound change applied converting /l/ to /j/. This overrode the

restriction on /ji-/ etc., so that /likl/ little became /jiki/. (DJE calls this a "bungo talk" form of little.)

The feature specification of JC consonants is straightforward. They are $[^{-syll}_{+cons}]$, and further as follows.

	p	b	t	d	k	g	tʃ	dʒ	f	v	s	z	ʃ	m	n	ŋ	r	l
[son]	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
[cont]	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	+	+
[ant]	+	+	+	+	-	-	-	-	+	+	+	+	-	+	+	-		
[cor]	-	-	+	+	-	-	+	+	-	-	+	+	+	-	+	-		
[dist]							+	+	-	-	+	+	+					
[voi]	-	+	-	+	-	+	-	+	-	+	-	+	-					
[lat]																	-	+
[nas]		-		-		-								+	+	+		
[fric]	-	-	-	-	-	-	+	+	+	+	+	+	+					

The features [dist], [nas], and [fric] are redundant. All gaps can also be redundantly supplied.

That leaves the segments agreeing in respect of [syll] and [cons]; these $[^{\alpha syll}_{\alpha cons}]$ segments are the syllabic consonants, the semivowels and the 'glide' /h/. It has already been implicitly suggested (p. 27) that the syllabicity of syllabic consonants is an allophonic feature introduced by a low-level rule. For the segments /j, w, h/, if Chomsky and Halle, 1968, are right about [h]--and for want of a better solution I will assume they are--we

assign the feature specification [$^{-syll}_{-cons}$] and

	j	w	h
[high]	+	+	-
[low]	-	-	+
[back]	-	+	-

--making /h/ a sort of [ă]. (Its voicelessness can be supplied redundantly.)

All JC consonants can occur in initial position, with the exception of /ŋ/. The following two-term sequences are found: /pr, tr, kr, br, dr, gr, fr; pl, kl, bl, gl, fl, sl; pw, tw, kw, bw, dw, gw, sw; pj, tj, kj, bj, dj, gj, fj, vj, mj, nj/. Sequences involving initial /s/ are a bit problematical. While /sl/ and /sw/ are clearly admissible (sleep, swim), /s/ plus a [-son] segment is presumably to be excluded from a form of Creole so maximally broad that no-one quite speaks it. Alongside /sta:t/ start we have the broader variant /ta:t/, alongside /splaʃ/ splash we have /plaʃ/, and so on. With /sm/ and /sn/ another question arises: in broad JC either there is a vowel between them, thus /sine:k/ snake*, or else the /s/ itself seems to be syllabic, as it were /s̩ne:k/. See DJE, p. lxii. Examples noted of missing /s/ and hypercorrectly inserted /s/ include the following.

/tap ju naiz/ 'Stop your noise!'

/mi no wa:n ju traŋgl mi man/ 'I don't want you to strangle me, man'

---

* thus beginning identically with (Frank) Sinatra /sina:tra/.

/mi wen traŋ/	'I was strong'
/mi kin a kratʃ mi/	'My skin's scratching (me)'
/skroʃ op/	'crushed, crumpled'
/standʒari:n/	tangerine

In final position, all true consonants can occur, but not the $[^{-syll}_{-cons}]$ set, /j, w, h/. Of clusters, at least the following occur: /ps, ts, ks, ms, ns, ŋs, mp, nt, ŋk, ntʃ, ndʒ, bz, gz, mz, nz, lp, lt, lk, lb, lf, ls, ltʃ, ldʒ, lz/; and, with the final consonant syllabic, /pl, kl, bl, gl, fl, vl, sl, zl, mpl, ŋkl, mbl, ŋgl, pn*, bn*, fn*, vn*, tn, dn, sn, zn, ʃn/. Other clusters involving final /s/ or /z/ are readily admissible when Standard-influenced grammar requires them; also admissible, but less readily, are those with final /t/ or /d/ required in the same way. Final clusters beginning with /r/ are readily admissible when brought about by postvocalic r-insertion in words like bird /bo(r)d/, beard /be:(r)d/, search /sa:tʃ, sortʃ/, etc. Examples of some less obvious final clusters:

/ka:ps/ corpse	/hainz/ 'kind of fish'
/swims/ 'shrimp'	/dʒantʃa:lz/ 'name of herb'
/boŋs/ bounce	/laisn/ licence

Lastly in our discussion of JC phonology we turn to the suprasegmentals--to stress and intonation. I do not feel that I fully understand stress in JC; nor have I mastered its intonation. This means that my treatment of them is in consequence somewhat anecdotal. If this is so, I flatter

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* The nasal here is often assimilated. E.g. coffin /ka:fn/ may be [ka:fŋ] or [ka:fṽ].

myself that in this respect I am at least no worse than other writers on the subject*.

In disyllabic words, stress usually falls on the second syllable if its vowel is long, diphthongal, or followed by more than one consonant: /a'lou/ allow, /kri'tʃo:l/ 'owl', /ka'ment/ comment; otherwise it falls on the first syllable: /'kunu, 'kanu/ 'boat'. But there are exceptions: /ko'bel/ 'noise of a quarrel, din', /de'pan/ 'keep on; be on', (DJE gives this word with initial stress. In Westmoreland it has final stress.), /ma'ros/ morass (also the name of a part of Savanna-la-Mar). So stress seems to be contrastive.

The whole question of word stress is bedevilled by a characteristic Jamaican intonation phenomenon which has the effect of shifting the surface stress by one syllable. Thus the sentence

/a ena go ina di kitʃin/ 'I was going into the kitchen'

said with ordinary stress and intonation has kitchen front-stressed, /'kitʃin/. With the special intonation, /ki/ has a medium or low pitch, /tʃin/ a high fall, giving the auditory effect (to my English ear) of /ki'tʃin/[-`]. This special intonation, which we shall write as /ˆ/, was noted by Bailey (1966: 19), but only in attention-getting vocatives. But it can be used in statements of all kinds. Further examples:

That is ˆLondon (sounding like /...lon'don/)

I'm going to the ˆtoilet (/...tai'let/)

She must be ˆcrippled (/...kri'pl/)

*I have not seen Lawson, 1963; but Lawson, 1968, inspires no confidence.

As the last example shows, this intonation can give the effect of stress even to a syllabic consonant. When /ˆ/ is applied to monosyllables, there can be no stress shift: the pitch movement all happens within the syllable concerned:

...not even hearing if she is alive or ˆdead.

In attention-getting vocatives I noted a similarly stress-shifting rise-fall-rise: ˜ Jackie!, stress effect /dʒa'ki/, pitch movement [- ˇ].

Since these stress-shifting intonations may be used to emphasize the citation form of a word one inquires about, one encounters considerable difficulty in establishing the underlying stress pattern of JC words. I am still not sure whether the stress patterns realíze, agricúlture, etc., often used by Jamaicans, are the basic stress pattern of these words of the result of /ˆ/ intonation and stress-shifting. And I am not absolutely sure of what may be a minimal pair for stress: /'kantrak/ cóntract (n.) vs. /kan'trak/ contráct (v.) (often used in the expression 'contract a cold' -- not a literary expression in Jamaica).

It has been suggested that can and can't, both /kja(:)n/ (or [kjã:]), may be distinguished in JC by tone.

> ... the pervading distinction appears to be one of pitch modulation, the voice rising from a low tone on kyan [sc. can] to a high tone on the following verb or verbal element, and conversely from a high tone on kyaan [sc. can't] to a low tone on the following verb or verbal element.
>
> (Bailey, 1966: 45 fn.)

My Westmoreland informants accepted identical intonation patterns from me for

/jes, ju kja:n lik mi/ [¯ _¯ ˋ.]

and /no:, ju kja:n lik mi/ do.

One speaker said, thereby demonstrating that Bailey was wrong,

/jes, dʒondʒo kja:n i:t/ 'Yes, funguses are edible.'

[ˋ _ _ ¯ ˋ]

--and the matter was clinched by a fragment of conversation I overheard:

A./ju kja:n dwi:t/ 'You can't do it.'

B./mi kja:n dwi:t ju no, if mi wa:na dwi:t/

'I can do it, you know, if I want to do it.'

Here an identical pitch pattern, [¯ _], was used for the two instances of /kja:n dwi:t/, although one is negative and one positive.

Bailey's idea being disproved, the most likely hypothesis in my opinion is that the two words are homophonous, with an accented form /kja:n/ and an unaccented form /kjan/ (cf. (2), p. 29). The accented form is used when the word must be made contrastive, i.e. when contradicting someone. Hence the accented form must always have the negative meaning if the previous speaker implied a positive meaning to the proposition concerned, and vice versa: the ambiguity between can and can't is resolved by context. The unaccented form would normally be positive.

For the rest, Bailey's three-way division of pitch contours will have to serve for the moment (Bailey, 1966: 17-19). These are the falling, rising, and high-level contours. Some comments:

(i) The rising contour is used not only for 'total questions, and on interrogative and imperative tags' (Bailey), but also in non-final clauses. Examples, with the rise shown as /ˊ/, a fall as /ˋ/:

/ju ˊwa:nt it, ˋi:t it/ 'If you want it, eat it.'

/if ju wa:na ˊsi: hou it ˊmiks, kom an ˋluk/ 'If you want to see how it's mixed, come and look.'

These rising-tone clauses are subordinate. Main clauses when non-final may have a fall:

/eniwe: mi wi ˋi:t it, wails mi ˋwa:n i/ 'Anyway I'll eat it, provided that I want it'

(ii) Structural ambiguity may on occasion be resolved by appropriate tonality, as in standard accents:

/no plaʃ di ˋwa:ta pan mi bwai/ 'Don't splash the water on me, boy!'

/no plaʃ di ˋwa:ta pan mi ˋbwai/ 'Don't splash the water on my boy!'

(iii) JC has another tone contour which is a kind of high-to-mid fall. I am not sure whether it is just a variant of Bailey's high level contour; it can certainly be used in the 'rhetorical sentences' for which she prescribes only the high level (Bailey,

1966: 93). Example:

/no le:zi man, no ˜le:zi/ 'You're lazy, man, lazy!'

/no ˜stju:pidnes dat/ 'That's ridiculous!'

(where ˜ denotes the high-to-mid fall).

We conclude our survey of the linguistic background by very much briefer looks at the other accents we identified as relevant to this study.

An educated Jamaican accent is very much closer to RP than JC is. Just as grammatically JE approaches the Standard English of England without quite reaching it, so also JE pronunciation comes asymptotically near to RP. To grammatical usages like "If you let your house, the tenants don't care the garden as you would yourself" (quoted as an example by Le Page, 1968: 437) or "Milk is on the table" (grammatically closer to JC /milk depan di te:bl/ than to English English "There's some milk on the table") --to grammatical usages such as these there correspond such characteristically JE phonetic habits as the nonprevocalic clear /l/ and the monophthongal /o:/.

In its phonemic system JE includes most of the phonemes present in RP but missing from JC, namely /ɔ, ɔ:, ɔi, θ, ð, ʒ/ and the marginal /h, v/. The 'missing' clusters, too, are found--most noticeably final /nd, ld, kt, ft, st/ and, with syllabic /l/, /tl/ and /dl/. Unstressed /a/ is replaced by /ə/, though the stage at which the [ə] deserves recognition as a separate phoneme

is hard to determine. But there is usually no systemic contrast corresponding to that between RP /iə/ and /eə/, fear vs. fare. On the other hand JE characteristically retains one contrast that RP has lost, namely that exemplified by the pair horse and hoarse (JE /hɔ:rs/ vs. /ho:rs/; RP both /hɔ:s/).

The most striking differences between JE and RP concern realization and incidence. Nonprevocalic clear /l/ has been mentioned, as has the tendency to monophthongal /o:/ (and /e:/). The vowel of bird, church, etc., is typically r-coloured: whether we should phonemicize it as /or/, /ɚ:/ or /ə:/ is probably an irresoluble question. The phoneme /o/ (= /ʌ/) may be rather back and rounded, as in JC; /w/ is front, [y̆], before close front vowels. Words such as beard, pork have /r/ in JE in spite of not having it in JC or RP; so often do words like park, garden, and slippers (though in this there is great inconsistency). And /r/ is usual in words like star, four, where it regularly occurs in JC but in RP is only prevocalic. In unstressed syllables, JE has /i/ in various situations where RP has /ə/ or consonantal syllabicity, e.g. towel, channel. Words like boy, spoil lack the JC /w/ glide, but those like gas, castle may still have /j/.

Three of the questionnaire respondents whose pronunciation is analysed in Part III may be taken as models for JE. They are the very recent arrivals in non-manual occupations, nos. 24, 27, and 28; in the transcription tables of Chapter III.1 they occupy the second column, rows 2, 3, and 4. See also Appendix I, p. 251-252.

Received Pronunciation or RP, the educated accent of England, has been thoroughly described in many places (Jones, 1957, 1966, 1967; Gimson, 1970; etc.). There is no need to repeat these descriptions here. Instead, we shall point out two characteristics in respect of which JC and RP are in agreement, though the majority of accents of English differ from them both.

The first of these is the distribution of /i/ and /i:/. Finally and prevocalically, JC and RP prefer /i/, although Cockney and General American, for example, prefer /i:/. This is exemplified in words such as happy, valley, city, and create: JC-JE-RP /hapi, vali, krie:t/, Cockney-GenAm /hapi:, vali:, kri:e:t/. Indeed, JC has a few pronunciations which are superior minority tastes within RP, e.g. Rio, JC /rio/, RP /ri(:)o:/. Exactly similar considerations apply to the distribution of /u/ and /u:/.

The second JC-RP agreement concerns the incidence of /a/ and /a:/. Here Cockney agrees with them in having /a:/ in words like glass, laugh, dance (where the majority of the English-speaking world, including the North of England and most of America, have /a/). Here again JC and JE go a little further than RP, having /a:/ even, for example, in athlete (JC /a:tli:t/, JE /a:θli:t/; RP /aθli:t/).*

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* The difference between distribution and incidence, and the variations to be observed in the distribution of /i(:)/ and the incidence of /a(:)/, are discussed in my recent article (Wells, 1970: 240, 241, 243, 244).

Just as at the bottom of the Jamaican sociolinguistic scale we may place an idealized maximally broad JC, so at the bottom of the London scale there is an idealized maximally broad Cockney. 'Genuine' Cockney is supposed to have two principal geographical varieties, centred on the foci of the East End and Walworth-Bermondsey-Southwark respectively; but the differences Londoners detect between them are certainly not going to concern a Jamaican immigrant to London. Cockney in general, though, and the spectrum extending up the scale to Educated London and ultimately RP, is important to him. Most of the English people he has dealings with, at work or elsewhere, are not RP speakers: their accent is at the very least recognizably South-Eastern.

Cockney, and the South-Eastern accent in general, is similar to RP in systemic, distributional, and incidential matters; it differs strikingly in respect of realization. Recent descriptions of its phonology and phonetics are Sivertsen, 1960, and Hurford, 1967.

The long vowels and diphthongs in Cockney have undergone an extra historical vowel shift. As a result, /i:/ is pronounced [əɪ], /e:/ is [æɪ] or thereabouts, /ai/ is [ɑɪ], and /ɔi/ is [oɪ]; /u:/ is [əʊ], /o:/ is [ɐʊ] or thereabouts, and /au/ is characteristically [aə]. This has the effect of making each of the Cockney phonemes mentioned sound like the next one along of other accents: Cockney <u>day</u> sounds like other people's <u>die</u>, Cockney <u>tie</u> like others' <u>toy</u>, Cockney <u>shoe</u> like others' <u>show</u>, etc. Although one adjusts to it after a time,

this can be confusing to an outsider, as I can confirm from personal experience. It has led some Jamaicans to acquire unexpected lexical representations of newly learnt words, e.g. mate as /mait/, bloke as /blouk/ (= /blauk/). From one London Jamaican I noted the expression /o:l blouk/ [ʊɔl blɔʊk] old bloke.

Among the Cockney short vowels, the only one likely to give rise to difficulties is /ʌ/ (= JC /o/), since it is realized as [a] or thereabouts—phonetically very similar to JC /a/. Hence London suck sounds like Jamaican sack (or for that matter JC sock).

Three points call for comment among the consonants. They concern /l/, /t/, and /θ, ð/. In places where RP has a dark /l/, namely in nonprevocalic position, Cockney has a back vocoid in the [ɤ] area. This can generally still be regarded as a member of the /l/ phoneme (so Sivertsen, 1960). Like the vowels, it can make things difficult to understand for an outsider, particularly since it conditions several vowel neutralizations (e.g. pale-pal-pile) or special positional allophones (e.g. /o:/ becomes [ɔʊ], e.g. roll, rolling). As for /t/, the well-known Cockney characteristic is a glottal stop used as a realization of intervocalic and final /t/; but a voiced tap, [t̬], and a voiceless affricate, [t^{s}], are also very common in this position. Several instances of these /t/ realizations turn up in the speech of London Jamaicans (see Part III). The Cockney dental fricatives, /θ/ and /ð/, are frequently replaced by labiodentals, /f/ and /v/. But this

replacement is not consistent: it seems there is no Cockney who never uses dental fricatives. For further discussion, see Wells, 1970: 243; Hurford, 1967: 306. This Cockney characteristic, too, can be found in the speech of Jamaicans in London.

There seem to be only three characteristics of an American accent which could be relevant here. One is that words like pot, cop have an unrounded vowel, as they do in JC, which may exert some counterpressure to the roundedness of the JE-RP vowel. (Advertisements for Jamaica in the New Yorker tell prospective American visitors that Jamaicans will fascinatingly address them as "mon".) The other two characteristics have been mentioned already. One is the full rhoticity of most kinds of American English (historical /r/ pronounced in all positions), and the other is the "flat a" of class, bath, etc. Their relevance to Jamaican pronunciation may be judged from typical forms I noted at a Holiness Church service in Westmoreland: [wɜ̃ndəful] wonderful, [ʌlɛlu:jə] alleluia (exhibiting hypercorrect rhoticity), and [dans] dance.

We finish this chapter with comparative phonological diagrams of the vowel systems of JC, JE, RP, and Cockney. The row beginning with /e:/ is also illustrated by characteristic realizations for each accent.

JC

i		u		i:		u:		
e		o		e:		o:		
							ai	ou
	a				a:			

JE

i		u		i:		u:			
e	ə	o		e:	ə:	o:			
							ai	ɔi	ou
a		ɔ		a:		ɔ:			

RP/Cockney

i		u		i:		u:			
							iə	eə	uə
e	ə	ʌ		e:	ə:	o:			
							ai	ɔi	au
a		ɔ		a:		ɔ:			

Realizations of /e: (ə:) o:/

JC	[ɪɛ	ɔ̈ɹ	ʌɔ]
JE	[e:	ɞ:	o:]
RP	[eɪ	ɜ:	əʊ]
Cockney	[æɪ	ɜ:	ɐʊ]

Chapter I.3

PHONOLOGICAL ADAPTATION

A working-class Jamaican faced with education in his own country, or with living in England, experiences social pressure against certain characteristics of his pronunciation and towards certain characteristics found in the speech of educated Jamaicans and/or the speech of Londoners of all educational levels.

In such a situation, it is hypothesized, he does not approach the socially favoured form of speech as something to be learnt from scratch. Rather, he adapts his existing phonology to fit the new situation. In doing this he builds onto his existing linguistic competence. The adaptation made by Jamaicans in London may, of course, range from zero (no change) to complete (full acquisition of a London-like pronunciation).

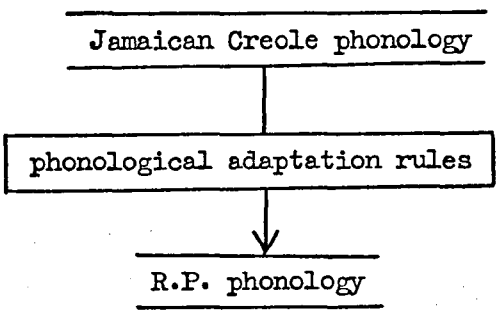
If, as suggested, he typically reacts by the formulation and application of (subconscious) adaptation tactics, we may further posit that such tactics can be expressed in the shape of adaptation rules of the form

$$X \rightarrow Y \;/\; W \;\_\_\; Z$$

that is, X becomes Y in the environment "after W and before Z"; in other words, WXZ becomes WYZ. (Any of X,Y,Z,W may be nul.)

It is suggested that the many hypercorrect forms to be observed in the speech of Jamaicans in London can most adequately be accounted for on the hypothesis of such adaptation rules, and might appropriately be termed hyperadapted forms or hyper-adaptations.

The adaptation rules may be viewed as a device whose input is Jamaican phonology and whose output is--ideally--London phonology. In some cases, the input should be more specifically Educated Jamaican, in others Jamaican Creole. In many cases it should be something of a mixture. The output or target may be viewed as RP or Cockney or something in between. For simplicity we shall assume, except where otherwise stated, that the input is Jamaican Creole and the output Received Pronunciation. If perfectly formulated and applied, the rules convert their input into the desired output*.



* Hence the term conversion rules used by De Camp, 1969, in his study of the relationship between JC, JE and RP vowels.

As a first example of such an adaptation rule, let us consider the pronunciation of words having a JC initial cluster /kj/ or /gj/ plus an open vowel. Typical instances are cat, car, gas, garden: their JC forms are /kjat/, /kja:r/, /gjas/, and /gja:dn/ respectively. But the RP forms are /kat/, /ka:(r)/, /gas/, and /ga:dn/.

The JC realizations of /a/ and /a:/ are not too far removed from the RP realizations, and we can ignore for the moment the low-level realizational adaptations that would have to be made. The final consonants /t, s, d, n/ are also virtually identical in JC and RP, and the non-pronunciation of final /r/ in RP car (except when 'linking' before a following vowel) is not a matter to which much prestige is attached or attention paid. But the glaring difference, and one to which Jamaicans in London often devote care (conscious or unconscious) is the /j/ which follows the initial velar in JC but not in RP.

In the following discussion the symbol /K/ will be used to denote the /k-g/ archiphoneme, i.e. any segment which is phonologically [+cons, -son, -cont, -ant, -cor]. The rule deleting /j/ in cat, car, gas, garden, and many other words with JC /Kj/, will, at a first approximation, be

(10) $$j \rightarrow \emptyset \; / \; K \; —$$

To each adaptation rule we shall give a brief symbol to facilitate reference in Chapters II.5 and III.1. The symbol for this 'depalatalization' rule is j.

But Rule (10) is not yet sufficiently precise. As it stands, it will delete /j/ not only in cat, etc., but also in words such as cure, argue, where JC and RP agree in having the cluster /Kj/. It needs to be sharpened by the addition of [+low] as the second part of the environment, to restrict its operation so that it applies only where the /j/ is followed by /a/ or /a:/. It then runs as follows:

(11) $$j \longrightarrow \emptyset \;/\; K \;\_\_\; [+low]$$

Replacing the phonetic symbols by the appropriate distinctive feature matrices, we have the j-rule:

(11′) $$\begin{bmatrix} -syll \\ -cons \\ +high \\ -back \end{bmatrix} \longrightarrow \emptyset \;/\; \begin{bmatrix} +cons \\ -son \\ -cont \\ -ant \\ -cor \end{bmatrix} \;\_\_\; [+low]$$

Taking the JC input /kjat/, /kja:r/, /gjas/, /gja:dn/, Rule (11′) now correctly gives the output /kat/, /ka:r/, /gas/, /ga:dn/, free of the unwanted palatal glide. We conclude that one small part of the Jamaican-born Londoner's task of linguistic adaptation is the (probably unconscious) formulation and application of Rule (11′)*.

Rules like (11′) are relatively easy to acquire and apply, since the context in which they apply can be formulated simply as a given phonetic environment. It leads to no hypercorrect forms--though it does produce one or two forms which

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*Actually, Rule (11′) can with advantage be widened by allowing it to apply after all consonants, not just after /K/. It then correctly changes damn (JC /djam/) to /dam/, while words such as JC /njam/, /pjã:-pjã:/ can be ignored since they are not used in London anyway. Only piano may have to be marked as an exception. The part of the rule following the slash then reads simply [+cons] — [+low].

are (i) of low prestige, e.g. /gal/ girl (JC /gjal/), or (ii) unknown in London, e.g. /ganzi/ 'sweater' (JC /gjanzi/).

Other adaptation rules are more problematical from the speaker's point of view. They may require him to differentiate two phonemes where JC phonology only has one. It is such underdifferentiation situations which are most productive of hypercorrect forms when adaptation is attempted.

Sometimes such a phoneme split is necessary only in a given relatively uncommon or restricted environment. An example is the case of JC /e:/ before tautosyllabic /r/, which has to be split into /iə(r)/ and /eə(r)/. In all other environments /e:/ needs nothing more than a realizational adaptation (to [eɪ]), which can engender no hyperadaptation.

Jamaicans, whether educated or not, usually have steer and stare as homophones, /ste:r/, while in London they are heterophonous, /stiə/ vs. /steə/. Similarly, fear is pronounced like fair-fare by Jamaicans* but not by English people. Wary is a word not known to many Jamaicans, but those who do know it pronounce it identically with weary, /we:ri/; weary, fairy, and Mary are a rhyming set for Jamaicans.

The realization of JC /e:r/ is similar to that of RP /iər/. The matter of morpheme-final /r/ not being one to

*In this as in other questions of Jamaican phonetics and phonology I find myself in disagreement with De Camp, 1969. Either we hear things differently or we have taken very different kinds of speaker as informant.

which prestige attaches, the problem for the Jamaican who wishes to adapt his pronunciation of /e:r/ words can be stated in the form of the following adaptation rule:

(12) e: → ɛ: / — r in certain cases.

The difficulty lies in the qualification "in certain cases". The rule has to be made such that it applies to stare but not to steer, to bare and bear but not to beer, to fare and fair but not to fear, to fairy and Mary but not to weary. There is no phonological context which can be formulated to govern the applicability of the rule; each /e:r/ word has to be considered separately, and for each word the Jamaican who wants to adapt has to find out and remember if Rule (12) applies or not.

Let us designate those words for which Rule (12) is required as being labelled with a lexical feature [+L] ('plus lowering'), and those for which Rule (12) is not required as labelled [-L] ('minus lowering'). Rule (12) can then be restated as:

(12′) e: → ɛ: / — r [+L]

--and the problem becomes one of assigning [+L] or [-L] to every word or morpheme containing /e:/ plus tautosyllabic /r/. To the extent that [±L] is correctly assigned, the output will correctly distinguish /iə(r)/ from /eə(r)/.

In fact, the feature [±L] needs to be assigned not so much to every morpheme or word containing /e:r/ as to every instance of /e:r/ within a morpheme or word. There are probably no morphemes that contain more than one sequence /e:r/, though in principle there could be; and, if there were, one such sequence might require [+L] and the other [-L]. We ought therefore to

attach the [±L] to the matrix column associated with /e:/. Refining Rule (12′) to accord with this leads to the formulation:

(12″) $$e: \rightarrow \varepsilon: \; / \; \overline{[+L]} \; r$$

which we term the eə-rule. The requirement that the /r/ be tautosyllabic is partly met by the absence of any column between $\overline{[+L]}$ and r (thus excluding, say, hay-ride, which has a morpheme boundary between them). It is likely that this formulation is nevertheless still insufficiently precise, since it is noticeable that Jamaicans syllabicate words such as various as /ve:-ri-os/ and hence tend to adapt them to [vei-ri-əs], etc., rather than to the RP form [vɛər-i-əs], etc.

Similar considerations apply to the very much more sensitive question of splitting the JC /t/ and /d/ phonemes into the RP /t, θ/ and /d, ð/. Pairs such as tin--thin, three--tree, death--debt, breathe--breed are homophonous in JC but not in RP. Let us represent the /t, d/ archiphoneme, [-syll, +cons, -son, -cont, +ant, +cor, +dist], as /T/, both for RP and for JC, and the /θ, ð/ archiphoneme, [-syll, +cons, -son, +cont, +ant, +cor, -dist], as /Ŧ/. Let us designate as having an adaptation feature [+F] ('plus fricativization') those JC instances of /T/ which correspond to RP /Ŧ/ (ignoring for the moment the further problem of the Cockney variants with /f, v/ in place of /Ŧ/). We can then formulate the Ŧ-rule as:

(13) $$T \rightarrow Ŧ \; / \; \overline{[+F]}$$

which is the equivalent of:

(13′) $$\begin{bmatrix} -\text{cont} \\ +\text{dist} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cont} \\ -\text{dist} \end{bmatrix} / \begin{bmatrix} \overline{\phantom{+\text{cons}}} \\ +\text{cons} \\ -\text{son} \\ +\text{ant} \\ +\text{cor} \\ +\text{F} \end{bmatrix} .$$

The JC speaker's problem is then one of correctly assigning [+F] to some cases of /T/ and [-F] to others. The problem is virtually solved by an ability to spell correctly, since with a handful of exceptions (e.g. Thames, Thomas) the spelling th corresponds to [+F] and the spellings t and d to [-F]. It might be thought that words requiring [+F] at one point and [-F] at another would present particular problems--thus teeth, for example, requires its initial JC /t/ to be left alone but its final JC /t/ to be converted to /θ/. In fact, the evidence to be presented in Part III will show that this factor plays little or no part: teeth had final [t] eleven times out of 36, a non-adaptation exceeded by north, thumb, and fourth ($11\frac{1}{2}$, $12\frac{1}{2}$, and 14 non-adaptations respectively*); teeth was hyperadapted to initial [θ] $5\frac{1}{2}$ times, comparable to mortar (5 times) and tree ($4\frac{1}{2}$ times).

Unlike the j-rule, then, the eə-rule and the T-rule must be lexically determined. The assignment of the diacritic feature, [±L], [±F], is tantamount to the restructuring of the lexical representation of each morpheme containing a segment meeting the environment conditions specified for the adaptation rule concerned.

Another adaptation rule whose application must be lexically determined is the rule introducing the phoneme /ʒ/. The JC phoneme corresponding to the /ʒ/ of RP and other standard

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* A half score means either a phonetically intermediate realization, e.g. [t̬], or two pronunciations offered, one with and one without adaptation. See Chapter III.2

accents is /dʒ/, thus pleasure /pledʒa/ (RP /pleʒə/). The pair vision and pigeon thus have identical medial consonants in JC, and pleasure rhymes with ledger. The introduction of /ʒ/ thus involves splitting /dʒ/ into /dʒ/ and /ʒ/, i.e. converting to [+cont] certain cases of [-syll, +cons, -son, -cont, -ant, +cor, +voi]. We can say that this involves assigning a feature [±D] ('deplosivization') to all instances of JC /dʒ/, and formulate the adaptation rule (the ž-rule):

(14) $$dʒ \rightarrow ʒ \;/\; \underline{\quad}_{[+D]}$$

--so that the problem is again one of correctly assigning the feature [+D] to all and only the cases where the adaptation rule needs to be applied.

A very nearly correct result is attained if the environment for Rule (14) is specified phonetically instead of lexically. Using the symbol V to represent any vowel (i.e. $[^{+syll}_{-cons}]$), we formulate it as:

(14') $$dʒ \rightarrow ʒ \;/\; V \text{ — } V \quad .$$

It then leaves untouched all cases of morpheme-initial and -final /dʒ/, converting only all intramorphemic intervocalic /dʒ/'s into /ʒ/. This is fine for pleasure, vision, and most other words (as well as for jaw, edge, judge, etc.); but it leads to an inappropriate result for words such as pigeon, which will become /piʒin/. This pronunciation does in fact turn up in the data presented in Chapter III.1.

It is evident that the environment for the ž-rule should ideally contain the essence of the environments both of

(14) and of (14'). This means the avoidance of memory-loading for initial and final /dʒ/ implicit in the environment of (14), together with the inclusion of the necessary lexical determining which the environment of (14') fails to capture. So the ideal version of the ž-rule runs:

(14") $$dʒ \rightarrow ʒ \;/\; V \;\overline{[+D]}\; V \;.$$

But not all the respondents studied in London can have had the rule in this form, since some used the hypercorrect form of pigeon with [-ʒ-], which corresponds to Rule (14') with its inadequately specified environment. This suggests the definition of hypercorrection or hyperadaptation as the result of the imprecise specification of the environment in which an adaptation rule applies. (This must include the inaccurate assignment of the diacritic features like [±D] which specify a 'lexical environment'.)

We pass next to the adaptation problem with open vowels. JC has two [+low] vowels, short /a/ and long /a:/. The RP vowels which correspond lexically to these are generally speaking /a, ɔ/ and /a:, ɔ:/. Although vowel length generally corresponds, JC does not make the qualitative differences which distinguish RP /a/ [æ] from /ɔ/ [ɒ] and /a:/ [ɑ̟:] from /ɔ:/ [ɔ̹:]--differences which we subsume as dependent on the feature [±back]. (We take /a:/ to be phonologically [-back], like /a/, even though low-level realization rules later make it phonetically fairly back.) Thus pat and pot, homophones in JC as /pat/, are heterophonous in RP, /pat/ vs. /pɔt/; so likewise farm and form,

in JC both /fa:m/, but in RP /fa:m/ and /fɔ:m/ respectively.

The adaptation-seeking Jamaican Creole speaker is accordingly again faced with the necessity of a phoneme split, affecting both /a/ and /a:/. The environment for the shift to back/rounded vowels cannot be phonologically prescribed, and we must again posit a lexical feature, say [+B] ('plus backing'), which is ideally to be attached to just those cases of JC /a(:)/ which require application of the ɔ-rule

(15) $$a \rightarrow ɔ \; / \; \underline{\quad}\,[+B]$$

or of the ɔ:-rule

(16) $$a: \rightarrow ɔ: \; / \; \underline{\quad}\,[+B] \; .$$

Now /a/ and /a:/ together constitute the archiphoneme we wrote as /a(:)/, namely [+syll, -cons, +low, -back]. Similarly we can write the archiphoneme comprising RP /ɔ/ and /ɔ:/, namely [+syll, -cons, +low, +back], as /ɔ(:)/. Rules (15) and (16) can obviously be combined to form a first approximation to the ɔ(:)-rule

(17) $$a(:) \rightarrow ɔ(:) \; / \; \underline{\quad}\,[+B]$$

which is equivalent to

(17') $$[-back] \rightarrow [+back] \; / \; \begin{bmatrix} \underline{\quad} \\ +syll \\ -cons \\ +low \\ +B \end{bmatrix} \; .$$

To a large extent the literate speaker may again be helped by knowledge of the spelling, since [+B] is appropriate only where the spelling involves either the letter o or, in the environment specified by (18), the letter a.

(18) $$/ \begin{Bmatrix} \begin{Bmatrix} \underline{w(h)} \\ \underline{qu} \end{Bmatrix} & — \\ — & \begin{Bmatrix} \underline{w} \\ \underline{u} \\ \underline{l} \end{Bmatrix} \end{Bmatrix}$$

Backing is thus appropriate in the cases of pot, rot, block, sock, form, fork, short (which have o) and of what, chalk, law, water, daughter, quality (which conform to the schema (18)). It is not appropriate in cases such as pat, rat, black, sack, farm, park, bath, where its application would lead to hyperadapted forms. On the other hand the environment specified by (18) gives the wrong answer for aunt.

JC final unstressed /a/ must be excluded from the domain of operation of Rule (17), since it corresponds to RP /ə/ rather than to /a/ or /ɔ/, e.g. letter, JC /leta/, RP /letə/. More generally, all unstressed /a/'s are probably to be excluded. We restate Rule (17) as

(19) $$a(:) \rightarrow ɔ(:) \; / \; \overline{\begin{bmatrix} +str \\ +B \end{bmatrix}} \; .$$

Further, the backing rule is never appropriate in cases where JC has /Kj/ before the vowel concerned, e.g. cat, garden. More generally, it is not appropriate where JC has any consonant followed by /j/ as the preceding environment*. If the ɔ(:)-rule is ordered so as to follow Rule (11), the j-rule, we lose generality inasmuch as the assignment of [-B] to each /a(:)/ has to be lexically specified. It is clearly more sensible to further restrict the environment in which the ɔ(:)-rule operates

* But after initial /j/ on its own (i.e. /#j/), the rule may be appropriate: yacht, RP /jɔt/.

so as to exclude the environment Cj— (where C is any consonant, $[^{-syll}_{+cons}]$). At the same time we must so order the rules that the ɔ(:)-rule precedes the j-rule. We thus have the following derivation for cat:

/kjat/	JC input
/kjat/	Rule (19) does not apply
/kat/	by Rule (11).

So we must restate Rule (19) as (19'):

(19') $$a(:) \longrightarrow ɔ(:) \;/\; \underline{X} \begin{bmatrix} — \\ +str \\ +B \end{bmatrix}$$

where X represents a matrix specification covering any segment, non-segment, or sequence other than one ending Cj.

The converse of a phoneme-splitting rule is one which unites two phonemes. Such a rule might unite certain cases of JC /o:/ and JC /a:/ into a single phoneme corresponding to RP /ɔ:/. Pairs such as hoarse--horse are heterophonous in JC (and for that matter in JE), and pairs such as pork--fork, or-four fail to rhyme. In RP, on the other hand, they are homophonous or rhyme respectively. There would appear to be little social pressure on a Jamaican to formulate and apply a rule levelling this contrast, though two or three of the informants whose pronunciation is transcribed in Chapter III.1 have done just that. The instances of /o:/ involved are all of those cases where it precedes /r/ in JC (e.g. door, four, story), together with certain others where it precedes some other consonant (e.g. pork but not its JC homophone poke, and court but not its JC homophone coat). Ignoring for the moment the latter group,

we restrict the discussion to the JC /o:r/ words, all of which correspond to RP forms with /ɔ:(r)/. The instances of JC /a:/ involved are those to which Rule (19) has applied, with the diacritic feature [+B] assigned, e.g. jaw, form, war. These /a:/ words have already had their shift to /ɔ:/ effected by Rule (19); it remains to formulate a rule for the /o:r/ words. It is very simple:

(20) $o: \rightarrow ɔ: \; / \; \_\_ \; r$

which is the equivalent of

(20') $$[-\text{low}] \rightarrow [+\text{low}] \; / \; \begin{bmatrix} \_\_ \\ +\text{syll} \\ -\text{cons} \\ -\text{high} \\ +\text{back} \\ +\text{long} \end{bmatrix} \begin{bmatrix} +\text{son} \\ +\text{cont} \\ +\text{cons} \\ -\text{lat} \end{bmatrix}$$

Since Rule (20') involves no diacritic lexical feature for its operation, it seems simpler not to combine it with Rule (12"), in spite of the evident similarity of the two rules.

A separate phoneme-uniting rule is not therefore necessary as such. The combining of JC /a:/ and /o:/ into RP /ɔ:/ results from the application of two separate quality-shifting rules, (19') and (20).

We still have to deal with the split of JC /o:/ into two phonemes, corresponding to RP /ɔ:/ and /o:/ respectively. JC homophones such as pork--poke (/po:k/) and court--coat (/ko:t/) show that a lexical diacritic, say [±L], must be assigned in order to account for the lowering appropriate for pork and court but not for poke and coat. Once again, the good speller is at an advantage, since [+L] is appropriate where the spelling involves r but [-L] otherwise. The shift from /o:/ to the closing-diphthong quality of RP [əu] is accomplished by a low-level realization rule. The existence of hyperadapted forms

such as pork, hoarse, court, afford with [əu]-type vowels--all of which have been noted in the speech of Jamaicans in London--show that the realization rule can operate in spite of non-assignment of the needed [+L]*.

We have been assuming that the application of the lowering rule in these cases depends on the presence of an assigned feature [+L]. This would entail the revision of (20) to

(21) $$o: \rightarrow ɔ: \; / \left\{ \begin{matrix} \_\_ \; r \\ \_\_ \\ [+L] \end{matrix} \right\} .$$

This accords with the common-sense view that the easiest way to go from JC /po:k/ to RP /pɔ:k/, etc., is just to lower the vowel. But entia like [±L] non sunt multiplicanda, and in fact there is good reason to believe that this shortest route is not the one actually taken. It seems that the commonest route is that of inserting /r/ in the (hopefully) appropriate cases. This first converts the JC form into the JE form, /po:rk/, etc. To reach a non-rhotic RP-type pronunciation, the /r/ then has to be deleted.

Thus we need an r-insertion rule,

(22) $$\emptyset \rightarrow r \; / \; o: \; \_\_ \; [+cons]$$

--but this rule still has to be applied only in certain lexically specified cases: pork but not poke, court but not coat, etc. Hyperadaptations can arise through r-insertion in inappropriate

---

*The realization rule presumably involves non-binary distinctive features. It might here be of the form [-high] → [02 high] / $\begin{bmatrix} -low \\ +back \\ +long \end{bmatrix}$, where [3 high] represents Cardinal 8 height, [2 high] the halfway point between Cardinals 8 and 7 height, [1 high] Cardinal 7 height, etc., and [02 high] a movement from [0 high] (opener than Cardinal 7) to [2 high], i.e. a closing diphthong.

cases (as will be exemplified in Chapter III.1 by respondent no. 8, winner of the prize for hyperadaptive r-insertion). So in fact we need a diacritic [+L] after all. In this instance, the spelling is reliable: /r/ is to be inserted wherever an r is written. Once /r/ has been inserted in pork, etc., Rule (20) applies without revision, and the modification represented by (21) is unnecessary.

The same considerations apply to one or two /e:/ words not mentioned during the discussion of the eə-rule, p. 58-59. These are words where JC /e:/ followed by some other consonant than /r/ corresponds to RP /iə/ or /eə/, e.g. beard (in JC a homophone of bathe). Here the broad JC vowel is phonetically similar to the RP vowel--JC and RP versions of beard are virtually identical. It might be thought that no adaptation was needed. But the realizational adaptation rule converting /e:/ from the JC opening [ie]-type diphthong to a JE monophthong, an RP [ei]-type closing diphthong, or a Cockney [æi]-type closing diphthong, is a very strong one. It will convert [bied] into [beid], etc., unless prevented in some way*. An easier tactic than just marking it as an exception is to insert /r/--corresponding again to the /r/ in the spelling. The route is then (i) insert /r/; (ii) Rule (12") does not apply provided beard is marked [-L] (compare Baird, [+L]); (iii) the realization rule making /e:/ [ei], etc., is blocked because it does not apply before /r/; and (iv) to reach the non-rhotic RP form, /r/ is deleted. So

* I have heard this pronunciation in London, though it didn't turn up in the data presented in Chapter III.1. Also [tɛitə] for theatre, etc.

we need to widen Rule (22) to cover /e:/ as well as /o:/.

(22') $$\emptyset \rightarrow r \;/\; \begin{bmatrix} -\text{cons} \\ -\text{high} \\ -\text{low} \\ +\text{long} \end{bmatrix} \;\_\_\; [+\text{cons}]$$

The realization rule will have to be something like the following (cf footnote on p. 67):

(23) $$\begin{bmatrix} -\text{cons} \\ -\text{high} \\ -\text{low} \\ +\text{long} \end{bmatrix} \rightarrow \left\{ \begin{array}{ll} [21\ \text{high}] \;/\; [-\overline{\text{back}}]\ r & \text{(a)} \\ [\ -\ \text{high}] \;/\; [+\overline{\text{back}}]\ r & \text{(b)} \\ [02\ \text{high}] & \text{(c)*} \end{array} \right.$$

--which actually incorporates Rule (20). The r-deletion rule is simply formulated. We give it in its most general form, which converts a fully rhotic accent to a non-rhotic one:

(24) $$r \rightarrow \emptyset \;/\; \_\_\; [-\text{syll}]$$

--in which [-syll] can be either a consonant or a word boundary.

Successive stages in the adaptation of beard and pork are accordingly as follows.

be:d	po:k	JC starting-point
be:rd	po:rk	(22'), r-insertion
--	--	(12") does not apply, nor 67 fn.
bierd	pɔ:rk	(23) (a) or (b)
bied	pɔ:k	(24), r-deletion
bi∂d	--	phonetic adjustment, rule not given.

*The absence of any indication of environment for part (c) indicates that it applies in all environments other than those specified under (a) and (b), i.e. "elsewhere".

We have taken examples of adaptation rules which alter segments, which insert segments, and which delete segments. The most complicated are those which perform metatheses.

As an example we may take that class of words where JC /ks/ corresponds to RP /sk/, e.g. ask, husk. Chomsky and Halle, 1968: 361, suggest that metathesis rules have to be stated in the form of transformational rules. This would be

(24) Structural description : k s / 1 2

Structural change : 1 2 → 2 1 .

It will again be necessary to attach a lexical feature, say [+M], to the words where the metathesis is appropriate, and [-M] to words where it is inappropriate (e.g. six, vex, ox). (This feature [+M] is then equivalent to an instruction "apply Rule (24)", and [-M] to an instruction "do not apply Rule (24)".)

Against this view of the nature of metathesis we may adduce the data to be presented in Chapter III.1, questionnaire keyword no. 123 (ask). Here we find not only unadapted /a:ks/* and adapted /a:sk/, but also the semi- or hyper-adapted forms /a:s/, /a:st/, and /a:ksk/. These suggest that the process of metathesis is more correctly viewed as resulting from two separate rules, one deleting /k/ and the other inserting it in its new place:

(25) $k \rightarrow \emptyset \; / \; - \; s$

(26) $\emptyset \rightarrow k \; / \; s \; - \; \neq$

*Or /aks/. The JC vowel seems to be variable in length.

To get from JC /a:ks/ to RP /a:sk/ it does not matter in which order Rules (25) and (26) are applied. The recorded intermediate forms /a:s/ and /a:ksk/ imply that some speakers adopt one order and some the other. Thus those who have only acquired half of the rules necessary for the metathesis may either have just rule (25) or just rule (26). Rule (25) on its own turns /a:ks/ into /a:s/, while Rule (26) on its own turns /a:ks/ into /a:ksk/. To derive the RP /a:sk/ it is necessary in each case to apply the other of the two rules. The two routes are therefore as follows:

(i)	a:ks	JC starting-point
	a:s	k-deletion, Rule (25)
	a:sk	k-insertion, Rule (26);
or (ii)	a:ks	JC starting-point
	a:ksk	k-insertion, Rule (26)
	a:sk	k-deletion, Rule (25).

The other recorded form, /a:st/, results from the application first of Rule (25) and then of a t-insertion rule. This t-insertion rule is one that is frequently required; it accounts for the adaptation of JC /fa:s/ to RP /fa:st/ fast, /fo(r)s/ to /fə:st/ first, /lef/ to /left/ left, /ak/ to /akt/ act, etc. This /t/ is inserted morpheme-finally after one of /f, s, p, k/; we label the relevant rule "the t-rule", and formulate it as:

(27) $$\emptyset \rightarrow t \; / \left[\begin{array}{l} +cons \\ -son \\ \left\{\left[\begin{array}{l} +ant \\ +cont \end{array}\right]\right. \\ \left.\left[\begin{array}{l} -cor \\ -cont \end{array}\right]\right\} \\ -voi \end{array}\right] \; — \; \neq$$

For this rule, too, lexical marking is needed. When this is inappropriately assigned, hypercorrections of the type /gest/ guess (cf guest) arise. (In Chapter III.1 it will be seen that four of the thirty-six respondents recorded in London said /gestin/ for guessing.)

Application of k-deletion, Rule (25), to /a:ks/ yields /a:s/, as we have seen. This matrix now conforms to the environment specified in Rule (27); in the absence of appropriate lexical marking, Rule (27) applies, thereby yielding the form in question, /a:st/.

We have by no means covered all the adaptation rules needed to convert JC into RP. We have, however, dealt with the various different kinds of rule which are needed. Various rules not discussed here will be presented briefly in Chapter III.2, where the pronunciations recorded from questionnaire respondents are analysed.

Part Two METHODS

Chapter II.1

INFORMANTS

Some dialectologists and sociolinguists have elaborated systematic principles or procedured to govern the selection of informants. Thus Ellis, working on the fieldwork for the Leeds Survey (Orton and Dieth, 1962-), seeks out suitable elderly locals in his quest for maximally "pure" dialect:

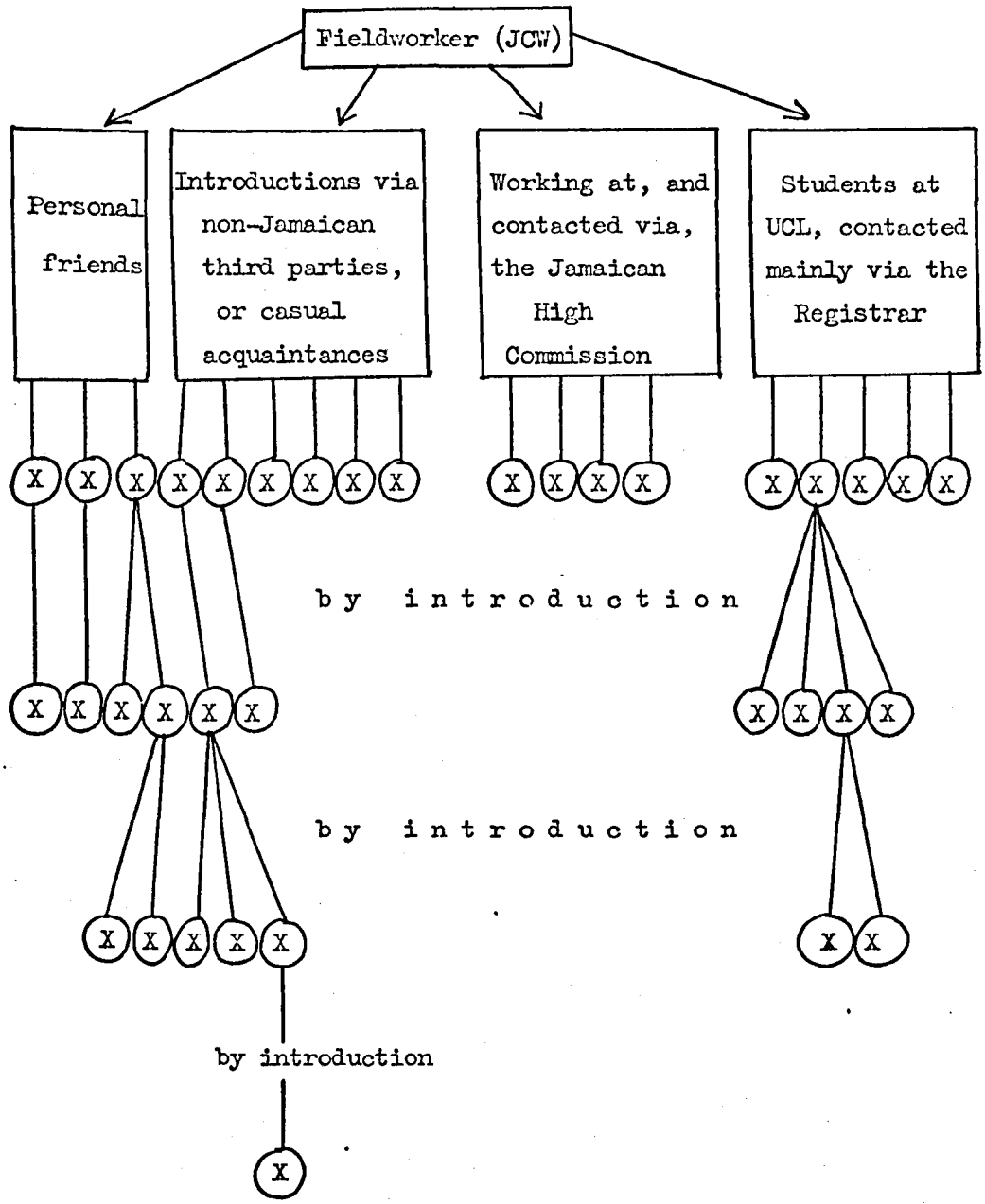
> On entering a village of the right type, the fieldworker may ask the first person encountered, "Who are the old men, the real old natives of the place?" And in a village of the right size the fieldworker will almost certainly be directed at once to the home of a man believed to be a native. [...] It may happen that the first man visited proves to be just the right type, a man of seventy or so, still mentally alert and with an excellent memory for the days of his youth, a broad speaker, with an agricultural background, born in the village of native parents, married to a wife who is herself a native of the locality, a man who is perhaps declining a little physically, but who is chafing at his retirement, without much change of company, ready and even eager to give to any interested person the advantage of his lifetime of experience.
>
> (Ellis, 1953: 13)

While Ellis looked for speakers who objectively are extremely unrepresentative of the population as a whole, Labov, in his survey of New York speech, was concerned to obtain a statistically representative sample of speakers:

> We may consider the scale [combining characteristics of occupation, education, and family income] as a useful device for dividing the population along the socio-economic scale into three units of approximately equal size. The purpose of such divisions is to ensure that we will have sufficient representation for all of the major groups listed above [sc. Negro, Jewish Orthodox, Jewish Reform or Conservative, Catholic, and White Protestant] in an upper, middle and lower socio-economic category. If one sub-group is particularly weak, it will be possible to adjust the percentage of sampling so that we will have enough informants in that sub-group to give us an accurate report on its speech as a whole.
>
> (Labov, 1966: 171)

Neither of these lines of approach was applicable to the selection of informants for this study. Jamaicans in London are by definition not natives of the area they live in; and, in the absence of any records to show which inhabitants of the London area (or even how many) come from Jamaica, there can be no way of taking a representative sample.

The procedure actually followed for this study was to invite every Jamaican with whom I had any contact to become an informant by allowing me to tape-record his or her answers to a questionnaire (Chapter II.5). The only requirements were that the potential informant should have been born and brought up in Jamaica and be now living in the London area. Every respondent was further requested to put me in touch with other prospective informants. Those new contacts who agreed to become respondents were in turn asked to suggest further names. The resulting chain of contacts is diagrammed over the page.



Respondents and how they were obtained

It turned out that all respondents were aged between 18 and 42 at the time of recording (spring and summer, 1970). Their average age was 28.6 years, with a standard deviation of 4.8 years. They might thus be described as young adults.

The total number of respondents interviewed was 36, a number limited by the time and labour available. They seem to constitute a reasonable sample in terms of occupational class distribution (non-manual 12, manual 24), but are less satisfactorily balanced as concerns distribution by sex (men 26, women 10) and parish of origin (no-one from Portland, Trelawny, St James, or Hanover).

Details of the 36 respondents--their sex, occupational class, age on arrival in England, number of years since arrival in England, parish of origin, and age now--are given in Table II.1.2 on the next page. These classifications are the basis for the statistical analysis of their pronunciation (with the exception of the last, age now, which is clearly not independent).

The underrepresentation of women in the sample reflects two factors: first, that I personally am acquainted with more Jamaican men than women; and second, that the proportion of the women approached who refused an interview was greater than that of the men. Men who were approached often proved quite enthusiastic about the idea of acting as an informant, whereas many women--even those who did eventually make a recording--had to be cajoled and persuaded to overcome their shyness or reluctance. Several took refuge in the excuse, real or feigned, that their husbands had forbidden them to assist. A considerable amount of time and energy was spent following up contacts with prospective female informants, mostly fruitlessly.

Serial no.	Sex	Occupation	Age came to U.K.	Years in U.K.	Parish of origin	Age now
1	m.	manual	19	8	West	27
2	m.	manual	16	9	St Ann	25
3	m.	non-m.	10	15	Kgn	25
4	m.	non-m.	12	14	Kgn	26
5	f.	non-m.	18	5	Man	23
6	m.	non-m.	16	2	Kgn	18
7	m.	manual	19	8	West	27
8	m.	manual	22	10	St And	32
9	m.	manual	17	10	St T	27
10	m.	manual	26	7	St E	33
11	m.	manual	26	8	Man	34
12	f.	manual	16	7	St T	23
13	f.	manual	32	1	St M	33
14	f.	manual	20	5	Man	25
15	m.	manual	19	10	St C	29
16	m.	manual	21	9	Clar	30
17	m.	manual	19	8	St T	27
18	m.	manual	28	6	St M	34
19	m.	manual*	21	9	St M	30
20	m.	manual	18	16	Kgn	34
21	f.	manual	15	11	Clar	26
22	m.	manual	25	10	St Ann	35
23	m.	manual	21	7	Kgn	28
24	m.	non-m.	24	< 1	Clar	25
25	f.	non-m.	18	5	Kgn	23
26	m.	non-m.	23	1	Kgn	24
27	f.	non-m.	29	< 1	Kgn	29
28	m.	non-m.	34	< 1	Man	34
29	m.	manual	19	13	Kgn	32
30	f.	non-m.	25	2	St M	27
31	f.	manual	28	14	Kgn	42
32	f.	manual	23	8	St M	31
33	m.	manual	26	9	Man	35
34	m.	non-m.	9	14	Kgn	23
35	m.	non-m.	24	5	Kgn	29
36	m.	manual	22	4	Kgn	26
Mean			21.1	7.5		
Standard deviation			5.6	4.2		

Table II.1.2 The respondents in detail

Certain points arising from the details of Table II.1.2 might be mentioned.

Serial no. The respondents were assigned reference numbers corresponding to the order in which the interviews were recorded.

Occupation This simple classification into manual and non-manual, though crude, has the advantage of being easy for a non-sociologist to use. "Non-manual" covers the Registrar General's occupational classes 1-7 (HMSO, 1969: Table 7), while "manual" covers classes 8-11. Only one respondent's occupation presented any problem of classification: number 19, asterisked in the Table, who is a self-employed potter, classified here as "manual" on educational grounds.

Age on arrival in the U.K. Three-quarters of the respondents migrated from Jamaica to the United Kingdom between the ages of 16 and 26 years. The extremes were 9 and 54 years. Thus each respondent's basic native language learning took place in Jamaica: all except one or two had passed from childhood, when native-like language learning typically occurs, into adolescence or beyond, of which the imperfect language-learning of adults is characteristic. Hence none of the respondents sounded exactly like Englishmen: most would not want to anyway, but one at least did, being employed as a teacher of English to foreign students and doing her utmost to speak RP.

Years in U.K. Three-quarters of the respondents had been in England for a period of from four to thirteen years inclusive.

The effect of progressively more restrictive U.K. immigration can be seen from these figures: of those who had been in the country three years or less, six out of seven were classified as being in a non-manual occupation--the seventh had acquired the right of entry by marriage to an Englishman. There was no possibility of finding a male, working-class, just-arrived informant, since such a person would be excluded by the Commonwealth Immigrants Act.

Parish of origin The absence of informants from the Northwest of Jamaica has been mentioned above. A map of Jamaica, showing where the informants came from, is given overleaf (Fig. II.1.i).

For the purpose of statistical tests and calculations, all classifications were made dichotomous. The total of 36 respondents could then be broken down as follows (App. III, Matrix [2.1]):

(a)	women (10)	men (26)
(b)	non-manual (12)	manual (24)
(c)	arrived aged 19 or under (16)	arrived aged 20 or over (20)
(d)	arrived by 1960 (= in UK ten years or more) (11)	arrived since 1960 (= in UK less than ten years) (25)
(e)	from Western parishes (Manchester and westwards) (8)	from Eastern parishes (Clarendon, St Ann and eastwards) (28)

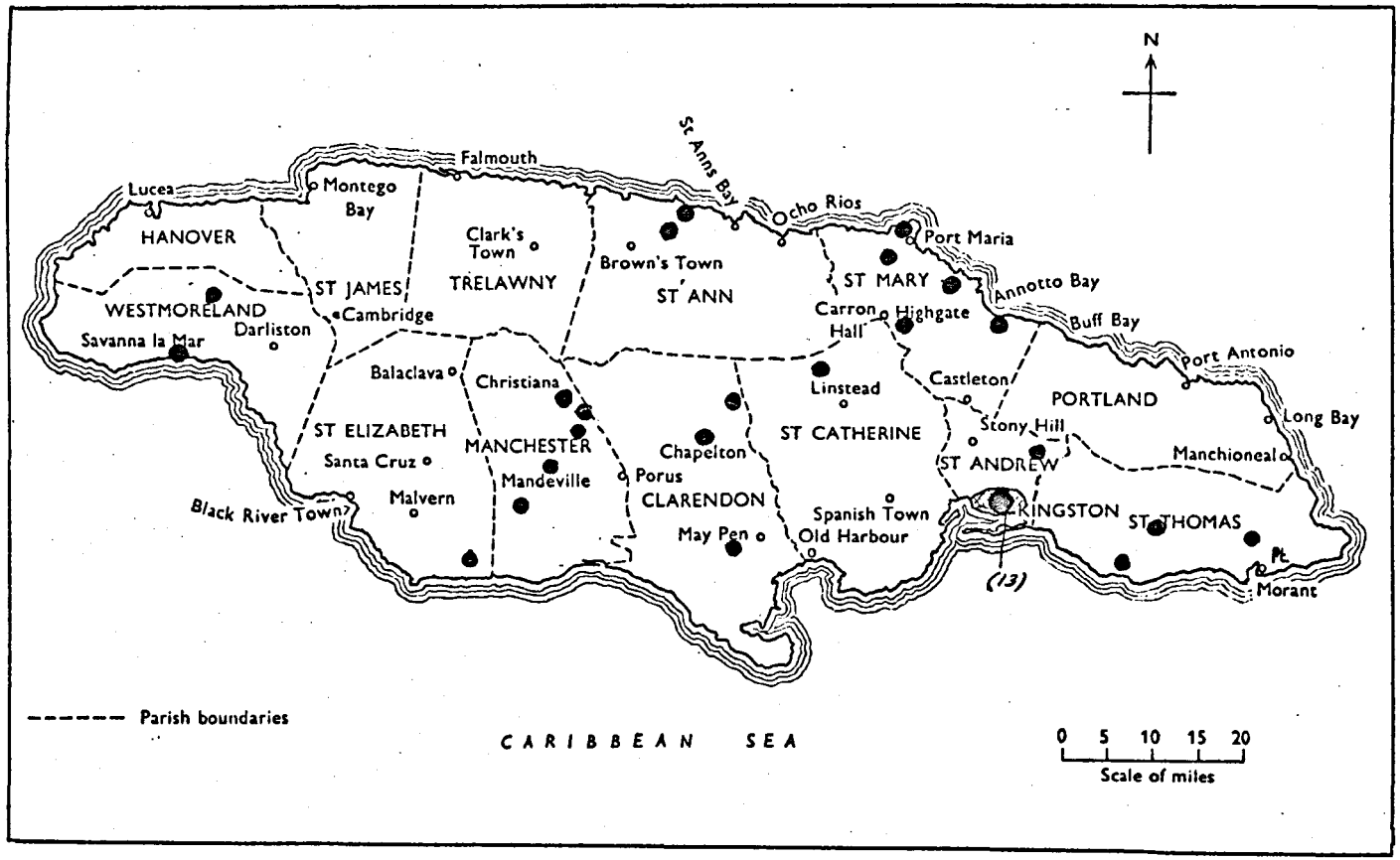


Fig. II.1.1

● informants' home districts

The intersections between pairs of classifications can be diagrammed as follows.

		(b) occupation		(c) age on arrival		(d) date of arrival		(e) parish	
		non-man.	manual	19-	20+	by 1960	since	W	E
(a)	women	4	6	4	6	2	8	2	8
	men	8	18	12	14	9	17	6	20
(b)	non-manual			6	6	3	9	2	10
	manual			10	14	8	16	6	18
(c)	19-					8	8	3	13
	20+					3	17	5	15
(d)	by 1960							0	11
	since 1960							8	17

Although the five classifications are in principle independent of one another, it can be seen that there are certain weak correlations between them (App. III, Matrix [2.3]). In only two cases is the correlation coefficient greater than 0.2:

(cd) Of those who have been in England ten years or more, a disproportionate number migrated young (at 19 years or under).

(de) None of those who have been in England ten years or more come from the Westernmost parishes. This might be taken to mean that in migration to England, as in other matters, what Kingston does today Savanna-la-Mar does tomorrow. More likely, it is a random fluctuation.

Chapter II.2

INTERVIEWS

Informants' responses to the questionnaire (Chapter II.3) were elicited in the course of an interview conducted by myself as fieldworker. Most of the interviews took place in the informant's own home, "where he feels master of the situation; he is the host, he has granted this stranger an interview, and so he feels at home " (Ellis, 1953: 16). This was possible with 28 of the 56 interviews; the remainder were conducted elsewhere--one at my home, three in my room in University College, and four in a private room at the Jamaican High Commission.

The interviews were recorded by means of a battery-operated Philips tape-recorder, model EL 3586, using a simple crystal microphone and a tape speed of $1\frac{7}{8}$ i.p.s. (4·75 cm/sec). In nearly all cases this provided a very satisfactory recording which gave little difficulty when it came to transcribing. The advantage of tape-recording the entire interview is that no data elicited from the respondent is lost in auditory or transcriptional confusions, and that anything that is queried can always be re-checked against the recording. It also means that the fieldworker is not obliged to keep writing things down during the interview, which could make the respondent uneasy.

With the exception of the first dozen, the respondents were encouraged at some point in the interview to talk freely

about some experience or interest. A sample of their free speech was thus obtained, which could be compared phonetically with their speech in the answers to questionnaire questions (see p. 240-241.) Usually this sample of free speech was elicited after the questionnaire had been completed; in a few cases, however, one or other of the matters touched on in the questionnaire was sufficient to stimulate the informant into quite extensive free speech.

Personal details about the respondent were usually asked for after question 97, so providing a break about half-way through the questionnaire. The information sought comprised: name, address, parish and district* of origin, occupation or job, how long the respondent had been in this country, occupation of parent, education, age of coming to this country, and whether the respondent considered he/she had many English friends. From the questions "How long have you been in this country?" and "What age did you come to this country?" the respondent's age could be obtained: it was felt that in some cases this was a more tactful way of obtaining it than asking for it outright--and in any case length of time in the U.K. and age on entry were required for statistical purposes, which age at the time of the interview was not. The question about parent's occupation also called for tact, and it was eventually decided not to attempt to use this information as the basis for a statistical classification. Most working-class respondents were not brought up by both parents together (marriage on the European model not being

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*A Jamaican parish is rather smaller than an English county; a district corresponds to an English village.

customary among the Jamaican peasantry), whereas middle-class respondents tended to answer the question "Back home as a child, who looked after you? Your mother, or your grandmother, or somebody else?" with an indignant "My mother and father, of course". Having found out who brought up the informant as a child, the fieldworker went on to ask for this person's occupation, aiming thereby to get at least a rough idea of the family's place in the Jamaican social scale.

It is assumed that every informant has at his disposal a personal range of styles of speech, from which he selects according to the external circumstances attending a given speech act--who he is talking to, where he is doing it, what he is talking about, etc.

> Nearly all speakers of English in Jamaica could be arranged in a sort of linguistic continuum, ranging from the speech of the most backward peasant or labourer all the way to that of the well-educated urban professional. Each speaker represents not a single point but a span of this continuum, for he is usually able to adjust his speech upward or downward for some distance on it. The middle-class housewife will understand the informal speech of a market woman and, if sufficiently provoked, may even retort in kind, though she would probably have difficulty in maintaining an extended conversation on the market woman's level. Similarly the market woman may adapt her speech in the direction of the matron's. Each of them would probably describe the different levels in her own speech as 'standard English' and 'the dialect', yet the market woman's 'standard' might be further down the linguistic continuum than the matron's broadest 'dialect'. Every speaker differs in the span of this continuum which he can command.
>
> (De Camp, 1961: 82. Italics mine, JCW.)

The majority of the questionnaire respondents recorded for this

study have (or had) a more-or-less broad form of Jamaican Creole at one end of this range and at the other a form of speech approaching Standard English. The former is associated with familiar discourse among family and friends or with other West Indians of the same or lower status as the speaker; the latter with "public" language (e.g. in church or at a meeting) and with addressing outsiders in general and English people in particular. (Speaking to an English person he has come to know well, though, a Jamaican will be quite likely to revert to a form of English with more Creole features.)

Factors of the questionnaire interview situation may be assumed to have exerted pressure on the respondent to speak in accordance with the Standard end of his stylistic range. These factors include the formal nature of an "interview" as such, particularly an interview known to be concerned with speech and conducted by a stranger (which I was to the majority of the informants); the fact that the proceedings were being tape-recorded; the form of speech used by the interviewer, which was Standard English with an educated (more-or-less RP) accent; and the fact that the conversation was taking place in England with a white Englishman. Mitigating these factors were the circumstances that the respondent had agreed to the request of an interview, that the interview was (usually) held in the respondent's home, and that the interviewer made every endeavour to adopt a friendly and non-censorious attitude.

Overall, though, it is clear that respondents tended to put on their "best" form of speech. Since this may be presumed

to be the form which includes the maximum of adaptation away from JC towards Standard English, in pronunciation as in other matters, there is nothing regrettable about their using their "best" speech for the interviews. This study is after all not a study of Jamaican Creole but of the adapted form of speech used by Jamaicans in England.

Chapter II.3

THE QUESTIONNAIRE

The questionnaire is designed to elicit material only of phonetic and phonological interest. The precise wording of a question is accordingly not really important--all that matters is to induce the respondent to utter the wanted word without the interviewer first saying it himself.

The questionnaire is intended to establish two things:
(a) how the respondent pronounces each of his phonemes in the principal structural positions;
(b) how the respondent performs in relation to the variables discussed in Chapter I.3. and elsewhere.

For purpose (a), instances of relevant keywords are as follows.

	initial	medial	final
/p/	park 93	slippers 36	cap 20
/b/	bath 77	trouble 126	crab 106
/t/	tongue 8	butter 144	coat 23
	thumb 30	author 119	mouth 6
/d/	day 52	ladder 88	bed 80
	that 62	leather 117	breathe 64
/tʃ/	chew 75		church 140
/dʒ/	jump 89	pigeon 108	judge 185

/k/	coat 23	baker 145	black 101
/g/	gone 153	bigger 110	dog 98
/f/	face 15	coffee 70	off 84
/v/	voice 12		five 43
/s/	sock 34	guessing 188	voice 12
/z/	zoo 114	razor 17	nose 1
/ʃ/	shirt 21		wash 76
/m/	mouth 6		farm 148
/n/	nose 1		one 39
/ŋ/		singers 142	tongue 8
/r/	road 163	Mary 132	hair 2
/l/	lion 112	daily 53	coal 159
/w/	week 54		
/j/	year 56		
/h/	hair 2		

	preconsonantal	final
/i/	slippers 56	thirty 44
/e/	guessing 188	
/a/	hat 19	finger 29
/o/	buckle 27	window 87
/u/	foot 52	
/i:/	teeth 7	three 41
/e:/	face 15	day 52
/a:/	bath 77	
	mortar 161	jaw 9
/o:/	throat 13	toe 33
/u:/	suit 25	two 40
/ai/	voice 12	tie 22
/ou/	out 96	cow 116
/or/	shirt 21	stir 71

Symbols for phonetic/phonological variables exemplified by questionnaire items

(Brackets round a symbol denote hyperadaptation)

a	realization of /a/, e.g. hat. Implies (ɔ) except after /Cj/.
a:	realization of /a:/, e.g. mask
a:'	realization of /a:/ before /r/, e.g. star
ai	realization of /ai/, e.g. tie. Implies (ɔi).
d	distribution of /d/ in final clusters, JC /n/ = RP /nd/, e.g. blonde
ð	opposition /d-ð/, JC /d/ = RP /ð/, e.g. breathe
e:	realization of /e:/, e.g. face
eə	opposition /iə-eə/, JC /e:(r)/ = RP /iə/ or /eə/, e.g. chair
ə	realization of unstressed JC /a/ or /o/, = RP /ə/, e.g. razor, second
ə:	realization of JC /or/ = RP /ə:/, e.g. church
θ	opposition /t-θ/, JC /t/ = RP /θ/, e.g. thick
θr	realization of /r/ after /θ/, e.g. three
h	opposition /ø-h/, eastern JC /ø/ = western JC and RP /h/, e.g. hair
iŋ	incidence of nasal consonant in -ing: /n/ or /ŋ/
j	distribution of /j/ in environment K — a(:), e.g. gas, car
k	distribution of /k/ in final clusters, JC /s/ = RP /sk/, e.g. mask
k'	distribution of /k/ in final clusters, JC /ks/ = RP /sk/, e.g. ask

ɫ realization of /l/ preconsonantally, e.g. belt

ɫ' realization of /l/ finally, e.g. needle

o distribution of /o/ or /o:/ in unstressed syllables, e.g. window, hotel

o: realization of /o:/, e.g. throat; and possible loss of opposition /o:-ou/

oŋ incidence of /oŋ/ vs. /ouŋ/ = RP /aun/, e.g. ground

ou realization of JC /ou/ = RP /au/

ɔ opposition /a-ɔ/, JC /a/ = RP /ɔ/, e.g. pot

ɔ' incidence /a:-ɔ:-ɔ/, JC /a:/ = RP /ɔ/, e.g. lost, dog

ɔ: opposition /a:-ɔ:/, JC /a:/ = RP /ɔ:/, e.g. short

ɔi opposition /ai-ɔi/, JC /ai/ = RP /ɔi/, e.g. voice

p distribution of /p/ in final clusters, JC /s/ = RP /sp/, e.g. wasp

r1 distribution of /r/ in environment o — C (where C denotes any consonant), e.g. church

r2 distribution of /r/ in environments e:—C, o:—C, e.g. beard, court

r3 distribution of /r/ in environment a: — C, e.g. park

r4 distribution of /r/ in environment a — (= RP /ə/), e.g. bigger, slippers

r5 distribution of /r/ in environment V: — ≠, e.g. bear, four, stars

sN realization of initial sequence /s/ plus a nasal, e.g. smooth

t distribution of /t/ in final clusters, JC /s/ = RP /st/, e.g. fast

t' distribution of /t/ in final clusters other than /s(t)/, e.g. soft, act

Tl — distribution of /t/ and /d/ before /l/, JC /Kl/ = RP /Tl/, e.g. bottle, needle

Tr — opposition /tʃ-tr, dʒ-dr/, some JC /tʃ, dʒ/ = RP /tr, dr/, e.g. true, drink

ŭ — realization of /w/ followed by a nonlow front vowel, e.g. week

v — opposition /b-v/, some JC /b/ = RP /v/, e.g. have

w — distribution of /w/ in environment P — ai, e.g. point, boil

X — spelling pronunciation characteristic neither of JC nor of RP, e.g. /debt/ debt

Y — incidence variation peculiar to this word or to a small group of words

ž — opposition /dʒ-ʒ/, JC /dʒ/ = RP /ʒ/, e.g. vision

No symbols are supplied nor indications of relevance given for certain variations of minor interest.

(+) means that I, as interviewer, touched or pointed at the appropriate object or made an appropriate gesture.

The questionnaire

1. Let's start by naming some parts of the body. This (+) is my -- NOSE 1

   Relevant for: o:

2. And this (+) is my -- HAIR 2

   Relevant for: h eə r5

3. A girl with fair hair is a -- BLONDE 3

   3'. She's not a brunette, she's a --

   3". Gentlemen prefer --

   Relevant for: ɔ d

4. This (+) is my -- EYE 4

   Relevant for: (h) Y ai

   Y: in JC eye may have an initial /j/, thus /jai/ (see DJE s.v. yai, yaiz). No questionnaire respondent used this form.

5. Someone who can't see is -- BLIND 5

   Relevant for: ai d

6. This (+) is my -- MOUTH 6

   Relevant for: ou ɵ

7. And these (+) are my -- TEETH 7

   Relevant for: (ɵ) ɵ

   Note: in JC this form is unmarked for number (see DJE s.v.).

No respondent used the predicted morphological hypercorrection /ti:ts/.

8. And this (+) is my -- TONGUE 8

Relevant for: (ɵ) (oŋ)

9. This (+) is my -- JAW 9

9'. This part here (+), that I open

Relevant for: ɔ:

10. This (+) is my -- EAR 10

Relevant for: (h) eə r5

Note: the JC form is /e:z/, unmarked for number (see DJE s.v. ears). In a sense, therefore, this item is relevant for r2 rather than r5. Respondents used forms with all four possible combinations of presence or absence of /r/ and /z/.

11. I use my ears to -- HEAR 11

Relevant for: h eə r5

12. When I speak you hear my -- VOICE 12

Relevant for: v ɔi (t)

13. This (+) is my -- THROAT 13

Relevant for: ɵ ɵr o: (ɵ)

possibly also for: Tr

14. If I have a sore throat my voice grows -- HOARSE 14

Relevant for: h o: r2 (t)

15. All of this (+) is my -- FACE 15

Relevant for: e: (t)

16. To hide his face a thief might wear a -- MASK 16

Relevant for: a: (ɔ:) k (t)

17. To shave I use a -- RAZOR 17

Relevant for: e: ə r4

18. If I didn't shave I would grow a -- BEARD 18

Relevant for: e: eə r2 (ð)

19. On my head I might wear a -- HAT 19

Relevant for: h a (ɔ) (ɵ)

20. But a schoolboy would wear a -- CAP 20

Relevant for: j a

21. Here (+) I'm wearing a -- SHIRT 21

Relevant for: ə: rl (ɵ)

22. And a (+) -- TIE 22

Relevant for: (ɵ) ai

23. And over them a (+) -- COAT 23

Relevant for: o: (θ)

24. If a coat isn't long, it must be -- SHORT 24

24'. The opposite of long is --

Relevant for: ɔ: r3 (θ)

25. A coat and trousers together is called a -- SUIT 25

Relevant for: Y (θ)

Y: in RP may have /j/ after the initial /s/. Two respondents used this form.

26. This (+) is my -- BELT 26

Relevant for: l (θ)

27. And here (+) is the -- BUCKLE 27

27'. This metal part (+) is the --

Relevant for: (Tl) l'

28. This (+) is my -- HAND 28

Relevant for: h a (ɔ) d

Note: the back of the extended hand was shown. In JC hand refers to the whole upper limb, covering both 'hand' and 'arm' of Standard English. See DJE s.v. hand.

29. And this (+) is a -- FINGER 29

Relevant for: ə r4

30. But this (+) is my -- THUMB 30

Relevant for: θ X

X: A possible spelling pronunciation with final /b/ was not encountered.

31. This part (+) of my leg is my -- THIGH 31

31'. This (+) is my calf, but this (+) is my --

Relevant for: θ ai

Note: this word, incorporated in the questionnaire as a potential minimal pair with TIE, is evidently not used in JC. Several informants said they did not know it when it was supplied. It was thought best to ignore it when calculating θ-scores.

32. And this (+) is my -- FOOT 32

Relevant for: (θ)

Note: the area of the lower leg/ankle/foot was pointed to vaguely. In JC foot refers to the whole lower limb, covering both 'foot' and 'leg' of Standard

English (see DJE s.v.). The word was difficult to elicit from some informants, who had probably adaptively replaced <u>foot</u> in all its meanings by <u>leg</u>.

53. Here (+) is my -- TOE 53

53'. On the end of my foot is my --

Relevant for: (θ) <u>o:</u>

54. Here (+) I'm wearing a -- SOCK 54

Relevant for: <u>ɔ</u> (t')

<u>Note</u>: the JC form /saks/ is unmarked as to number.

55. And here (+) a -- SHOE 55

<u>Note</u>: the JC form is /ʃu:z/, unmarked as to number, and denoting a 'pair of shoes' or a 'shoe'. The form /ʃu:/ also exists in JC, at least in Westmoreland, but refers to an animal's shoe, e.g. horse-shoe.

56. At home in the evening, instead of shoes I might wear -- SLIPPERS 56

Relevant for: <u>ə</u> <u>r4</u>

57. And in the summertime -- SANDALS 57

Relevant for: a (ɔ) Y

Y: The JC form is /slandaz/ or /sla:ndaz/, related by a complex metathesis to standard forms such as RP /sandɫz/. It is also, like shoes, unmarked for number in JC. Not surprisingly, the questionnaire data turns up a large variety of unadapted, semi-adapted, and adapted phonological forms intersecting with hyperadapted (false singular) grammatical forms.

58. But a labourer would wear -- BOOTS 58

Relevant for: (Q)

59. And now tell me how we count. We start with -- ONE 59

Relevant for: Y (d)

Y: the JC form is /wan/, not the */won/ which would be expected on the basis of RP /wʌn/--the JC form corresponds rather to Midlands /wɔn/ (Wells, 1970: 245).

40. Next comes -- TWO 40

Relevant for: (ɵ)

41. And then -- THREE 41

Relevant for: ɵ ɵr

42. And then -- FOUR 42

Relevant for: r5

43. And then -- FIVE 43

Relevant for: ai v

44. Right. After twenty-nine comes -- THIRTY 44

Relevant for: ɵ ɵ: rl (ɵ)

45. And after thirty-nine? FORTY 45

Relevant for: ɔ: r3 (ɵ)

46. Now if things are arranged in line one behind another, at the end comes the last, and at the beginning comes the -- FIRST 46

Relevant for: ɵ: rl t

47. And next comes the -- SECOND 47

Relevant for: ɵ d

48. And then the -- THIRD 48

Relevant for: ɵ ɵ: rl (ð)

49. And then the -- FOURTH 49

Relevant for: r5 ɵ

Note: this is apparently the only monosyllable which contains a preconsonantal /r/ in even the broadest JC. In this respect it constitutes a minimal pair with /fo:t/ fort.

50. After the ninth comes the -- TENTH 50

Relevant for: (ɵ) ɵ

47'-50'. Number two/three/four/ten is the --

51. Sixty minutes make one -- HOUR 51

Relevant for: X(h) ou ə r4

52. Twenty-four hours make one -- DAY 52

Relevant for: (ð) e:

53. A word meaning 'every day'? DAILY 53

53'. This word comes in the name of the Mirror and Telegraph newspapers. The Mirror's full name is the -- Mirror

Relevant for: (ð) e:

54. Seven days make a -- WEEK 54

Relevant for: ŭ t'

55. Thirty days make one -- MONTH 55

Relevant for: ɵ

56. Twelve months make one -- YEAR 56

Relevant for: (h) eə r5

57. The sun shines by day but not by -- NIGHT 57

Relevant for: ai (ɵ)

58. At night if you look up at the sky you may be able to see the moon and the -- STARS 58

Relevant for: a:' r5

59. What am I doing now (+) ? POINTING 59

Relevant for: w ɔi (ɵ) iŋ

60. Which direction does a compass point? NORTH 60

60'. Tell me the different directions. There's East, and West, and South, and --

60". There are three tube stations near here: Clapham South, Clapham Common, and Clapham --

Relevant for: ɔ: r5 ɵ

Note. It soon became apparent that respondents could not usually answer the question originally

formulated. So 60' or 60"
were mostly used instead.

61. What does a woman sew with? NEEDLE 61

Relevant for: Tl ɬ'

62. To ask what something is, you would say
"What's --?" THAT 62

Relevant for: ð a (ɵ)

Note: this was a difficult item to elicit. As can be seen from the transcriptions of respondents' answers, they all gave carefully pronounced answers. On occasion, other words with initial /ð/ were accepted as answers.

63. All around us is the -- AIR 63

63'. What is it that we breathe?

Relevant for: (h) eɵ r5

64. The air is what we -- BREATHE 64

64'. What am I doing (+) now? BREATHING

Relevant for: ð [with 64', iŋ]

Note: After the first few recordings 63' and 64' were substituted for 63 and 64, their order being reversed.

65. If you're thirsty you have a drink of -- WATER 65

Relevant for: ɔ: (ɵ) (r3) ə r4

66. Or you might go into a pub and drink -- BEER 66

Relevant for: eɵ r5

67. What quantity would you ask for? PINT 67

67'. If you buy beer or milk, how much do you buy at once?

Relevant for: ai (ɵ)

68. You could drink it from a glass or else straight from the -- BOTTLE 68

68'. What container is it sold in?

Relevant for: ɔ Tl ɬ'

69. If you had plenty of money, you might go not to a pub but to a -- [for example, the Hilton...] HOTEL 69

69'. If you wanted to stay overnight in a strange town, you could stay in a --

Relevant for: h o (ɵ) ɬ' Y

Y: stress

70. In the morning, people often drink -- COFFEE 70

Relevant for: ɔ'

71. If you take sugar in tea or coffee, you have to -- STIR (it) 71

Relevant for: ɵ:

Note: not relevant for rl, since unlike church etc. it has /r/ in the broadest JC.

72. Coffee warms you up because you drink it -- HOT 72

Relevant for: h ɔ (ɵ)

73. But beer is nicer [if it's] -- COLD 73

Relevant for: o: ɬ/ɬ' d

74. If we like something, we say it's [not nasty, but] -- NICE 74

Relevant for: ai (t)

75. Before you swallow something, you -- CHEW (it) 75

Relevant for: Tr

76. If your hands get dirty you -- WASH (them) 76

Relevant for: ɔ

Note: it is not possible to say whether the forms with /-ʃt/ represent phonological or morphological hyperadaptations.

77. To wash all over you might have a -- BATH 77

Relevant for: a: (ɔ:) θ

78. If your foot was cut, you might take some Dettol and -- BATHE (it) 78

78'. A single word meaning 'have a bath'?

78". If you went to the seaside, what could you do in the sea?

Relevant for: e: ð

Note: a difficult item to elicit. The first version of the question tended to be answered wipe it.

79. When you finish washing, you dry yourself with a -- TOWEL 79

Relevant for: (θ) ou Y ɫ'

Y: incidence of second vowel

80. At night we go to -- BED 80

Relevant for: (ð)

81. We go to bed because we're -- TIRED 81

Relevant for: (θ) ai ə r4 (ð)

82. You might say, "I'm so tired my eyes won't stay --" OPEN 82

Relevant for: (h) o: Y d

Y: incidence of second vowel

83. "... they want to --" SHUT 83

83'. The opposite of open is --

Relevant for: Y (ɵ)

Y: in JC the vowel is often /e/, as mentioned by DJE, p. xlviii. One questionnaire respondent used this form.

84. Before you go to sleep you switch the light -- OFF 84

Relevant for: (h) ɔ' (t')

Note: the form with /ɔ:/ is sharply recessive in England. It has virtually disappeared from RP speakers coeval with the respondents, though it persists in Cockney.

85. You live in a -- HOUSE 85

Relevant for: h ou (t)

86. To get to a room that is higher up you go up the -- STAIRS 86

Relevant for: eə r2/r5

Note: it is not clear whether the broadest JC form has an /r/ or not. I have heard the hyper-correction [steɪz] from a London-born child of Jamaican parents; but cf. /ste:rke:s/ here from a broad speaker.

87. Over there (+) is the -- WINDOW 87

Relevant for: ŭ o

88. To reach a high window from outside, you'd have to use a -- LADDER 88

Relevant for: a (ð) ə r4 Y

Y: In JC this word can be /leda/ or even /lega/ in place of the expected /lada/ (see DJE s.v. leda, lega). Only the first of these was recorded among the questionnaire data.

89. To kill yourself from a high window, you would -- JUMP 89

Relevant for: Tr

90. If you did that, you wouldn't go up, you'd go -- DOWN 90

Relevant for: (ð) oŋ

91. ... until you hit the -- GROUND 91

Relevant for: oŋ d

92. Outside, some houses have a place where flowers grow. GARDEN 92

Relevant for: j a:' (ɔ:) rɜ̃ (ð) (d)

93. What's the place like a very big public garden? [For example, Hyde --] PARK 93

93'. If you go somewhere by car, you have to find a place to --

Relevant for: a:/a:' (ɔ:) r3

94. What's the tall thing that grows in a park? TREE 94

Relevant for: Tr (θ)

95. When spring comes, a tree puts out -- BUDS 95

Relevant for: (rl) (ð)

96. If someone didn't want to stay in the house, he might say "I'm not staying indoors, I'm going --" OUT 96

Relevant for: (h) ou (θ)

Note: the response was often OUTDOORS or OUTSIDE. If so, only its first syllable is transcribed in the data. In the JC of Westmoreland, and maybe elsewhere, indoors (used in the question) means not 'inside a building' but 'at home'.

97. Scouts who go camping sleep in a -- TENT 97

Relevant for: (θ) (θ)

98. Let's do the names of some animals. The one that barks is a -- DOG 98

Relevant for: ɔ'

99. And the one that miaows? CAT 99

Relevant for: j a (θ)

Note: Notwithstanding DJE's comment s.v. puss, that puss is the regular word for 'cat' throughout Jamaica, cat being known but not much used, all respondents offered CAT rather than puss.

100. If your dog was a good dog, you might (+) -- PAT (him) 100

Relevant for: a (θ)

Note: The pronunciations [pɛt], bracketed among the data transcriptions, are presumably pet rather than pat. The four responses with initial /sp/ are more problematic. At first sight they would seem to be hypercorrections comparable to /skrɔʃ/ crush etc. (DJE p. lxii). But Gabriel Parsons has pointed out to me that there is a semantic factor involved here as well: patting or striking something

several times on the same spot is, reasonably enough, referred to as spotting it. It is noticeable that none of the thirty-six respondents used a back vowel with an /s/-less form, while two of the four who gave pronunciations with initial /s/ also used back vowels. If semantic considerations played no part, one would expect cases of [spat] and/or [pɒt]--which did not turn up. And nobody gave /sp-/ for POT (no. 149).

101. What colour cat is supposed to bring bad luck? BLACK 101

Relevant for: a (ɔ) (t')

102. What does a man do if he keeps a lot of cats so as to be able to sell the kittens? BREED(S) 102

[He's a cat- --] BREEDER

Relevant for: (ð)

103. What's the little animal you sometimes get in houses: it likes cheese, and the cat chases it? MOUSE 103

Relevant for: ou (t)

Note: the JC form, as usual unmarked for number, is /mais/ (DJE s.v. mice): hence its use by just on half the manual-occupation respondents. No-one offered the broader JC form /musmus/ (DJE s.v. mus-mus). But several offered rat, in which case question 104 was altered by changing the last three words to "rat, but smaller".

104. What's the animal like a mouse, but bigger? RAT 104

Relevant for: a (ɔ) (θ)

Note: no-one gave the old-fashioned JC /rata/ (DJE s.v. ratta).

105. What's the little animal with yellow stripes, that flies around and might sting you? WASP 105

Relevant for: ɔ p (t)

Note: no-one offered spontaneously the JC variant /waswas/ (DJE s.v. was-was). In one or two cases where I asked about it I was given the evidently well-known phrase /waswas no bait mi/ 'Wasp, don't sting me'.

106. What's the little animal that runs around on the seashore and is good to eat? CRAB 106

Relevant for: a (ɔ)

107. Sparrow and crow and jackdaw are different kinds of -- BIRD 107

Relevant for: ə: rl (ð)

Note: every single respondent in fact offered BIRDS. This is probably a sort of syntactic hypercorrection of number in generic noun phrases (see Bailey 1966: 27). So too 108.

108. What's the bird you can see in Trafalgar Square? PIGEON 108

Relevant for: (ž) Y

Y: incidence of second vowel. Although it is /i/ in JC and--in the view of Jones, 1963, at least--in RP, a fair number of respondents have been sufficiently struck by the commoner London variant with [ən] or [n̩] to adapt their second vowel to [ə] or [ʌ].

109. Which bird is the national emblem of the United States? EAGLE 109

Relevant for: (h) (Tl) ɬ'

110. An eagle isn't smaller than a pigeon,
it's -- BIGGER 110
Relevant for: ə r4

111. What's the animal that people ride? HORSE 111
Relevant for: h ɔ: (ɔ') r3 (t)

112. What's the big animal that roars? LION 112
Relevant for: ai ə (r4) (d)

113. Lions and tigers aren't tame, they're -- WILD 113
Relevant for: ai ɫ/ɫ' d

114. To see animals like lions and tigers, we'd
go to the -- ZOO 114

115. What's the big white animal that lives
near the North Pole? [Polar --] BEAR 115
Relevant for: eə r5

116. What's the animal that gives us milk? COW 116
Relevant for: ou

117. When a cow has been slaughtered, they take
the hide, the skin, and make -- LEATHER 117
117'. What's this (+) made of?
Relevant for: ð ə r4
Note: no-one offered a
pronunciation based on the

JC form /lada/ reported in

DJE s.vv. leather-coat, leda.

118. This (+) is a -- BOOK 118

Relevant for: (t)

119. The man who writes a book is the -- AUTHOR 119

Relevant for: (h) ɔ: ɵ ə r4

Note: it became evident that many respondents did not know this word, or knew it only passively. Accordingly it was discounted when calculating scores.

120. I'm sitting in a -- CHAIR 120

Relevant for: eə r5 .

121. Men and women sleep in beds, but a little baby would sleep in a -- COT 121

Relevant for: ɔ (ɵ)

Note: in Jamaica a baby sleeps in a crib, while a COT is what in England is called a camp-bed. But there was no difficulty in eliciting COT with the question as above.

122. To tell the time, we look at a -- CLOCK 122

Relevant for: ɔ (t')

123. If you wanted to know the time, and you hadn't got a watch and couldn't see a clock[or the sun], you might go up to someone and -- ASK 123

Relevant for: a: (ɔ:) k'

124. What noise does a clock make? TICK 124

Relevant for: (θ) (t)

125. What's that thing over there (+) ? TELEVISION 125

125'. What do people watch at home in the evenings?

Relevant for: (θ) v ž ə (r4) (d)

126. You might say, "I don't want to do the washing up, it's too much --" TROUBLE

126'. ... wash the dishes ...

126". Gossiping can cause --

Relevant for: Tr (θ) (v) l'

Note: this item was included in the hope of eliciting the hyperadaptation /trovl/, which I have heard in London (see DJE p. lx and s.v. truvel). The hope was unfulfilled.

127. What do you give a child to play with? TOY 127

Relevant for: (ɵ) ɔi

128. If a woman has a baby, what relation is she to the baby? MOTHER 128

Relevant for: Y ð ə r4

Y: The first vowel in JC is /a/, not the /o/ that would be predicted from RP /ʌ/. Hence the elegant Jamaican pronunciation with [ɒ].

129. And the man who gave her the baby is the -- FATHER 129

Relevant for: a: (ɔ:) ð ə r4

130. If a mother has two sons, [Jim and Harry,] what relation is one to the other [Jim to Harry] ? BROTHER 130

Relevant for: Y ð ə r4

Y: The first vowel in JC is /e/ (see DJE s.v. breda), not the /o/ that would be predicted from RP /ʌ/. The three instances of [ɒ] in the data all come from speakers who gave [mɒðə] for mother, which implies contamination from one to the other.

151. In the Bible, who was the son of God? JESUS 151

Relevant for: ə (r4) (t)

152. What was the name of his mother? MARY 152

Relevant for: eə

153. Do you know an expression, "something, hope, and charity"? FAITH 153

153'. A word beginning with F, that means something like 'trust'?

Relevant for: e: ɵ

154. If an angel appeared to someone in a dream, we'd say that person had a -- VISION 154

Relevant for: v ž ə (r4) (d)

155. What church has the Pope at its head? CATHOLIC 155

Relevant for: j a ɵ

156. What do you say with a drink (+) ? CHEERS 156

Relevant for: (Tr) eə r5

Note: it is not quite clear whether the broadest Jamaican form is /tʃe:r/, /tʃe:rz/, or even /tʃe:z/. The questionnaire data rules the last one out; if it is /tʃe:rz/, we have either an internal morpheme boundary or an anomalous preconsonantal /r/. Cf EAR(S), no. 10.

157. When you are very very frightened, you tremble with -- FEAR 157

Relevant for: eə r5

158. At the end of life comes -- DEATH 158

Relevant for: (ð) ə

159. Jesus died upon the -- CROSS 159

Relevant for: ɔ' (t)

140. To worship God people go to -- CHURCH 140

Relevant for: (Tr) ə: rl (Tr)

141. If I run my finger here (+), it isn't rough, it's -- SMOOTH 141

Relevant for: sN ð

142. Engelbert Humperdink and Tom Jones are -- SINGER(S) 142

Relevant for: ə r4

143. We eat with a knife and -- FORK 143

Relevant for: ɔ: r3 (t')

144. What do we put on bread? BUTTER 144

Relevant for: (θ) ə r4

145. What do we call the man who makes bread? BAKER 145

Relevant for: e: ə r4

146. If you wanted to buy something and didn't know the price, you would ask, "How much does it -- ?" — COST — 146

Relevant for: ɔ' t

147. What do we use a knife for? (to) — CUT, CUTTING — 147

Relevant for: (θ)

148. What's the place in the country where animals are kept and milk and eggs come from? — FARM — 148

Relevant for: a: (ɔ:) r3

149. If something needs to be cooked, you put it in a -- — POT — 149

Relevant for: ɔ (θ)

150. Some people use electricity to cook, others use -- — GAS — 150

Relevant for: j a (t)

151. What's the simplest way to cook an egg? — BOIL (it) — 151

Relevant for: w ɔi ɬ' (d)

Note: Hyperadaptive /-d/ in this word, of which two instances occur in the data, could be due either to phonological (d) or to morphological hyper-adaptive past-tense ending.

152. Chops can be lamb, or mutton, or -- PORK 152

152'. What meat comes from pigs?

Relevant for: r2 (t')

153. If I wanted some butter, and there was no butter left, you might say, "I'm sorry, it's all -- " GONE 153

Relevant for: ɔ' (d)

154. If you're hungry, you want some -- FOOD 154

Relevant for: (ð)

155. When you put a bottle in a baby's mouth, what does baby do? SUCK 155

Relevant for: (t')

Note: here, too, hyperadaptive /-t/ may be morphological or phonological.

156. You buy baked beans in a -- TIN 156

Relevant for: (θ) (d)

157. Here are two books. This one (+) is -- THICK 157

157'. ... We could describe the difference between them by saying that this one (+) is --

Relevant for: θ (t')

158. ...but this one (+) is -- THIN 158

Relevant for: ϴ (d)

159. To make an old-fashioned fire in England we burn -- COAL 159

Relevant for: o: l (d)

160. Coal is usually delivered in a -- SACK 160

160'. This was a women's fashion, too, a few years ago.

160". There's something you call /krokos/ in Jamaica. What's it called in England?

Relevant for: a (t')

161. To grind up coffee beans back home you would use a -- MORTAR 161

161'. A house is built of bricks and --

Relevant for: ɔ: r3 (ϴ) ə r4

162. A motorist is someone who drives a -- CAR 162

Relevant for: j a:' (ɔ:) r5

163. You drive a car along a -- ROAD 163

Relevant for: o: (ð)

164. If you were with me in a car, and I was driving very slowly, you might say, "Drive -- " FASTER 164

Relevant for: a: (ɔ:) t ə r4

165. But if I drove at eighty miles an hour,
I'd be going too -- FAST 165
Relevant for: a: (ɔ:) t

166. What do we call a place bigger than a
village but smaller than a city?
[For example, Luton] TOWN 166
166'. Wandsworth has two railway stations,
Wandsworth Common and Wands-
worth --
166". A place in North London is
Kentish --
Relevant for: (ɵ) oŋ (d)

167. If the police were after a criminal driving
a car, they might set up a road -- BLOCK 167
Relevant for: ɔ (t')

168. If the price of something was too high, you
might say, "Oh, that costs too much, I
can't -- " AFFORD (it) 168
Relevant for: ə r2 (ð)

169. If you go anywhere by bus or train, you have
to pay your -- FARE 169
Relevant for: eə r5

170. If the ticket-collector wanted to see your ticket and you couldn't find it, you'd say, "I did buy one, but I've -- " — LOST (it) 170

Relevant for: ɔ' t

171. But if you hadn't bought a ticket, you might be prosecuted and taken to -- — COURT 171

Relevant for: r2 (ɵ)

172. The man at the head of a court, who decides the sentence in a serious case, is the -- — JUDGE 172

Relevant for: (Tr) (Tr)

173. If someone owes money, we say he's in -- — DEBT 173

Relevant for: (ð) X (ɵ)

X: insertion of /P/ (i.e. /p/ or /b/) to accord with the b in the spelling.

174. Another name for a policeman is a -- — COP, COPPER 174

Relevant for: ɔ

175. A person might say, "That's not false, it's --" — TRUE 175

175'. The opposite of false is --

Relevant for: Tr

Note: in two cases forms of TRUTH were accepted instead.

176. What's the name of the river we have in London? THAMES 176

Relevant for: (ɵ) X X

X: from the spelling one would predict an RP form /ɵe:mz/, which differs both in initial consonantism and in vocalism from that actually found. It is not surprising that this proper name, like Streatham, tends to trip up those who are uncertain about /t-ɵ/.

177. The Thames doesn't run round London, it runs (+) -- THROUGH (it) 177

Relevant for: ɵ ɵr

178. If you went with a friend to a party, you might say, "We didn't come separately, we came -- " TOGETHER 178

Relevant for: (ɵ) Y ð ə r4

Y: the form current where I stayed in Westmoreland was /tugjada/, which did not occur as such in the London data.

179. A woman in the Cabinet is Mrs Barbara -- CASTLE 179

179'. [after the General Election of June, 1970] A woman who used to be in the Cabinet is Mrs Barbara --

Relevant for: j Y X ɹ'

Y: the forms with /a/ and /a:/ respectively are geographical variants in JC. See p.

X: one respondent used a spelling pronunciation with /-stl/.

180. Now my hand (+) is above the table; now (+) it's -- UNDERNEATH 180

Relevant for: Y (ɔ̈) ə r4 ɵ

Y: under has a variety of different pronunciations current in JC (see, for example, DJE s.v.). All forms recorded in the data can be seen as reflexes of JC /onda/ or /anda/.

181. A town on the North coast of Jamaica is Montego -- BAY 181

Relevant for: e:

Note: questions 181-186 are arranged as pairs to test the

phonological reality for respondents of /r/ in r5 words.

182. "Red Stripe" is a Jamaican kind of -- BEER 182 (= 66)
Relevant for: eə r5

183. If you buy jam, what is it sold in? JAR 183
Relevant for: a:' r5

184. This (+) is my -- JAW 184 (= 9)
Relevant for: ɔ:

185. If you cut your foot and it turned septic, you'd have a -- SORE 185
Relevant for: r5

186. What does a woman do with a needle and thread? SEW 186
Relevant for: o:

187. [If someone comes from Canada, we say he's a Canadian. In the same way,] someone from the United States is an -- AMERICAN 187
Relevant for: ə Y ə
Y: second vowel /e/ or /o/
(see p.)

188. If you didn't know the exact answer to a question, you might just try something

to see if it was right. You could

say, "I don't know really, I'm just --" GUESSING 188

Relevant for: (t) ŋ

189. To claim sickness benefit you fill in a -- FORM 189

Relevant for: ɔ:

190. This is my last question, because now we've

come to the -- END 190

Relevant for: (h) d

An alphabetical index to the questionnaire items will be found at the end of the thesis, p. 287 ff.

Part Three F I N D I N G S

Chapter III.1

THE DATA

In this chapter each respondent's pronunciation of each questionnaire keyword is presented in phonetic transcription. The form of transcription used is one which might be termed 'impressionistic' and 'selectively narrow'. On the one hand, the short non-low vowels are shown as [ɪ ɛ ʊ ʌ] in all cases except where they diverge strikingly from the RP norm*; on the other hand, the quality of low vowels has been represented with some precision, in view of the importance of determining whether or not a given speaker has an opposition between /a/ and /ɔ/ (pat--pot), /a:/ and /ɔ:/ (farm--form), /ai/ and /ɔi/ (tie--toy). The tamber of nonprevocalic /l/ has been shown as [l̠] (palatalization), [l] (neutral tamber), or [ɫ] (velarization), to bring out the informants' having or not having the RP distribution of /l/ tambers.

The alphabet of the International Phonetic Association** has been used, supplemented by the following extra symbols: ᴀ (fully open central unrounded vowel, halfway between Cardinals 4 and 5); ˀ (not released). A raised ˞ denotes r-colouring of the vowel whose symbol precedes; all other raised symbols denote short glide sounds. The symbol œ is used to represent a central (rather than front) half-open rounded vowel.

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*This happens most commonly with [ɔ] for JC /o/ = RP /ᴀ/.

** I.P.A., 1957.

The data is arranged by keyword. Each questionnaire item mentioned is followed by its phonemic and phonetic "reference transcriptions" for Jamaican Creole and Received Pronunciation and then by thirty-six transcriptions representing the pronunciation given to it by each of the thirty-six respondents.

Each JC and RP "reference transcription" necessarily represents only one out of a range of possibilities. The following conventions apply:

JC phonemic Words such as five are shown with /v/, although some speakers, lacking /v/, use /b/. Words said with /h/ in Western Jamaica, where /h/ is phonemic, are shown with /(h)/. Words such as beer, sore, star are shown with final /r/. The vowel in words such as shirt is shown as /o(r)/. Words such as tree, drink are shown with /tr-, dr-/ rather than the /tʃ-, dʒ-/ which some JC speakers use in such words.

JC phonetic /a/ is shown as [a̲] when stressed (but [a] after /Kj/), and as [ɐ] otherwise. /a:/ is shown as [ɑ:], notwithstanding occasional allophonic variation (e.g. retraction next to labials). /e:/ and /o:/ are shown as [ie, uo̝] before /r/, otherwise as [ie̝, uɔ] (which may be taken to represent what is more accurately [i̞e, ʊ̞ɔ]). /ai/ is shown as [aɛ̈].

RP phonemic The vowels of face, nose are symbolized as /e:/ and /o:/ respectively. This not only emphasizes their intuitive characteristic of being 'single sounds' rather than

diphthongs (although realizationally they are diphthongal), but also underlines their lexical correspondence to the JC vowels transcribed in the same way. Words such as cross are shown with /ɔ/ rather than the old-fashioned /ɔ:/, except for off, for which both variants are shown. Words ending in one of /a:, ɔ:, ə:, ə, iə, eə, uə/ are shown without the linking /r/ which may be added when a vowel follows.

RP phonetic Norms for /ai, au/ are assumed to be [ɐɪ], [ʌʊ]. /i/ and /u/ are shown as slightly diphthongal, [ɪi, ʊu], except where shortened by a following fortis consonant. /r/ is taken as [ɹ] in all positions, including intervocalically and after /θ, ð/ (where some speakers use [ɻ]).

The transcriptions of the questionnaire response data are arranged in an order which partly brings together the pronunciations of respondents with similar backgrounds. In the leftmost column are those of non-manual occupational class who migrated to Britain at age 19 or under; the next column gives those of non-manual occupation who migrated at 20 or over. The remaining four columns give the pronunciation of respondents in manual occupations, those who arrived at 19 or under in the centre and those who came at 20 or over on the right. There is a small overflow from the two rightmost columns into the two centre ones. The diagram overleaf, in which respondents' numbers correspond to the transcriptions of their pronunciation in the remainder of this chapter, should make everything clear.

Occupational class	Non-manual		Manual			
Age on arrival in U.K.	19 or under	20 or over	19 or under		20 or over	
Respondent's number	*3	30~	1†	2	*8	36
	*4	24	7†	*9	*10†	11†
	5~†	27~	12~	*15	16	13~
	*34	28†	*20	17	18	14~†
	25~	26	*29	*21~	22	19
	6	35	23	33†	*31~	32~

* in U.K. ten years or more

† from Western parishes

~ female

( ) in U.K. less than one year

Abbreviations and non-phonetic symbols used

§ suggested word, supplied by interviewer to respondent

** hyperadapted form (hypercorrection) * partial ditto

n.a. not asked (through interviewing error)

n.k. not known to respondent (even when supplied)

n.r. not recorded (through technical error)

° excerpted from incidental material (for comparison)

1 NOSE JC /no:z/[nʊɔz] RP /no:z/[nəʊz]

—nɔʊz	—nëʊz	—nɐʊz	—nɐəz	—nɐʊz	—nəʊz
—nʊ:z	—nəʊz	—no:z	—nə̃ʊz	—nəʊz	—nɐʊz
—nəʊz	—nəʊz	—nə̰ʊz	—nəʊz	—nəʊz	—nə̰ʊz
—nouz	—no:z	—nëʊz[a]	—nəʊz	—nëʊz	—nəʊz
—nə̰ʊz	—nə̰ʊz	—nəʊz	—nə̰ʊz	—nɐʊz	—nəʊz
—no:z	—nouz	—nəʊz	—nɔ̈uz	—nəʊz	—nə̃ʊz

2 HAIR JC /(h)e:r/[hɪeɹ] RP /heə/[hɛə]

–hɛ̝ə	–hɛə	–he:ɹ	–ɪəᵊ	–ɛ̝e:ɹ	–hɛ̝əɹ
–hɛ:ɛᵊ	–heɤ·	–he:ɹ	–heɐ	–heɐᵊ	–he:ɤ
–hɛ̝əɹ	–hɐʊᵊ·	–hë:	–heɐ	–he:ɹ	–he:ɹ
–heə	–heɤ	–hɛ̝ə	–hɛɐ	–heə	–he:ɹ
–hɛ̝ə	–hɛ̝·ɤ	–heɐ	–he:ɤ	–hɛ̝·əɹ	–hɛ̝·ɤ
–he:ɹ	–hɛ̝ə	–he·ə	–he:ɤ	–he:ɐᵊ	–he:ɹ

5 BLONDE JC /blan/[bl̪an] RP /blɔnd/[blɔnd]

–blɒnd	–blɒndᵊ	–bland	–bland	–blan	–blɒn
–blɒnd	–blɒn	–n.k.	–blɒn	–blan	–blan
–blɒnd	–bland	–blënd	–blʌnd	–blʌn	–blɒnz, °-n, °-nd, °-ʌ-, °-a-
–blɒnd	–bland	–blɒn	–bland	–bl̪and	–bland
–blɒnd	–blɒnd	–blʌn	–bl~~ʌn~~ɒn	–bland	–bl̪an
–bland	–blɒnd	–bl̪an	–blʌnd	–bl̪and	–blɒnd̥ʰ

4 EYE JC /(j)ai/[(j)aɛ̝] RP /ai/[a̟ɪ]

–aɪ	–ʌ·ɪ	–ʌɪz	–hɑɪz**	–a̟aɪ*	–aɪ
–aɪ	–aɪ	–aɪ	–ʌɪz	–ʌɪz	–ʌɪz
–aɪ	–aɛ	–aɪz	–haë**	–ʌɪ	–ʌɪz
–a̲ɪ	–æɪ	–ɒ̃ɪ	–hʌɪz**	–aɪz	–aɪz
–aɪ	–aɪ	–aɪ	–a̲a̲ɪz*	–aɪz	–hʌɪ**
–aɪ	–a̲ɪz	–a̟ɪz	–ʌɪ	–hɑɪz**	–ʌɪz

5 BLIND JC /blain/[blaɐn] RP /blaind/[blɐ̯ɪnd]

–blaɪnd	–blʌɪnd	–blʌɪnd	–blaɪnd	–blaɪn	–blaɐn
–blaɪnd	–blaɪnd	–blaɪn	–blʌɪn	–blʌɪnd	–blʌɪn
–blaɪnd	–blaɛnd	–blaɪnd	–blʌɪnd	–blaɪn	–blaɪnd
–blɐ̯ɪnd	–blæɪnd	–blʊ̃ĩn	–blʌɪnd	–blɐ̯ã̃ĩn	–blaɪnd
–blaɪnd	–blaɪnd	–blaɪn	–blʌɪnd	–blaɪnd	–blʌɪn
–blaɪnd	–blɐ̯ɪnd	–blʌɪnd	–blaɪn	–blaɪnd	–blʌɪnd

6 MOUTH JC /mout/[mɔʊt] RP /mauθ/[mʌʊθ]

–mʌʊθ	–mɐ̯ʊθ	–mɐʊθ	–mʌʊθ	–mɐʊθ	–mʌʊt
–mʌʊθ	–mɐʊθ	–mɒʊt	–mʌʊθ	–mʌʊθ	–mʌʊθ
–mʌʊθ	–mʌʊθ	–mʌʊθ	–mʌʊθ	–mʌʊθ	–mʌʊt
–mɐ̯ʌʊθ	–mɒʊθ	–mʌʊt	–mʌʊθ	–mʌʊθ	–mʌʊθ
–mʌʊθ	–mʌʊθ	–mʌʊt	–mɤ̯ʊθ	–mʌʊθ	–mʌʊθ
–mʌʊθ	–mɐʊθ	–mʌʊt̪	–mʌʊt	–mʌʊθ	–mʌʊθ

7 TEETH JC /ti:t/[ti·t] RP /ti:θ/[ti·θ]

–tiθ	–ti:θ	–θi:θ**	–ti:θ	–θi:t**	–t̪i:t̪*
–ti:θ	–ti:θ	–ti:ts	–tˢi:t	–θi:t**	–ti:θ
–ti:θ	–ti:θ	–ti:θ	–ti:t	–ti:t	–θi:t**
–ti:θ	–ti:θ	–ti:t	–ti:θ	–ti:θ	–ti:θ
–ti:θ	–ti:θ	–ti:θ	–tiˀt	–ti:θ	–ti:θ
–ti:θ	–ti:θ	–t̪i:t*	–ti:θ	–t̪i:tθ*	–ti:θ

8 TONGUE JC /toŋ/[tʊ̈ŋ] RP /tʌŋ/[tʌŋ]

– tʌŋ	– tʌŋ	– tʌŋ	– tʌŋ	– θʌŋ**	– t̪ʌŋ*
– tʌŋ	– tʊ̈ŋ	– tʌŋ	– tʌŋ	– tʌŋ	– tʌŋ
– tʌŋ	– tʌŋ	– tʌŋ	– θʌŋ**	– tʌŋ	– tʌŋ
– t̪ʌŋ	– tʌŋ	– tʌŋ	– tʌŋ	– tʌŋ	– tʊ̈ŋ
– t̪ʌŋ*	– tʌŋ	– tʌŋ	– tʌŋ	– tʌŋ	– tʌŋ
– tʊ̈ŋ	– tʌŋ	– tʌŋ	– tʌŋ	– tʌŋ	– tʌŋ

9 JAW JC /dʒa:/[dʒA:] RP /dʒɔ:/[dʒɔ:]

– dʒɔ	– dʒɔ:	– dʒɒ:	– dʒɔ:	– ʃdʒa:	– dʒɒ:
– dʒɔ:	– dʒɔ:	– dʒa:	– dʒa:	– dʒa:	– dʒɒ:
– dʒɔ:	– dʒɔ:	– dʒa̪:	– dʒa:	– dʒɔ:	– dʒɔ:
– dʒɔ:	– dʒɔ:	– dʒɔ:	– dʒɔ:	– dʒa:	– dʒa:
– dʒɔ:	– dʒɔ:	– dʒɔ:	– dʒɔ:	– dʒɔ:	– dʒʊ̈:
– dʒɔ:	– dʒɔ:	– dʒa:	– dɹɒ:**	– dʒɔ:	– dʒɔ:

10 EAR JC /e:ɪ/[iɛɪ] RP /iə/[ɪə]

– ɛ̝ə	– i̝ə	– e:ɹ	– ɪə	– e̝e:ɹ*	– ɪə
– eɹ	– eɹ	– ɪë̞ɪ	– ɪəɪ	– e:eɹ	– e:ɹ
– ɛ̝e	– e·eɹ	– i̝ɛ̝	– ee	– e:ɹ	– ɪeɹɪ
– ɪə	– e:ɹ	– ɛ̝ə	– he̝eɹ**	– heɹɪ**	– e:ɹ
– ɛ̝ə	– ɛ·ɹ	– e·eɹɪ	– he:ɹɪ**	– i̝e:ɹ*	– e̝e
– e:ɹɪ	– eɹ	– heəɪ**	– e·ɹ	– e:ɹɪ	– e̝e:ɹ*

11 HEAR JC /(h)e:r/[(h)ieɹ] RP /hiə/[hɪə]

–hɐ̟ə	–hɪə	–he:ɹ	–hɪəɹɪn	–ɐ̟e:ɹ	–hɪə
–hɐ̟ɐ̟	–heɹ	–hɪëɹ	–ʔɪə	–he:ə	–he:ɹ
–hɐ̟ə	–he·ɹ	–hɪɐ̟̈	–ɐɐ	–he:ɹ	–ʔɪɐ̟, hɪɐ̟
–hɪə	–he·ɹ	–hɪə	–hɐ̟ɐ̟	–hɐɹɪn	–he:ɹ
–hɐ̟ə	–he·ɹ	–he·ɐ	–he:ɹ	–hɐ̟:ɹ	–hɪɐ
–he:ɹ	–heɹ	–heɹ	–he·ɹ	–e:ɹ	–he:ɹ̟

12 VOICE JC /vais/[vaɐ̟s] RP /vɔis/[vɔɪs]

–vɔɪs	–vɔ·ɪs	–vɔɪs	–vɔɪs	–vaɪs	–vɔɪs
–vɔɪs	–vɔɪs	–vaɪs	–vɔɪs	–vɔɪs	–vɐ̟ɪs
–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs
–vɔɪs	–vɔɪs	–vɔɪsᵊ, ᵒvɐ̟ɪs	–vɔɪs	–vɔɪs	–vɔɪs
–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs
–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs	–vɔɪs

13 THROAT JC /tro:t/[tɹɐɔt] RP /θro:t/[θɹəʊt]

–θɹəʊt	–θɹëʊt	–θɹɐʊt	–θɹəʊt	–tɕɹɐʊt	–ɕθɹəʊt
–θɹəʊt	–θɹɔʊt	–tɹoɔ̈t	–tɕɹəʊt	–θɹəʊt	–t̪ɹəʊt
–θɹo:t	–t̪θɹo:t	–tɕɹəʊt	–θɹəʊt	–t̪ɕɹoʊt	–θɹəʊt
–θɹɔʊt	–θɹo:t	–tɕɹəʊtᵊ, θɹəʊt	–θɹəʊt	–tɕɹəʊt	–tɹəʊt
–θɹɔ̈ʊt	–θɹo:t	–tɹəʊt	–θɹəʊt	–tɹəʊt	–θɹɔɹʊt
–tɹo:t	–θɹöʊt	–tɹəʊt	–tɹo:t	–tɹəʊt	–tɹoʊt

14 HOARSE JC /(h)o:s/[(h)ʊɔs] RP /hɔ:s/[hɔ̣:s]

–hoɹs	–hɔ̣:s	–ho:ɹs	–o:ɹs	–ɐɐs**	–ʃʔo:ɹs
–hɔ̣:s	–ho·ɚs	– ho:s	–o:ɹs	–ho:ɹs	–ho:ɹs
–ho:ɹs	–hɔ·ɚs	–hö:ᵛs	–hɔʊst**	–hɒ:ɹs	–ho:ɹs
–ho·ɹs	–ho:ɹs	–ɒ:ɹsᵊ	–hɒ:ɹs	–ho:ɚs	–ho:ɹs
–hɔ̣·əs	– hɔ:s	–ho:ɚs	–hʌ:ɚs	–hɔ:ɹs	– hɔ̣:s
–hɔ̣ɹs	–hɔɚs	– ho:ɹs	–ho:ɹs	–ho:ɹs	–ho:ɹs

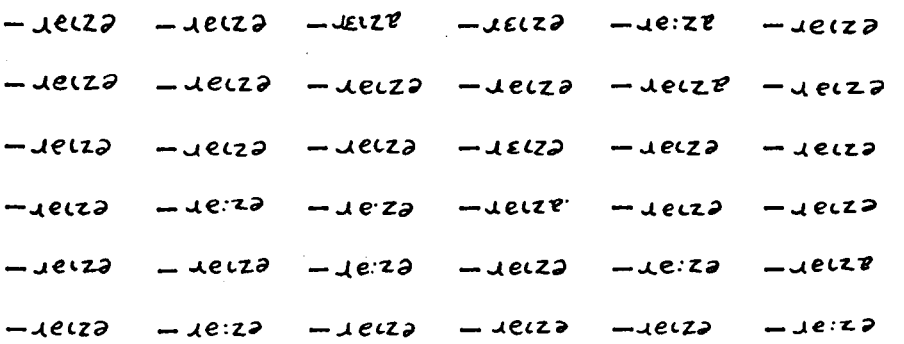
15 FACE JC /fe:s/[fiɐs] RP /fe:s/[feɪs]

–feɪs	– feɪs	–fɛɪs	–fɛɪs	–fɛ̈ɪs	–feɪs
– feɪs	– feɪs	– fe:s	– feɪs	– feɪs	– fËɪs
– feɪs	– feɪs	– feɪs	– feɪs	– feɪs	– feɪs
– feɪs	– fe:s	– feɪsᵊ	– feɪs	– feɪs	– feɪs
– feɪs	– feɪs	– fe:s	– feɪst**	– fɐ:s	– feɪs
– feɪs	– fe:s	– feɪs	– fe:s	– fe:s	– feɪs

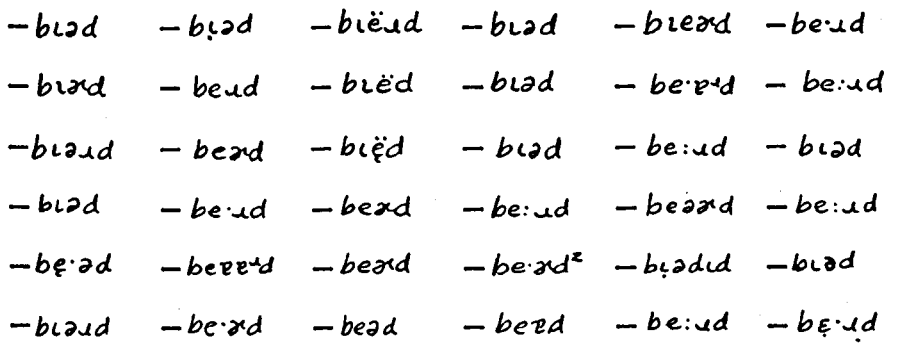
16 MASK JC /ma:s/[mʌ:s] RP /ma:sk/[mɑ̟:sk]

– mask	– ma:sk	– mã:sk	– ma:sk	– ma:s	– mɔ:s**
– mãsk	– mɑ̟:sk	– ma:s	– mɒ̃:s	– mɑ̟:s	– mʌ:sk
– mʌ:sk	– mã:sk	– mʌ:sk	– mas	– mɑ̟:s	– ma:sk
– mɑ̟:sk	– mɑ̱:sk	– mã:s	– mɑ̱:sk	– ma:sk	– mʌ:sk
– mɑ̟̃:sk	– mʌ:sk	– mɑ̱:s	– mʌs·k	– mɑ̟:sk	– ma:sk
– mÃ:sk	– mɑ̟:sk	– mʌ:sk	– mʌ:sk	– ma:sk	– mɑ̱:sk

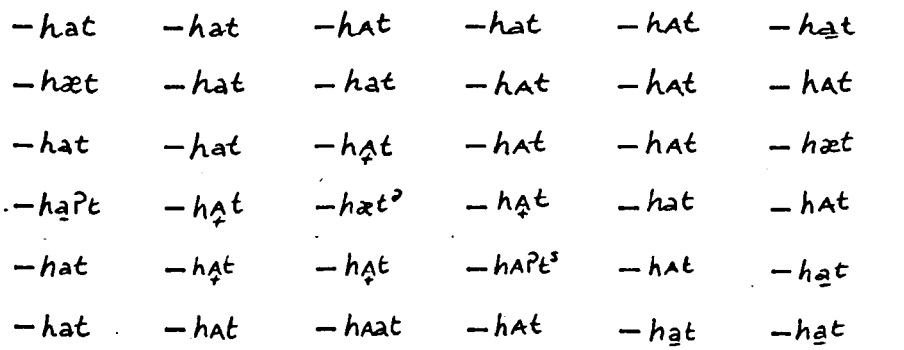
17 RAZOR JC /re:za/[ɹiɻzɐ] RP /re:zə/[ɹeɪzə]



18 BEARD JC /be:d/[biɐ̯d] RP /biəd/[bɪəd]



19 HAT JC /(h)at/[(h)a̠t] RP /hat/[hæt]



20 CAP JC /kjap/[kjap] RP /kap/[kæp]

– kap	– kap	– kap	– kap	– kjap	– kjap
– kæp	– kap	– kjap	– kjap	– kap	– kap
– kjap	– kjap	– kap	– kæp	– kʌp	– kjæp[7]
– kap	– kap	– kæp[3]	– kap	– kæp	– kap
– kap	– kap	– kjap	– kʌp	– kʌp	– cap
– kjap	– kap	– kjæp	– kjap	– kjap	– kap

21 SHIRT JC /ʃo(r)t/[ʃɔ(ɹ)t] RP /ʃə:t/[ʃɜ·t]

– ʃɜt	– ʃɜ:t	– ʃɐɹt	– ʃɜ·t	– ʃɔɹt	– ʃœɹ:t
– ʃɜɜ·t	– ʃɜ·t	– ʃœɹt	– ʃɛ̈ɹt	– ʃœɹt	– ʃœɹ:t
– ʃœɹ:t	– ʃʌɹt	– ʃɛ̈ɹ:t	– ʃɐɹ:t	– ʃœɹt	– ʃœɹt
– ʃɜ·:t	– ʃɜ·:t	– ʃɜ:t[3]	– ʃɜ:t	– ʃɐɹ:t	– ʃœɹ:t
– ʃɜ·t	– ʃɜ:t	– ʃɜ·t	– ʃœɹt[5]	– ʃʌɹt	– ʃɔɹt
– ʃɜ·:t	– ʃʌɜt	– ʃʌɹt	– ʃœɹ:t	– ʃœɹt	– ʃœɹ:t

22 TIE JC /tai/[taɛ] RP /tai/[tʌɪ]

– taɪ	– tɑ·ɪ	– taɪ	– taɪ	– taɪ	– taɨ
– taɪ	– taɪ	– taɪ	– tʌɪ	– tʌɪ	– taɪ
– taɪ	– taɛ	– taɪ	– taɛ	– tʌɪ	– tʌɪ
– tɑɪ	– tɜ̈ɪ	– tɒɪ	– tʌɪ	– taɪ	– tʌɪ
– taɪ	– taɪ	– taɪ	– tɑɪ	– tʌɪ	– tʌɪ
– taɪ	– tɑɪ	– taɪ	– tʌɪ	– taɪ	– taɪ

25 COAT JC /ko:t/[kuɔt] RP /ko:t/[kəʊt]

– ko:t	– kəʊt	– kɐʊt^{7}	– kɐʊt	– kɔʊt	– kö:t
– kɐʊt	– ko:t	– koɔ̈t	– kǫ̈ʊt	– kɐʊt	– kɐ̨ʊt
– ko·ʊt	– kout	– kout	– ko:t	– kɐ̨ʊt	– kəʊt
– kout	– ko:t	– kəʊt^{2}	– kout	– kout	– kövt
– kout	– ko:t	– ko:t	– kout	– ko:t	– kɐ̨ʊt
– ko:t	– ko:t	– kö:t	– kout	– kout	– kout

24 SHORT JC /ʃa:t/[ʃᴬ:t] RP /ʃɔ:t/[ʃɔ̟:t]

– ʃɔ:t	– ʃɔ̟:t	– ʃɔ̟:t	– ʃɔ:t	– ʃɑ:t	– n.a.
– ʃɔ̟:t	– ʃɔɚt	– ʃa:t	– ʃɒ:t	– ʃa:t	– ʃɔ̟:t
– ʃɔ:t	– n.a.	– ʃɔ:t	– ʃɔʊt	– ʃɔ:t	– ʃɔ:t
– ʃɔ:ɹt	– ʃɔ:t	– ʃɔ̟:t	– ʃɔ:t	– ʃɒ·t	– ʃɔ̟:ɹt
– ʃɔ̟:t	– ʃɔ:t	– ʃɔ:t	– ʃɔ:t	– ʃɔ̟:ɹt	– ʃɔ̟:t
– ʃɔɹt	– ʃɔ:t	– n.a.	– ʃɒ:t	– ʃɔ̟:t	– ʃɔ:ɹt

25 SUIT JC /su:t/[su:t] RP /s(j)u:t/[s(j)ü·t]

– su:t, -t'	– su:t	– su:t	– sǫ̨:t	– su:t^{7}	– su:t
– su:t	– sʉ:t	– su:t	– su:t	– su:t	– su:t
– su:t	– su:t	– svüt	– su:t	– su:t	– su:t
– su:t	– su:t	– su:t	– s^{ᵛ}u:t	– s^{ɪ}u·t	– su:t
– su:t	– sjü:t^{7}	– sʉ:t	– sü:t	– su:t	– sju:t
– su:t	– sʉɹt	– su:t	– su:t	– su:t	– su:t

26 BELT JC /belt/[bɛɫt] RP /belt/[bɛtt]

—bɛlt	—bɛtt	—bɛɫt	—bɛɫt	—bɛɫt	—bɛɫt
—bɛɫt	—bɛlt	—bɛɫt	—bɛɫt	—bɛɫt	—bɛlt
—bɛɫt	—bɛɫt	—bɛlt	—bɛɫt	—bɛɫt	—bɛɫt
—bɛtt	—bɛɫt	—bɛlt	—bɛlt	—bɛɫt	—bɛɫt
—bɛɫt	—bɛɫt	—bɛlt	—bɛl·t	—bɛ̨ɫt	—bɛtt
—bɛɫt	—bɛɫt	—bɛlt	—bɛɫt	—bɛɫt	—bɛɫt

27 BUCKLE JC /bokl/[bɔ̈kɫ] RP /bʌkl/[bʌkt]

—bʌkɫ	—bʌkt	—bʌtɫ**	—bʌtɫ**	—bʌtɫ**	—bʌkl
—bʌkɫ	—bʌkl	—bʌkɫ	—bʌkɫ	—bʌkl	—bʌtɫ**
—bʌtɫz**	—bɔ̈kɫ	—bʌʔl**	—bʌʔl**	—bʌtɫ**	—bʌtɫ**
—bʌkt	—bʌkɫ	—bʌtl**	—bʌkl	—bʌtɫ**	—bɔ̈kɫ
—bʌkɫ	—bʌkɫ	—bʌtl**	—bʌʔl**	—bʌtɫ**	—bʌkt
—bɔ̈kɫ	—bʌkɫ	—bʌt̬l**	—bʌkɫ	—bʌtɫ**	—bʌtɫ**

28 HAND JC /(h)an/[(h)a̠n] RP /hand/[hænd]

—hand	—hænd	—hɛ̃nd	—ɛ̨nd	—ʌn	—ha̠nd°
—hænd	—han	—han	—han	—hand	—hʌn
—hand	—han	—hɛ̨n	—hænd	—hã̟nd	—hænd
—hand	—ha̠nd	—æ̨nd°, °h-	—ʌ̟n	—hæ·nd	—hand
—hand	—hand	—hʌ̟n	—hæ̨n	—ha̠nd	—hạ·nd
—hand	—ha̠nd	—han	—hʌ̟nd	—hæand	—hã̠n

29 FINGER JC /fiŋga/[fɪŋgɐ] RP /fiŋgə/[fɪŋgə]

–fɪŋgə	–fɪŋgə	–fɪŋgɐ	–fɪŋgə	–fɪŋgə	–fɪŋgə
–fɪŋgə	–fɪŋgɐ	–fɪŋgə	–fɪŋgə	–fɪŋgə	–fɪŋgə
–fɪŋgə	–fɪŋgə	–fɪŋgə	–fɪŋgə	–fɪŋgə	–fɪŋgə
–fɪŋgə	–fɪŋgə	–fɪŋgə	–fɪŋgɐ	–fɪŋgə	–fɪŋgə
–fɪŋgə	–fɪŋgə	–fɪŋgəz	–fɪŋgə	–fɪŋgə	–fɪŋgɐ
–fɪŋgə	–fɪŋgə	–fɪŋgə	–fɪŋgə	–fɪŋgɐ	–fɪŋgɐz

30 THUMB JC /tom/[tɔ̈m] RP /θʌm/[θʌm]

–θʌm	–θʌm	–tʌm	–θʌm	–tʌm	–tʌm
–θʌm	–θʌm	–tʰʌm	–tʌm	–tʌm	–θʌm
–θʌm	–θʌm	–θʌm	–θʌm	–θʌm	–tʌm
–θʌm	–θʌm	–tʌm	–tʌm	–tʌm	–θɔ̈m
–θʌm	–θʌm	–tʌm	–θʌm	–θʌm	–θʌm
–θɔ̈m	–θʌm	–θʌm	–tʌm	–tθʌm	–θʌm

31 THIGH JC (see note, p.96) RP /θai/[θɐ̟ɪ]

–θaɪ	–θaɪ	–θaɪ	–t̪θaɪ	–n.k.	–n.k.
–θaɪ	–θaɪ	–n.k.	–n.k.	–ˢθaɪ	–ˢt̪a̠ɪ
–t̪θaɪ	–θaɐ	–θaɪ	–ˢθaɪ	–ˢθʌɪ	–tʌɪz
–θa̠ɪ	–θaɪ	–taɪz	–θɐ̟ɪ	–tʌɪ	–ˢθʌɪ
–θaɪ	–θaɪ	–taɪz	–ˢθɑ̟ɪ	–t̪θɐ̟ɪ	–θʌɪ
–θaɪ	–θa̠ɪ	–θaɪ	–n.k.	–θaɪ	–θa̠ɪ

52 FOOT JC /fut/[fʊt] RP /fut/[fʊt]

– fʊt	– ʃʊt	– fʊθ**	– fi:t	– fʊt	– fɛ:t
– fʊt	– fʊt	– ʃʊt	– fɛ:t	– fʊt	– fʊt
– fi:t	– fi:t	– ʃʊt	– fɛ:t	– fʊt	– fi:t
– fʊt	– fʊt	– fʊtᵊ	– fɛ:t	– fʊ̈t	– fi:t
– fʊt	– fʊt	– fi:t	– fʊt	– fʊt	– fʊt
– fʊtˀ	– fʊt	– fʏ̈t	– fʊt	– fʊt	– fʊt

53 TOE JC /to:/[tuɔ] RP /to:/[təʊ]

– touz	– tëʊ	– tɐʊz	– tou	– tɐʊz	– təʊz
– təʊz	– töu	– tɒ:	– təʊz	– to:	– n.a.
– touz	– to:	– tëʊ	– təʊ	– tɒʊz	– təʊz
– tou	– tou	– təʊzᵊ	– tövz	– təʊz	– töʊ
– tɒ̈ʊ	– to:	– to:z	– təʊz	– n.a.	– təʊz
– to:	– touz	– tö:	– to:z	– tɐʊz	– touz

54 SOCK JC /saks/[sa̱ks] RP /sɔk/[sɒk]

– sɒks	– sɒk	– saks	– sɒk	– sʌks	– sɒks
– sɒk	– sɒks	– saks	– sʌks	– sʌks	– sɒks
– sɒk	– saks	– sɒks	– sɒks	– sɒks	– n.a.
– sɒks	– sɒks	– sɒk	– n.a.	– sɑ̱k	– sɒks
– sɒk	– sɒks	– sɒk	– sɒks	– sʌks	– saks
– sɒks	– sɒks	– saks	– sʌks	– sɒks	– n.a.

55 SHOE JC /ʃu:z/[ʃu:z] RP /ʃu:/[ʃvu]

–ʃʉ:z	–ʃu:z	– n.a.	–ʃu:	–ʃu:z	–ʃvu
–ʃu:	–ʃü:z	–ʃu:z	–ʃvuz	–ʃu:	–ʃu:z
–ʃu:	–ʃu:z	–ʃu:z	–ʃu:z	–ʃu:z	–ʃu:z
–ʃu:	–ʃu:z	–ʃʉz	–ʃʉ:z	–ʃʉ:	–ʃu:
–ʃu:	–ʃu:	–ʃʉ:	–ʃʉ:	–ʃu:z	–ʃu:
–ʃu:	–ʃvuz	–ʃʉ:z̥	–ʃu:z	–ʃvuz	–ʃu:z

56 SLIPPERS JC /slipaz/[slɪpɐz] RP /slipəz/[slɪpəz]

–slɪpəz	–slɪpəz	–slɪpəz	–slɪpəz	–slɪpɐ˞z	–slɪpəz
–slɪpə,-ɚz	–slɪpɚz	–slɪpɐz	–slɪpə̝z	–slɪpəz	–slɪpəz
–slɪpəz	–slɪpəz	–slɪpəz	–slɪpə̝z	–slɪpəz	–slɪpə̝
–slɪpəz	–slɪpəz	–slɪpəz	–slɪpəz	–slɪpɐ	–slɪpə̝z
–slɪpəz	–slɪpəz	–slɪpɚz	–slɪpə̝z	–slɪpə̝z	–slɪpəz
–slɪpəz	–slɪpəz	–slɪpəz	–slɪpəz	–slɪpəz	–slɪpɚz

57 SANDALS JC /slɑ(:)ndəz/[slɑ(:)ndəz] RP /sandl̩z/[sɛndt̩z]

–sandəlz	–sn̩dətz	– n.a.	–sla:ndəz	–ˢslandəz	–sandəlz
–sændlz	–sandəlz	–sla:ndəz	–slã:ndə̝z	–slandəz	–sɑ̟ndəlz
–sandɛlz	–sandəl̩z	–sandl̩z	–slʌndəz	–slɑ̟:ndəz	–slændəz
–sandtz	–sandɛ̈lz	–sandt̩z²	–sɑ̟:ndəz	–sandə	–slɑ̟:ndəz
–sandəlz	–sa̱ndəlz	–sa̱ndəz	–sla̱ndəz	–ˢsla̱ndəz	–sɑ̟:ndlz
–sʌ:ndəz	–sn̩dl̩z	–slandəz	–slandə	–sandə	–sa̱ndəl̩z

58 BOOTS JC /bu:ts/[bu:ts] RP /bu:ts/[bʉ·ts]

– bu:ts	– bu:ts	– bu:ts	– bü:t	– bu:ts	– bʊʊts
– bʊts	– bü:ts	– bu:ts	– bʊ:ts	– bʉ:ts	– bu:ts
– bu:tsᵊ	– bu:ts	– bʊʊts	– bu:ts	– bu:ts	– bu:ts
– bu:ts	– bu:ts	– bu:tsᵊ	– bu:ts	– bu:ts	– bu:ts
– bu:ts	– bu:ts	– bu:ts	– bü:ts	– bu:ts	– bu:ts
– bu:ts	– bu:t	– bʊ:ts	– bu:t	– bʊʊts	– bu:ts

59 ONE JC /wan/[wa̲n] RP /wʌn/[wʌn]

– wʌn	– wʌn °wɒn	– wa̲n	– wʌn	– wʌn	– wʌn
– wʌn	– wɔ̈n	– wʌn	– wʌn	– wɒn	– wʌn
– wa̲n	– wʌn	– wʌn	– wʌn	– wʌn	– wʌn
– wʌn	– wʌn	– wʌn	– wʌn	– wʌn	– wɔ̈n
– wɒn	– wɒn	– wɔ̈n	– wʌn	– wʌn	– wʌn
– wɔ̈n	– wɒn	– wɔ̈n	– wʌn	– wʌn	– wʌn

40 TWO JC /tu:/[tu:] RP /tu:/[tʊʊ]

– tu:	– tʊʊ	– tu:	– tü:	– tu:	– tˢu:
– tu:	– tü:	– tu:	– tʊʊ	– tᵊu:	– tu:
– tu:	– tu:	– tʊʊ	– tu:	– tu:	– tu:
– tu:	– tu:	– tu:	– tˢʊʊu:	– tu:	– tu:
– tu:	– tu:	– tu:	– tˢü:	– tu:	– tu:
– tu:	– tʊʊ	– tu:	– tu:	– tʊʊ	– tu:

41 THREE JC /tri:/[tɹi:] RP /θri:/[θɹɹi]

–θɹi:	–θɹi:	–θɹi:	–θɹi:	–fɹi:	–ʧi:
–θɹi	–θɾi:	–tɹi:	–fɹi:	–θɹi:	–θɹi:
–θɹi:	–θɹi:	–θɹi:	–θɾi:	–θɹi:	–θɾi:
–θɹi:	–θɹi:	–θɾi:	–θɹi:	–θɹi:	–θɾi:
–θɾi:	–θɾi:	–θɹi:	–θɹi:	–θɹi:	–θɾi:
–θɹi:	–θɹi:	–θɹi, °tɹi:	–θɹi:	–tθɹi:	–θɹi:

42 FOUR JC /fo:r/[fuɐɹ] RP /fɔ:/[fɔ:]

–fɔ:	–fɔ:	–fɔ:	–fɔ:ᵊ	–fo:ɹ	–fö:
–fɔ:ɹ	–fɔ:ɐɹ	–fo:ɹ	–fo:ə	–fo:ɚ	–fɔ̈:
–fɔ:ɹ	–fɔɐ	–fɔ:	–fɔ:ə	–fo:ɹ	–fɔ:ɹ
–fɔ:ɹ	–fo:ɹ	–fɔ:	–fɔ:	–fɔ:	–fɔ:ɹ
–fɔ:ɚ	–fɔ:	–fö:ə	–fɔ̈:	–fo:ɚ	–fɔ:
–fɔ:ɹ	–fɔ:	–fɔ:ᵊɹ	–fo:ɹ	–fɔ:	–fo:ɹ

43 FIVE JC /faiv/[faɛ̈v] RP /faiv/[fɐ̟ɪv]

–faɪv	–fʌɪv	–faɛ̈v	–faɪv	–faɪv	–faɛ̈v
–faɪv	–faɛv	–faɪv	–faɪv	–faɪv	–faɪv
–faɪv	–faɛv	–fʌɪv	–faɛ̈v	–fa̲ɪv	–faɪv
–fɐ̟ɪv	–faɪv	–faɪv	–fʌɪv	–fɐ̟̃ɪv	–fʌɪv
–faɪv	–faɪv	–faɪv	–fʌɪv	–fɐ̟ɪv	–fʌɪv
–faɪv	–faɪv	–fʌɪv	–faɪv	–faɪv	–fa̲ɪv

44 THIRTY JC /to(ʊ)ti/[tœ(ɹ)tɪ] RP /θɵ:ti/[θɜ·tɪ]

–θɜtɪ	–θɜ:tɪ	–θɜɹtɪ	–t̪θɜtɪ	–t̪ɜˠ:t̪ɪ	–θœɹtɪ
–θɜˠtɪ	–θɜˠ·t̪ɪ	–tœɹtɪ	–tɵˠ·tɪ	–θʌɹtɪ	–θœ:tɪ
–θœˠ:tɪ	–θʌɻtɪ	–θɜ:tɪ	–t̪θœɹtɪ·	–θœœˠ·tɪ,	–θœɹtɪ
–θɜɹtɪ	–θɜɜˠtɪ	–θɜɹtɪ	–θʒɹtɪ·	°t– –θɜtɪ	–θœɹtɪ
–θɜ·tɪ	–θʒ:tɪ	–θɐɹtɪ	–θɜɜˠtɪ	–θɜɹ·tɪ	–θɜɹtɪ
–θɜˠ·tɪ	–θɜɜt̪ɪ	–θʌɹtɪ	–t̪ʌɹtɪ	–tœɹtɪ	–θœ·ɹtɪ

45 FORTY JC /fa:ti/[fA:tɪ] RP /fɔ:ti/[fɔ̝·tɪ]

–fɔtɪ	–fɔ̝:tɪ	–fɔ̝:tɪ	–fɔ̝:tɪ	–fa·ɹt̪ɪ	–fɔ:tɪ
–fɔ̝·tɪ	–fɔ̝:tɪ	–fa:tɪ	–fʷa:tɪ	–fa:tɪ	–fɔ:tɪ
–fɔ:tɪ	–fɔ:tɪ	–fɔ·vtɪ	–fɔ:tɪ	–fɔ:tɪ	–fɔ̝:tɪ
–fɔɹtɪ	–fɔ:tɪ	–fɔ̝:tɪ	–fɔ:θɪ·**	–fɔ̝·tɪ	–fɔ̝:θɪ**
–fɔ:tɪ	–fɔ:tɪ	–fɔ̝:tɪ	–fɒ:ᵊtɪ	–fɔ:tɪ	–fɒ:tɪ
–fɔ·tɪ	–fɔ̝:t̪ɪ	–fa·ɹtɪ	–fɒ:tɪ	–fɔ̝:tɪ	–fɔ:tɪ

46 FIRST JC /fɞ(ɞ)s/[fœ(ɹ)s] RP /fɵ:st/[fɜ·st]

–fɜst	–fɔ:st	–fɜɹst	–fɜɹst	–fɜ̈ˠɻs	–fœˠ:st
–fɜ̝st	–fɜˠ:st	–n.a.	–fœˠ·s	–fɜɹs	–fœ:ɹs
–fœˠ:st	–fɜ·ɜˠst	–fɜ·st	–fɐˠ:s	–fɜɹs	–fœˠ:st
–fɜˠ·st	–fɜˠ·st	–fɜ̝:st	–fɜɹs C	–fɜɹst	–fœˠ:st
–fɐ:st	–fœˠ·st	–fɜˠs	–fœɜˠst	–fœɹst	–fœɹst
–fɜˠ·st	–fɜ·st	–fɞˠ·st	–fœˠ·st	–fœˠ:s	–fɜˠ:st

47 SECOND JC /sekon/[sɛkɔ̈n] RP /sekənd/[sɛkənd]

—sɛkənd	—sɛkənd	—n.a.	—sɛkənd	—sɛkɯn	—sɛkənd
—sɛkənd	—sɛkənd	—sɛkʌn	—sɛkʌn	—sɛkən	—sɛkənd
—sɛkənd	—sɛkʌn	—sɛkən	—sɛkən	—sɛkʌn	—sɛkənd
—sɛkənd	—sɛkənd	—sɛkən	—sɛkən	—sɛkənd	—sɛkənd
—sɛkən	—sɛkənd	—sɛkənd	—sɛkən	—sɛkənd	—sɛkən
—sɛkənd	—sɛkənd	—sɛkən	—sɛkʌn	—sɛkən	—sɛkənd

48 THIRD JC /to(r)d/[tœ(ɹ)d] RP /θə:d/[θɜ·d]

—θɜd	—θɜ:d	—θɜɹd˺	—θɜ·d	—θɝd	—t̪œɹd
—θɜɚd	—θɝ:d	—tœ˞:d	—tˢœ˞:d	—θœ˞:d	—θœ·ɹd
—θœ˞:d	—θɜɚd	—θɜ·d	—θɐ˞d	—θɝ·d	—θœ˞:d
—θɜ:d	—θɝ:d	—θɜɹd	—θɜ̜ɹd	—θɜ·ɚd	—θœ˞:d
—θɜ:d	—θɜ̜·d	—t̪ɝ·d	—θɜɚdˀ	—θœ̣ɹd	—θœɹd
—θɝ·d	—θɜ:d	—θəɚd	—t̪œ˞:d	—θœ˞:d	—θɝ:d

49 FOURTH JC /fo:rt/[fuo̜ɹt] RP /fɔ:θ/[fɔ·θ]

—fɔθ	—fɔ̣:θ	—foɹθ	—föʊθ	—fo:ɹθ	—fo:ɹt
—fɔ̣·ɚθ	—fɔ̣əθ	—fo·ɹt	—fo:ɹt˺	—fo:ɹt	—fʊ:ɹt̪
—foəθ	—fɔəθ	—fö̜ʊθ	—fɔ˞:ɹt	—fo̜·ɹt	—fo:ɚt
—fɔ:θ	—fo:ɹθ	—fɔ̣·ᵛθ	—fɔ:ᵛθ	—fɔ̣:θ	—fo:ɹt
—fɔ:θ	—fɔ:θ	—fö·ət	—fɔ̣̈:t̪	—fo:ᵊθ	—fɔʊθ
—fɔ̣˞θ	—fɔ̣:θ	—fɔɚt	—fo·ɹt	—föət	—fɔ:ɹt

50 TENTH JC /tent/[tent] RP /tenθ/[tenθ]

–tɛnθ	–tɛnθ	–tɛnθ	–tɛnt̪	–tɛnθ	–tɛnt
–tɛntθ	–tɛnθ	–tɛnt	–tɛnt	–tɛnt̪	–tɛnθ
–tɛnθ	–tɛnθ	–tɛnθ	–tɛnt	–tɛntθ	–tɛnθ
–tɛnθ	–tɛnθ	–tɛnθ	–t̪ɛnt*	–tɛnθ	–tɛnt
–tɛnθ	–tɛnθ	–tɛnθ	–tɛnt̪	–tɛnθ	–tɛntθ
–tɛnθ	–tɛnθ	–tɛnt	–tɛnθ	–tɛnt	–tɛnθ

51 HOUR JC /oua/[ɔɹɐ] RP /auə/[ʌ(ʊ)ə]

–aʊə	–ə̃ə	–ɐʊɐ	–ɐʊə	–ɐʊɐ	–hʌʊə**
–aɒɐ	–ɐʊə	–ɔʊə	–ʌʊɐ	–ɒʊə	–aʊə
–aʊə	–aʊə	–ʌʊə	–ʌʊə	–aʊə	–hʌʊə**
–a̰ʊə	–a·	–hʌʊə**	–ʌʊə	–aʊə̤	–ɒʊə
–ʌʊə	–ʌ·ə	–ʌʊə	–ʌʊə	–hʌə**	–ʌʊə
–aʊə	–a̰ə	–ɦʌʊɐ*	–ɒʊə	–ʌʊə	–hə̃ʊə**

52 DAY JC /de:/[diɛ] RP /de:/[deɪ]

–dẹɪ	–deɪ	–dɛɪ	–dɛ̤ɛ̈	–de:	–deɪ
–deɪ	–de·	–de:	–deɪz	–deɪ	–deɪ
–de:	–dẹ:	–de:	–deɪ	–deɪ	–deɪ
–deɪ	–de:	–deɪ	–deɪ	–deɪ	–de:
–deɪ	–deɪ	–de:	–deɪ	–dẹ:	–dẹɪ
–de:	–de:	–de:	–de:	–deɪ	–deɪ

53 DAILY JC /de:li/[dɪe̜lɪ] RP /de:li/[deɪlɪ]

—deɪlɪ	—de̜ɪlɪ	—dɛɪlɪ	—dɛɪlɪ	—de:lɪ	—ᶠde:lɪ
—deɪlɪ̜	—deɪlɪ	—dɪɛlɪ	—de:lɪ	—deɪlɪ.	—de·lɪ
—de:lɪ	—de:lɪ	—dɛɪlɪ	—de:lɪ̜	—deɪlɪ	—deɪli
—deɪlɪ̜	—deɪlɪ	—deɪlɪ̜	—deɪlɪ	—deɪlɪ	—deɪlɪ
—deɪlɪ	—de:lɪ	—de:lɪ	—deɪlɪ	—de̜:lɪ	—deɪlɪ
—de:lɪ	—deɪlɪ̜	—de:lɪ	—de:lɪ	—de:lɪ	—de:lɪ

54 WEEK JC /wi:k/[ʉ̆i:k] RP /wi:k/[wi·k]

—ʉ̆i·k'	—wi:k	—ʉ̆i:k	—ʉ̆i:k	—wi:k˺	—ʉ̆i:k
—ʉ̆i:k	—wi:k	—wi·k	—ʉ̆i·k	—wi:k	—wi:k
—wi:k	—ʉ̆i:k	—wi:k	—ʉ̆i:k	—ʉ̆i:k̟	—ʉ̆i:k
—ʉ̆i:k	—ʉ̆i:k	—wəik	—ʉ̆i:k	—ʉ̆i:k	—ʉ̆i:k
—ʉ̆i:k	—ʉ̆i:k	—ʉ̆i:k	—ʉ̆i:k	—ʉ̆i:k	—ʉ̆i:k
—wi:k	—wi:k	—ʉ̆i:k	—wi:k, °ʉ̆i:k (twice)	—ʉ̆i:k	—ʉ̆i:k

55 MONTH JC /mont/[mɔ̈nt] RP /mʌnθ/[mʌnθ]

—mʌnθ	—mʌnθ	—mʌnθ	—mʌnt̪	—mʌnθ	—mʌnt̪
—mɒnᵗθ	—mɔ̈nθ	—mʌ̠nt	—mʌnt	—mʌnt	—mʌnθ
—mʌnθ	—mʌnθ	—mʌnθ	—mʌn̪t̪	—mʌnθ	—mʌnθ
—mʌnθ	—mʌnθ	—mʌnθ	—mʌnθ	—mʌnθ	—mɔ̈nθ
—mʌnθ	—mʌnθ	—mʌnθ	—mʌnθ	—mɔ̈nθ	—mʌnθ
—mɔ̈nθ	—mʌnθ	—mʌnt	—mɔ̈nθ	—mʌnθ	—mʌnθ

56 YEAR JC /e:r/[ieɹ] RP /jiə,jə:/[jɪə, jɜ:]

–jɪə	–jɪə	–jɪ:ᵊɹ	–jɪə	–ɪe:ɹ	–je:ɹ
–jɪɚ	–jɪəɹ	–ɪeɹ	–ɪɛ̈	–ɪɛ	–jɪ·ᵊ
–jɪɛ	–jɪ·ɛᵈ	–jɪɛ	–jɪɛ̈	–jɪ·ɛᵈ	–jɪɛ
–jɪə	–je:ɹ	–iɪɛ	–jɪɛ	–jɪɛ, °jeɚz	–ʔe:ɹ
–jɪə	–jɐə	–e:ɚ	–he:ɚ**	–ɐ:ɛᵈ, °ɐ:ɹz	–jɪɛ
–ieəɹ	–jɪə	–e:ɹ	–e:ɹ	–jɪɛ	–jɪɛᵈ·

57 NIGHT JC /nait/[naɛ̈t] RP /nait/[naɪt]

–naɪtˈ	–nʌɪt	–naɪt	–naɪt	–naɪtʰ*	–naɻt
–naɪt	–naɪt	–naɪtʰ*	–nãɪt	–nʌɪt	–naɪt
–naɪt	–naɛt	–nʌ·ɪt	–nɐ̈ɛ̈t	–nʌɪt	–nʌɪt
–nʌɪt	–naɪt	–nɒɪt	–nʌɪt	–nʌɪt	–naɪt
–naɪt	–naɪt	–naɛt	–naɪt	–naɪt	–naɪt
–naɪt	–naɪt	–naɪt	–naɻt	–naɪt	–naɪt

58 STARS JC /sta:r/[stʌ:ɹ] RP /sta:z/[stɑ:z]

–sta:z	–sta:z	–sta:ɹ	–sta:ɹz	–sta:ɻz	–stʌ:ɹz
–sta:ɚz	–stʌ:ɚz	–sta·ɹ	–sta:ɹz	–stʌ:ɹz	–stʌ:ɹz
–sta:ɹz	–stɑ:ɹz	–sta:ɚz	–stʌ:ɹz	–stʌ:ɹz	–stʌ:ɹz
–stɑ:z	–stʌ:ɹz	–stɑəz	–stʌ:ɹz	–sta:z	–sta:ɻz
–stɑ:z	–stʌ:ɹz	–stʌ:ɹz	–stʌ·ɹz	–stɑ:ɹ	–sta:z
–sta:ɹz	–stʌ:ɹz	–stʌ·ɹz	–sta:ɹz	–stʌ·ɹz	–stʌ:ɹz

59 POINTING JC /pwaintin/[pwaɛ̈ntɪŋ] RP /pɔintiŋ/[pɔɪntɪŋ]

–pɔɪntɪŋ	–pɔɪntɪŋ	–pɔ̃ɪ̃ntɪn	–pɔɪntɪŋ	–pwʌɪntɪn	–pɔɪntɪn
–pɔɪntɪŋ	–pɔɪntɪŋ	–pɑ̃ɪ̃ntɪn	–paɪ̃ntɪn	–pwʌɪntɪŋ	–pɔɪntɪŋ
–pɔɪntɪn	–pʷɔɪntɪn	–pɔɪntɪŋ	–pɔɪntɪn	–pɔɪntɪŋ	–pɔɪntɪŋ
–pɔɪntɪŋ	–pɔɪntɪŋ	–pɔɪntɪn	–pɔɪntɪn	–pɔɪntɪŋ	–pɔɪntɪn
–pɔɪntɪŋ	–pɔɪntɪŋ	–pɔɪntɪn	–pɔɪntɪŋ	–pɔɪntɪn	–paɪntɪn
–pɔɪntɪn	–pɔɪntɪŋ	–paɪntɪn	–pɑ̟ɪntɪŋ	–pɔɪntɪŋ	–pɔɪntɪŋ

60 NORTH JC /na:t/[nA:t] RP /nɔ:θ/[nɔ̟:θ]

–nɔ̟:θ	–nɔ̟:θ	–nɑ̃:θ	–nɔ̟:t	–na:ɹt	–nɔ:t̠ʰθ
–nɔ̟:θ	–nɔ̟:θ	–nɑ̟:t	–nɒ:t	–nɔ:t	–nɑ̃:θ
–nɔ:θˢ	–nɔ:θ	–nɔ:tˀ	–na:t	–nɔ:θ	–nɔ:θ
–nɔ:θ	–nɔ:θ	–nɔ̟:t	–nɔ:θ	–nɔ:θ	–nɔ̟:ɹt
–nɔ:θ	–nɔ:θ	–nÃ:t	–nɒ:θ	–na:θ	–na:θ
–nɔ̃:θ	–nɔ:θ	–nɔɹt	–nɒ:θ	–nɑ̟:θ	–nɒ:θ

61 NEEDLE JC /ni:gl/[ni:gɬ] RP /ni:dl̠/[nɪidt]

–nidɬ	–ni:dl	–ni:dɬ	–ni:dɬ	–ni:ðɬ**	–ni:dl
–nidɬ	–ni:dɬ	–ni:dɬz	–nɨgɬ	–ni:dɬ	–ni:dɬ
–ni:dɬ	–ni:dɬ	–ni:dɬ	–ni:dɬ	–ni:dɬ	–ni:dɬ
–ni:dɬ V	–ni:dɬ	–ni:dɬ ç	–ni:dl	–ni:dt	–ni:dɬ
–ni:dɬ	–ni:dɬ	–ni:dl	–ni:dlz	–ni:dɬ	–ni:dɬ
–ni:dɬ	–ni:dɬ	–ni:dl	–ni:dl	–ni:dɬ	–ni:dɬ

62 THAT JC /dat/[da̠t] RP /ðat/[ðæt]

—ðat'	—ða̠t	—n.a.	—n.a.	—ðat	—ða̠·t
—ðat	—ðat	—n.a.	—ðʌtˀ	—ðʌt	—ðæt
—ðat	—ða̠t	—ðat	—ðʌt	—ðʌ·t	—ðat
—ða̠tˀ	—ða̠t	—ðat	—(ðɛə)	—(ðɩs)	—ðʌʔt
—ðat	—ðʌ̝t	—ðʌ̝t	—ðat	—ða̠t	—ða·t
—ðʌtˀ	—ðʌt	—ðæt	—ða̠t	—ða̠t	—d̪atˀ

63 AIR JC /e:r/[ieɹ] RP /eə/[ɛə]

—ȩə	—ɛ:	—e:ɹ	—ʔeᵊ	—e:ɹ	—hȩɐ**
—ɛ·ɛɹ, °eɚ	—e·ɹ	—ɩ·ëɹ	—heɐ**	—eɐɹ	—e·ɚ
—eɐ	—e·ɐ	—eɐ	—eɐ	—ȩ:ɹ	—he:eɹ**, e·ɐɹ
—ɛə	—e·ɐɹ	—hȩɐ**	—ɛə	—heə**	—e:ɹ
—ɛ·ɐ̝	—ɛ̝ə	—ȩɐ	—e̥e·ɚ*	—ɛɐ	—hɛɐ**
—e:ɹ	—ȩə	—he:ɚ**	—ȩ·ɐɹ	—e:ᵊɹ	—he:ɹ**

64 BREATH-E,-ING JC /bri:d(in)/ [bɹi:d(ɩn)] RP /bri:ð(iŋ)/ [bɹɩið(ɩŋ)]

—bɹið	—bɹi:ðɩŋ	—bɹi:ð	—bɹi:ð	—bɹi:ðɩn	—b̥ɹi:ðɩn
—bɹiðɩŋ	—bɹi:ð	—bɹi:ðɩn	—bɹɩidɩn	—bɹi:ðɩŋ	—bɹi·ðɩŋ
—bɹi:ðɩn	—bɹi:ðɩŋ	—bɹi:ðɩŋ	—bɹi:ðɩn	—bɹi:ðɩŋ	—bɹi:ðɩŋ
—bɹi:ðɩŋ	—bɹi:ðɩŋ	—bɹi:ðɩn	—bɹi:ðɩŋ	—bɹi:ðɩŋ	—bɹi:ðɩŋ
—bɹi:ðɩŋ	—bɹi:ðɩŋ	—bɹi:ðɩn	—bɹi:ðɩŋ	—bɹi:ðɩn	—bɹi:ðɩn
—bɹi:ð	—bɹi:ðɩŋ	—bɹi:ðɩŋ	—bɹi:ðɩŋ	—bɹi:ðɩŋ	—bɹi:ðɩn

65 WATER JC /wa:ta/[wA:tɐ] RP /wɔ:tə/[wɔ·tə]

–wɔtə	–wɔ:tə	–wɔ:tɐ	–wɔ:tɐ	–waːɹʈɚ**	–wɔ:tə
–wɔtə	–wɔ:tə	–wɔ·tɐ	–waːθə**	–wɔ:tə	–wɔ:tə
–wɔ:tə	–wɔ:tə	–wɔ:tə	–wɔ:tə	–wɔ:tə	–wɔ:tə
–wɔ:tə	–wɔ:tə	–wɔ:tə	–wɔ:θə**	–wɔ:tə	–wɔ:tə, •wɒ:tə
–wɔ:tə	–wɔ:tə	–wɔ:tə	–wɒ:tə	–wɔ:tə	–wɒ:tə
–wɔ:tə	–wɔ:ʈə	–wɒ:ʈə	–wɒ:tə	–wɔ:tə	–wɔ:tə

66 BEER JC /be:r/[bieɹ] RP /biə/[bɪə]

–bɪə	–bɪə	–bɪ:ɹ	–bɪə	–be:ɹ	–bɛ·ɐɹ
–bëɚ, bɪɚ	–be·ɹ	–bɪəɹ	–bɪɐɹ	–beɚ	–bɪ·ë
–bɪəɹ	–bɪɐ	–bɪə	–bɪɐ	–bɪ·ɹ	–bɪ·ɚ
–bɛ̨ə	–be·ɚ	–bɛ̨ɐ	–bɛ̨ɐ	–bɛ̨ə	–be:ɹ
–bɛ̨ə	–bɛ̨ə	–bɪɐ	–be·ə	–bɪ·ɚ	–bɛ̨ə
–bɪəɹ	–beəɹ	–bɪɐ	–be·ɐɹ	–be:ɹ	–bɛ̨:ɐɹ

67 PINT JC /paint/[paënt] RP /paint/[pa̤ɪnt]

–pæɪnt	–pʌɪnt	–paɪnt	–paɪnt	–pʌɪnt	–paɛ̃nt
–paɪnt	–paɪnt	–paɪnt	–pʌɪnt	–pa̤ɪnt	–pɒ̃nt
–paɪnt	–paɛnt	–pʌɪnt[7]	–pɑ̃ɪnt	–pʌ̃nt	–pʌɪnt
–pa̤ɪnt	–paɪnt	–pɔɪnt[sɔ]	–pʌɪnt	–pã̤ɪnt	–pa̤ɪnt
–paɪnt	–paɪnt	–paɪnt	–pã̃ɪnt	–pɑ̤ɪnt	–pʌɪnt
–pʌɪnt	–pʌɪnt	–pʌɪnt	–paɪnt	–pəɪnt	–pɐ̤ɪnt

68 BOTTLE JC /bakl/[bak̩ɫ] RP /bɔtɫ/[bɒtt]

—botl	—bɒʔtt	—bɒtɫ	—botɫ	—bʌɫɫ	—botl
—bɒtɫ	—botɫ	—bakɫ	—bʌkl	—batl	—bɒtl, °bɒtl
—botɫ	—botɫ	—baʔɫ	—bɒtʔɫ	—batɫ	—bɔtɫ
—bɒtt	—botɫ	—botl	—bɒtl	—botɫ	—botɫ
—botl	—botɫ	—bʌtl	—botl	—batl	—botl
—bɒʔlz	—botɫ	—bʌtl	—botl	—botɫ	—botɫ

69 HOTEL JC /(h)otel/[(h)ɔ̈tɛɫ] RP /ho:tel, hetel/
[həvtɛt, hətɛt]

—'hou'tɛl	—hëʊ'tɛt	—hʌ'tɛɫ	—ʌtɛɫ	—ʌtɛl	—hɵʊtɛl
—hʊ'tɛl	—hotɛl	—hɔ̈tɛɫ	—'ɔ̈tɛl	—hʌ'tɛl	—ho·tɛɫ
—'hoʊtɛl	—hotɛ̣·t	—'ho:tɛl	—¯hɔ̈tɛɫ	—¯hö̜tɛɫ	—'həʊtɛl
—hotɛt	—ho·tɛl	—hɵ'tɛl	—'hoʊ̜tɛl	—'ʔou'tɛl	—¯hɔ̈tɛl
—hʌ'tɛɫ	—hotɛl	—əʊ'tɛl	—ʌ'tɛl	—ɔ̈'tɛl	—'hou'tɛl
—hɔ̈tɛl	—hotɛɫ	—əʊtɛl	—'hʌ̜tɛɫ	—hʌtɛl	—'ho̜tɛɫ

70 COFFEE JC /ka:fi/[kʌ:fɩ] RP /kɔfi/[kɒfɩ]

—kɒfɩ	—kɒfɩ	—kɒfɩ	—kofi	—kʌfɩ	—kɒfɩ̣
—kofɩ	—kofɩ	—kʌfɩ	—kafɩ	—kɒfɩ	—kofɩ̣
—kɒfɩ	—kafi	—kɒfɩ	—kofɩ	—kofi	—kofi
—kofɩ̣	—kafɩ	—kɒfɩ	—kofɩ̣	—kofɩ	—kɒfɩ
—kɒfɩ	—kafɩ̣	—ka̟fɩ	—kɒfɩ	—kɒ̥fɩ	—kofɩ
—kofɩ	—kofɩ	—kʌfɩ	—kɒfɩ	—kofɩ̣	—kofɩ̣

71 STIR JC /stor/[stœɹ] RP /stə:(r)/[stɜ:(ɹ)]

–stɜ:	–stɜ:ɹ V	–stɐɹ	–stɐ̟:ɹ	–stɜ̈ːɹ V	–stʌɹ
–stʌʲ·V	–stɜ̟·	–stɜ̈ɹ V	–stœʲ:	–stʌɹd	–stɐʲ:V
–stɜ̟: V	–stʌɹ	–stɜːɹ V	–stɜ̈ɹ	–stœɹ V	–stœɹ V
–stɜ:	–stɐʲ·	–stɐ̟ɹ	–stʌɹ V	–stɐʲ:	–stœʲ:
–stɜ: V	–stɐɹ V	–stɐʲ:	–stʌɹ V	–stʌɹ	–stœɹ
–stɜ̈ɹ V	–stʌɹ	–stʌɹ	–stʌɹ	–stœɹ	–stœɹ

72 HOT JC /(h)at/[(h)a̟t] RP /hɔt/[hɒt]

–hɒtˀ	–hɒt	–hɔt	–hɔ̈t	–hʌt	–hɒt
–hɒt	–hɒt	–hʌt	–hɑ̟θ***	–hɒt	–n.a.
–hɒt	–hat	–hɒt	–hɒt	–hɒt	–hɒt
–hɒtˀ	–hɒt	–ɒt	–hɒt	–hɔ̃t	–hat
–hɒt	–hɒt	–ɑ̟ɑ̟t	–hɒʈ*	–hat	–hat
–hɒt	–hɒt	–hɑ̟t	–hɒt	–hɒt	–hɒt

75 COLD JC /ko:l/[kuɔɻ] RP /ko:ld/[kəʊtd]

–kəʊld	–kəʊld	–kɐʊld	–kɐʊld	–kəʊl	–kö:ɻd
–kɐʊld	–köuld	–ko:l	–kɜ̈ʊɻd	–n.r.	–n.a.
–ko:ldᵊ	–ko:ld	–kəʊld	–kɜ̈ʊld	–koʊld	–kəʊɻd
–kould	–kould	–kɐʊld	–köʊld	–kəʊld	–kəʊld
–kɵ̟ʊld	–kould	–ko·əl	–ko:ld	–ko:ld	–kəʊl
–koᵊɻd	–kould	–kould	–ko:ɻ	–kouɻd	–ko:ɻd

74 NICE JC /nais/[naës] RP /nais/[nɑɪs]

–nɑ̃ɪs	–nʌɪs	–nʌ̃ɪs	–nɑ̃ɪs	–nɑɪs	–nɑ̃ës
–nɑɪs	–nɑɪs	–nɑɪs	–nʌ̃ɪs	–nɑ̃ɪs	–n.a.
–nɑɪs	–nɑɛs	–nɑ̃ɪs	–nɑ̈ës	–nɑ̃ɪs	–nɑɪs
–nʌɪs	–nɑɪs	–nɒɪs	–nɑ̃ɪs	–nɑɪs	–nɑɪs
–nɑɪs	–nɑɪs	–nɑɪs	–nʌ̃ɪs	–nɑɪs	–nʌɪs
–nɑ̃ɪs	–nɑɪs	–nʌɪs	–nʌɪs	–nɑɪs	–nɑ̃ɪs

75 CHEW JC /tʃu:/[tʃu:] RP /tʃu:/[tʃʊu]

–tʃʉ:	–tʃu:	–tʂu:*	–tʃu:	–tʃu:	–tʃʊu
–tʃu	–tʃʉ:	–tʂu:*	–tʃʊu	–tʃu:	–n.a.
–tʃu:	–tʃu:	–tʃu·	–tʂu:*	–tʂɹu:**	–tɹu:**, θɹu:**
–tʃu:	–tʃu:	–tʃu:	–tʃu:	–tʃu:	–tʃu:
–tʃu:	–tʃu:	–tʃʉ:	–tɹu:**	–tʃu:	–tʃu:
–tʃu:	–tʃu:	–tʃʉ:	–tʃu:	–tʃu:	–tɹu:**

76 WASH JC /waʃ/[wɑ̈ʃ] RP /wɔʃ/[wɒʃ]

–wɒʃ	–wɒʃ	–wɔʃ	–wɒʃ	–wʌʃ	–wɒʃ
–wɒʃ	–wɒʃ	–waʃ	–wäʃt(**)	–wɒʃt(**)	–n.a.
–wɒʃ	–waʃ	–wɒʃ	–wɒʃ	–wɒ:ʃ	–wɒʃ
–wɒʃ	–wɒʃ	–wɒʃ	–wɒʃ	–wɒʃt(**)	–wɒʃ
–wɒʃ	–waʃ	–wɒʃ, ʷwɑ̈ʃ	–wɒʃ	–wʌʃ	–wɑ̈ʃ
–waʃ	–wɒʃ	–wɒʃt(**)	–wʌʃ	–wɒʃ	–wɒʃ

77 BATH JC /ba:t/[bɑ:t] RP /ba:θ/[bɑ̟·θ]

–ba:θ	–ba:θ	–ba:θ	–ba:θ	–bA:θ	–bA:t̠
–ba:θ	–bA:θ	–bA:θ	–ba:θ	–ba:θ	–n.a.
–bA:θ	–bɑ̟:θ	–ba:θ	–bA:θ	–bA:θ	–ba:θ
–bɑ̟:θ	–bɑ̟:θ	–bɑ̟:θ	–bɑ̟:θ	–bɑ̟:θ	–ba:θ
–bA:θ	–bɑ̟:θ	–bɑ̟:θ	–bA:θ	–bɑ̟:θ	–bɑ̟:θ
–bA:θ	–bɑ̟:θ	–bɑ̟:t̠	–bɒ:θ**	–bA:θ	–bɑ̟:θ

78 BATHE JC /be:d/[biẹ̈d] RP /be:ð/[beɪð]

–beɪð	–beɪð	–be·ɪð	–ˢbɛɪð	–bɛɪð	–beəɹd**
–beɪð	–beɪð	–ˢbɪëd	–ˢbe:d̠	–be:ð	–n.a.
–beɪð	–be:ð	–be·ɪð	–bẹ̈ẹd,-ð	–beɪð	–ˢbeɪð
–beɪð	–be:ð	–beɪðᵊ	–ˢbeɪð	–ˢbeɪð	–be:ð
–beɪð	–be:ð	–be:ð	–beɪð	–bẹ:ð	–beɪð
–be:ð	–be:ð	ˢbe:d	–be:ð	–be:ð	–be:ð

79 TOWEL JC /touil/[tɒʊɪl] RP /tauəl/[tɑ(ʊ)ət]

–taʊïl	–tɑ̟ət	–tɐʊɪl	–taʊïl	–tɐʊɪl	–tʌʊɪl
–tɑ̟ʊl	–tɐʊïl	–tɒʊïl	–θʌʊɪl**	–tʌʊl	–n.a.
–taʊɪl	–taʊɪl	–tʌʊël	–θʌʊɪl**	–taʊl	–taʊəl
–tɑ̟ʊət	–taʊïl	–tɑ̟ʊl	–tʌʊɪl	–taʊɹ	–tɑ̟ʊɪl
–tʌʊəl	–taʊəl	–tɑ̟ʊɪl	–taʊɪl	–tɑ̟ʊɛl	–taʊəl
–taʊɪl	–tʌʊïl	–tʌʊɛl	–tɑ̟ʊɪl	–tʌʊl	–tʌʊɛl

80 BED JC /bed/[bɛd] RP /bed/[bɛd]

–bɛd	–bɛdˀ	–bɛd	–bɛd	–bɛðˀ**	–bɛd
–bɛ̣d	–bɛd	–bɛd	–bɛd	–bɛd	–bɛd
–bɛdˀ	–bɛ̣d	–bɛd	–bɛðˀ**	–bɛd	–bɛd
–bɛdˀ	–bɛd	–bɛd	–bɛn̩*	–bɛd	–bɛd
–bɛd	–bɛd	–bɛd	–bɛdˀ	–bɛd	–bɛd
–bɛ̣d	–bɛd	–bɛd	–bɛd	–bɛd	–bɛd

81 TIRED JC /taiad/[taɛ̈ɐd] RP /taiəd/[tạ(ɪ)əd]

–taəd	–tʌɪəd	–taɪəd, taɪəɹd	–taɪɘd	–t̪aɪɘd	–ta·ɘd
–taɘd	–taɪɹd	–t̪aɪəd*	–taɪˤd	–tʌɪəd	–taɪəd
–taɪəd	–taɛɔd	–tʌɪəd	–θaɪəd**	–taɪɘd	–tʌɪạd
–tʌɪəd	–taɪɘd	–taəd	–tʌɪɘd	–ta·ɘˤd	–tʌ·ɘd
–ta·əd	–taɪəd	–taɪəd	–tʌɪəd	–taɪɘd	–tʌɪɘd
–taɪəd	–ta·ɘd	–taɪəd	–taɪ̯ɘd	–taɪəd	–taɪɘd

82 OPEN JC /o:pin/[ɯɔpɪn] RP /o:pən/[əʊpən]

–əʊpən	–ëʊpən	–ʊpɪn	–ʊpən	–ʊpɪn	–oupɛn
–oupən	–oupm	–ë̯ʊpɪn	–o:ˀm	–o·pɛn	–əʊpən
–oupən	–o:pïn	–əʊpən	–œʊpɪn	–o:pˀm	–əʊpən
–ɋupən	–oupˀm	–oupïn	–öʊpɪn	–əʊpən	–ɋʊpən
–oupn	–oupən	–əʊpən	–ʊpˀm	–ɋo:pïn*	–ɋupən
–oupən	–oupən	–əʊpɛn	–oupˀm	–ɵʊpˀm	–o:pɛn

83 SHUT JC /ʃot,ʃet/[ʃɔ̈t,ʃɛt] RP /ʃʌt/[ʃʌt]

-ʃʌtˀ	-ʃʌt	-ʃʌt	-ʃʌt	-ʃʌt	-ʃʌt
-ʃʌt	-ʃɔ̈t	-ʃɛt	-ʃʌt	-ʃʌt	-ʃʌt
-ʃʌt	-ʃʌt	-ʃʌtˀ	-ʃʌt	-ʃɔ̈t	-ʃʌt
-ʃʌt	-ʃʌt	-ʃʌt	-ʃʌt	-ʃʌt	-ʃɔ̈t
-ʃʌt	-ʃʌt	-ʃʌt	-ʃɻ̩t	-ʃʌt	-ʃʌt
-ʃɔ̈tˀ	-ʃʌt	-ʃɻ̩t	-ʃɔ̈t	-ʃʌt	-ʃʌt

84 OFF JC /a:f/[ɑ:f] RP /ɔ(:)f/[ɒf,ɔ:f]

-ɒf	-ɑf	-ɒf	-ɑ̟f	-ɑ:f	-ɔ:f
-ɒf	-ɒf	-a:f	-ɑ·f	-ɒf, °ɑ:f	-ɑf
-ɒf	-ɔ:f	-ɒf	-hɒf**	-ɔ̝f	-ɑ·f
-ɒf	-ɑf	-ɒf	-ɒf	-ɒf	-ɑ·f
-ɒf	-ɑf	-ɑɔf	-ɒf	-ɑ:f	-ɒf
-ɒf	-ɒf	-ɒf	-ɑ:f	-ɜ̝:f	-ɒf

85 HOUSE JC /(h)ous/[(h)ɔʊs] RP /haus/[hʌʊs]

-haʊs	-hɑ̟ʊs	-hɐʊs	-ʌ̟ʊs	-ɐʊs	-hʌʊs
-hɑ̟ʊs	-hɐʊs	-hʌʊs	-hʌʊs	-hʌʊs	-haʊs
-hʌʊs	-haʊs	-hɐ̈ʊs	-hʌʊs	-hɐʊs	-hʌʊs
-hɑ̟ʊs	-hɐ̟ʊs	-haɐs	-hɑ̟ʊs	-hɑ̃ʊs	-hɑ̟ʊs
-hʌʊs	-haʊs	-hʌʊs	-hɻ̩ʊs	-haʊs	-hʌʊs
-haʊs	-hɐʊs	-hɑ̟ʊs	-hɑ̟ʊs	-hɑ̟ʊs	-hʌʊs

86 STAIRS JC /ste:(r)z/[stiɐ̯(ʌ)ɪ̯] RP /steəz/[steəz]

–stɐ̯əz	–stɛ:z	–ste:ɹz	–stɪəz	–stɪ·ɹz	–steəɹz
–steɐ̯z	–stɐ̯ɐ̯	–stɪəɹkɪes	–steəz	–ste·ɐ̯z	–stɪ·ɹz
–steɐ̯z	–steɐ̯z	–stɐ̯:z	–steɐ̯z	–stɐ̯·ɹz	–ste:ɹz
–stɐ̯əz	–ste:ɐ̯z	–steəz[ə]	–stɛəz	–steəz	–ste:ɹz
–stɛəz	–steɐ̯z	–steɐ̯z	–ste:ɐ̯z	–stɐ̯:ɹz	–steəz
–ste:ɹz	–stɛɹz	–ste·ɹz	–ste:ɹz	–ste:ɹz	–ste:ɹz

87 WINDOW JC /windo/[ŭɪndɔ̈] RP /windo:/[wɪndəʊ]

–windəʊ	–windʊ	–windʌ	–windɣ	–windʌ	–windʌ
	°-dəʊ				
–windəʊ	–windo	–windɔ̈	–wində	–windʌ	–windɔ̈°
–windɐ	–windou	–wində	–windʌ	–windəʊz	–windəʊ
–windou	–ŭɪndöʊ	–windɵ	–windʌ	–windʊ	–windʊ
–windʌ	–windɐ·	–windəʊ	–wində	–windʌ	–windəz
–windɣ	–windɤ	–windəʊ	–windou	–windʌ	–windov

88 LADDER JC /ledə/[lɛdɐ], /ladə/[l̪adɐ] RP /ladə/[lædə]

–lædə	–l̪adə	–lʌdə	–laðə**	–lʌðə**	–læðə**
–lædɤ	–l̪adɤ	–lɛdɐ	–lʌdə	–lʌdɐ	–lʌdɐ
–ladə	–ladə	–laðə**	–læðə**	–lʌdə	–la·dɤ
–l̪adə	–ladə	–lædə	–l̪̪ðə**	–l̪adə	–ladə
–ladə	–ladə	–lɛdə	–lɛðɐ**	–lʌdə	–ladə
–lʌdə	–l̪̪də	–ladɤ	–lʌdə	–ladə	–l̪adə

89 JUMP JC /dʒomp/[dʒɔ̈mp] RP /dʒʌmp/[dʒʌmp]

–dʒʌmp	–dʒʌmp	–dʒʌmp	–dʒ̩ʌmp	–dʒʌmp	–dʒʌmp
–dʒʌmp	–dʒʌmp	–dʒʌmp	–dʒʌmp	–dʒʌmt	–dʒʌmp
–dʒʌmp	–dʒʌmp	–dʒʌmp	–dʒʌmp	–dʒʌmp	–duʌmp**
–dʒʌmp	–dʒʌmp	–dʒʌmpᵊ	–dʒʌmp	–dʒʌmp	–dʒɔ̈mp
–dʒʌmp	–dʒʌmp	–dʒʌmp	–dʒ̩ʌmp	–dʒʌmp	–duʌmp**
–duɔ̈mp**	–dʒʌmp	–dʒʌmp	–dʒɔ̈mp	–duʌmp**	–dʒʌmp

90 DOWN JC /doŋ, doun/ [dɔ̈ŋ, dɔ̃, dɔʊn] RP /daun/[dʌʊn]

–dʌʊn	–dʌ̱ʊn	–dɛʊn	–dʌ̩ʊn	–dɛʊn	–dʌʊn
–dʌʊn	–dʌ̩ʊn	–dɔ̈ŋ	–dʌʊn	–dʌʊn	–dʌʊn
–dʌʊn	–dʌ̩ʊn	–dɛ̈ʊ̩n	–dʌʊn	–dʌʊ̃n	–dʌʊn
–dʌ̩ʊn	–dɛ̱ʊn	–dʌʊn	–dʌ̩ʊn	–dʌʊn	–dʌʊn
–dʌʊn	–dʌʊn	–dʌʊn	–dɛ̩ʊn	–dʌʊn	–dʌʊn
–dʌʊn	–dɛ̩ʊn	–dʌ̱ʊn	–dʌ̩ʊn	–dʌ̩ʊn	–dʌʊn

91 GROUND JC /groŋ, groun/ [gɹɔ̈ŋ, gɹɔ̃, gɹɔʊn] RP /graund/[gɹʌʊnd]

–gɹʌʊnd	–gɹʌ̱ʊnd	–gɹɛʊn	–gɹʌənd	–gɹɛʊn	–gɹʌʊn
–gɹʌʊnd	–gɹɛʊnd	–gɹʌn	–gɹʌʊn	–gɹʌʊn	–gɹʌʊn
–gɹɛʊndᵊ	–gɹʌ̩ʊnd	–gɹɛ̈ʊ̩n	–gɹʌʊn	–gɹʌʊnd	–gɹʌʊnd
–gɹʌ̩ʊnd	–gɹʌ̈ʊnd	–gɹʌʊn	–gɹʌ̩ʊnd	–gɹʌʊn	–gɹʌʊnd
–gɹʌʊnd	–gɹʌʊnd	–gɹʌʊn	–gɹʌ̩ʊn	–gɹʌʊnd	–gɹʌʊn
–gɹɔʊ̃nd	–gɹʌ̱ʊnd	–gɹʌʊn	–gɹʌ̩ʊnd	–gɹʌ̩ʊnd	–gɹʌʊnd

92 GARDEN JC /gja:dn/[gjɑ:dn] RP /ga:dn̪/[gɑ̟:dn]

–ga:dnz	–ga:dn	–gɒˑdn	–ga:ɹdn	–ga:ɻdn	–gɑ̟:dn
–ga:dn	–gʌˑ:ɹdn	–ga:dn	–gɒ:dn	–ga:dn	–ga:ɹdn̈
–gɑ:dn	–gʌˑ:din	–gɑ:dən	–gɑ:ɹdn	–gɑ̟:ˑdn	–gɑ:ɹdən
–gɑ̟:ɚdn	–gɑ:ɹdn	–ga:dn	–gɑ̟:ɹdɛn	–gɑ̟:dn	–ga:ˑdən
–gɑ̟:dn	–gɑ:dn	–gɑ:dn	–gɑ:ɹdn	–gɑ̟:ɹdɛn	–gɑ:ɹdn
–ga:dnz	–ga:dnz	–gaɚdən	–gɒ:ɹdn**	–gɑ:dn	–gʌˑ:ɹdn

93 PARK JC /pa:k/[pɑ:k] RP /pa:k/[pɑ̟:k]

–pa:k'	–pa:k	–pɒ:kˀ	–pə:k	–pa:ɹk	–pɑ̟:k
–pa:k	–pʌˑ:ɹk	–pa:k	–pɒ:kˀ	–pa:k	–pa:ɹk
–pɑ:k	–pɑ:ɹk	–pɑ:ɚk	–pɑ̟:k	–pɑ̟:k	–pɑ:ɹk
–pa:k	–pɑ:k	–pa:k	–pɑ̟:ɹk	–pɑ̟:k	–pa:ˑk
–pɑ̟:k	–pɑ:k	–pa:k	–pɑ̟:ɚk	–pɑ̟:ɚk	–pɑ:k
–pa:k	–pa:ɚk	–pɑ̟:k	–pɒ:k**	–pɑ:k	–pʌˑ:k

94 TREE JC /tri:/[tɹi:] RP /tri:/[tɻi]

–tɹi:z	–tɹi:	–tɹi:z	–t̪͡ʂɹi:*	–t̪͡ɹi:*	–tɹi:z
–tɹi:z	–tɹi:	–tɹi:	–θɹi:**	–tɹi:z	–tɻi:z
–tɹi:z	–t̪͡ʂɹi:z*	–tɹi:z	–θɻi:**	–tɹi:z	–tᶢɹi:z
–tɹi:	–tɹi:	–tɹi:z	–tɹi:z	–tɹi:z	–tɹi:
–tɹi:	–tɹi:	–tɹi:	–θʂɹi:**	–tɹi:z	–tɹi:z
–tɹi:	–tɹi:z	–tɹi:z	–tʃi:z	–tɹi:z	–tɹi:

95 BUDS · JC /bod/[bɔ̈d] RP /bʌd/[bʌd]

— bʌdz	— bʌdz	— bʌdz	— bʌdz	— bɔ̈ᵊ·d**	— bʌdz
— bʌdz	— bɔ̈dz	— n.k.	— bɔ̈dɪn	— bʌdz	— bʌdz
— bʌdzᵊ	— bʌdz	— bʌdz	— bʌd	— bʌdz	— bʌdz
— bʌdz	— bʌdz	— bʌdzᵊ	— bʌdz	— bʌdz	— bɔ̈dz
— bʌdz	— bʌdz	— bʌd	— bə̨dz	— bɔ̈dz	— bʌdz
— bɔ̈dz	— bʌdz	— bə̨dz	— bɔ̈dz	— bʌdz	— bʌdz

96 OUT JC /out/[ɔʊt] RP /aut/[ʌʊt]

— aʊtʼ	— a̠ʊt	— ɐʊt	— ʌɔt	— hɐʊt**	— ʌ̥ʌʊt¹*
— əʊt	— aʊt	— ɔ̈ʊt	— aʊt	— ʌʊt	— ʌʊt
— ɐʊt	— aʊt	— äʊt	— ʌʊt	— ɐʊt	— ʌʊt
— a̟ʊt	— ɒ̈ʊt	— əʊt, "do.", a̟ʊtᵊ	— a̟ʊt	— ə̟̃ʊt	— ʌʊt
— ʌʊt	— aʊt	— ʌʊt	— ʌʊt	— a̟ʊt	— aʊt
— ɒʊt	— ɐʊt	— ʌʊt	— a̟ʊt	— ʌ̥ʌʊt*	— ʌ̟ʊt

97 TENT JC /tent/[tɛnt] RP /tent/[tɛnt]

— tɛnt	— tɛnt	— n.a.	— tɛnt	— tɛ̣nt	— tɛnt
— tɛnt	— tɛnt	— tɛnt	— tɛnt	— tɛnt	— tɛnt
— tɛntᵊ	— tɛnt	— tɛnt	— tɛn·t	— tɛnts	— tɛnt
— tɛnt	— tɛnt	— tɛnt	— tɛnt	— tɛnt	— tɛnt
— tɛnt	— tɛnt	— tɛnt	— tɛnt	— tɛ̣nt	— tɛnt
— tɛnt	— tɛnt	— tɛnt	— tɛnt	— tɛnt	— tɛnt

98 DOG JC /da:g/[dʌ:g] RP /dɒg/[dɒg]

–dɒg	–dɒg	–da:gz	–dɒg	–da:ɹg**	–dɔ:g
–dɒg	–dɒgz	–da:gz	–dɔ:g	–da:g *da:g	–dɒg
–dɒg	–dɔ:g	–dɒg	–dɒ:g	–dɔ:ᵛg	–dɔ:g
–dɒg	–dɒg	–dɒgᵊ	–dɔ̣:g	–dɒ:g	–dɒ:g
–dɒg	–dɔ:g	–dɒ:g	–dɒg	–dɒ:g	–dɔ̣:g
–dɔ:g	–dɒg	–da:g	–dɔ:g	–dɔ:g	–dɔ:g

99 CAT JC /kjat/[kjat] RP /kat/[kæt]

–kat'	–kæᵊt	–kˌat	–kat	–kjæt	–kat
–kæt	–kạt	–kjat	–k̟at	–kˌæt	–kɑt
–kjat	–kjat	–kæt	–kjæt	–kjạt	–keæ̆t, *kjæts
–kæ̣t	–kạt	–cæ̣tˢ	–kˌạt	–kˌæ̆t	–kjät
–kat	–kạt	–kạt	–kˌæ̣t	–kˌæ̣t	–kˌæ̣t
–kjatˀ	–cat	–cæ̣t	–kˌat	–kjạt	–kˌat

100 PAT JC /(s)pat/[(s)pạt] RP /pat/[pæt]

–pat	–pæ̣t	–pat	–pat	–spʌt	–spɒt
–pæt	–pæt	–spʌt	–pat	–pʌt	–pat
–pat	–pæt	–pæt	–p̟ʌ̟t	–(pɛt)	–(pɛt)
–pat	–pạt	–pæt	–p̟ʌ̟t	–pæt	–pʌt
–pat	–pạt	–pʌt	–pʌt	–pạ̟t	–pʌ̟t
–pʌt	–pʌt	–pæt	–spat	–pạt	–pạt

101 BLACK JC /blak/[blaːk] RP /blak/[blæk]

–blak	–blaːk	–blak	–blak	–blak	–blak
–blæk	–blak	–blak	–blak	–blak	–blak
–blak	–blaːk	–blak	–blak	–blak	–blak
–blak	–blaːk	–blæk	–blaːk	–blæːk	–blak
–blak	–blak	–blak	–blak	–blaːk	–blæk
–blak	–blak	–blak	–blak	–blaːk	–blaːk

102 BREED-S,-ER JC /briːd-/[bɹiːd-] RP /briːd-/[bɹiəd-]

–bɹiːdz	–bɹiːdz	–bɹiːdz	–bɹiːdz	–ᶠbɹiːd	–ᶠbɹiːðə**
–bɹiːdz	–bɹiːdz	–bɹiːdɐ	–bɹiːd	–bɹiːdz	–bɹiːdz
–bɹiːð**	–bɹiːd	–bɹiːðə**	–n.r, °bɹiːðə**	–bɹiːdə	–ᶠbɹiːdz
–bɹiːdə	–bɹiːdə	–bɹiːdz	–bɹiːðə**	–bɹiːdɐ	–bɹiːð**
–bɹiːdə	–bɹiːdz	–bɹiːdə	–bɹiːðə**	–ᶠbɹiːdə	–bɹiːd
–bɹiːdz	–bɹiːdə	–bɹiːdə	–bɹiːdə	–bɹiːðə**	–bɹiːðə**

103 MOUSE JC /mais/[maɛ̈s] RP /maus/[mʌʊs]

–mʌʊs	–mʌʊs	–mɐʊs	–maɪs	–maɪs	–mʌʊs
–maɪs	–maɪs	–maɪs	–mʌʊs	–mɔ̈ʊs	–mɔ̈ʊs
–mʌʊs	–maɛs	–mʌʊs	–maɪs	–mʌʊs	–mʌʊs, maɪs
–mɑʊs	–mʌʊs	–mʌʊsɪz	–maɪs	–mʌʊs	–mʌɪs
–mʌʊs	–mʌʊs	–mʌʊs	–maɪs	–maɪs	–mʌʊs
–mɐ̃ɪs, mʊʊs	–mɐ̃ɪs	–mʌʊs	–mʌɪs	–maɪs	–mʌʊs

104 RAT JC /rat/[ɹa̱t] RP /rat/[ɹæt]

–ɹat'	–ɹa̱t	–ɹAt	–ɹats	–ɹAt	–ɹa̱t
–ɹat	–ɹa̱ts	–ɹAt	–ɹat	–ɹa̱ts	–ɹats
–ɹats	–ɹa̱t	–ɹats	–ɹa̱t	–ɹAts	–ɹa̱·ts
–ɹat	–ɹa̱ts	–ɹæts	–ɹAt	–ɹæ·t	–ɹAʔt
–ɹat	–ɹa̱t	–ɹAts	–ɹA̱ts	–ɹAt	–ɹAts
–ɹAt	–ɹA̱ts	–ɹA̱t	–ɹAts	–ɹa̱t	–ɹa̱ts

105 WASP JC /was/[wa̱s] RP /wɒsp/[wɒsp]

–wɒsp	–wa̱sp	–wasp	–wASp	–wAs	–wɒs
–wɒsp	–wɒsp	–was	–was	–was, wasp	–wasp
–wɒsp	–wasp	–wɒst**	–wASp	–wɒsp	–wASp
–wɒsp	–wɒsp	–wɒs	–wA̱sp	–w'asp	–wA̱st**
–wɒsp	–wɒsp	–wASp]	–wasp	–wA̱sp	–wA̱sp, waps, wASp
–wɒsp	–wɒsps	–wasp	–wɒsp	–wa̱s	–wɒsp

106 CRAB JC /krab/[kɹa̱b] RP /krab/[kɹæb]

–kɹab	–kɹa̱b	–kɹabz	–kɹabz	–§kɹAb	–kɹA̱b
–kɹab	–kɹa̱bz	–kɹab	–kɹAb	–kɹAb	–kɹAbz
–kɹAb²	–kɹa̱b	–kɹab	–kɹab	–kɹAb	–kɹAbz
–kɹab	–kɹa̱bz	–kɹæbz	–kɹab	–kɹa̱·b	–kɹab
–kɹabz	–kɹa̱bz	–kɹAb	–kɹA̱bz	–§kɹa̱b	–kɹab
–kɹAb	–kɹAbz	–kɹab	–kɹAbz	–kɹAb	–kɹa̱b

107 BIRD JC /bo(r)d/[bɔ̈(ɹ)d] RP /bə:d/[bɜ:d]

–bɜ:dz	–bɜ:dz	–bœɹdz	–bɜ:dz	–bɔ̈ᵊ:d	–bœᵊ:dz
–bɜdz	–bɜˑ·dz	–bɔ̈ᵊdz	–bəᵊ:dz	–bœᵊdz	–bœᵊ:dz
–bɔ̈ᵊ:dz	–bʌɹdz	–bə:dz	–bœᵊ:dz	–bœᵊ:dz	–bœ·ᵊdz
–bɜ:dz	–bɜˑ·dz	–bɜ:dz̩	–bɐɹdz	–bɐ:dz	–bœᵊ·dz
–bz̩:dz	–bɜ̂:dz	–bɜˑ:dz	–bœɹdz	–bœᵊ:dz	–bœᵊdz
–bɜᵊ:dz	–bɐᵊ:dz	–bœᵊ·dz	–bɐᵊ:dz	–bœᵊ:dz	–bœᵊ:dz

108 PIGEON JC /pidʒin/[pɪdʒɪn] RP /pidʒən/[pɪdʒən], /-in/ [-ɪn]

–pɪdʒnz	–pɪdʒərɐ	–pɪdʒɪnz	–pɪdʒənz	–pɪdʒən	–pɪdʒənz
–pɪdʒʌnz	–pɪdʒənz	–pɪdʒɪn	–pɪdʒɪn	–pɪdʒɪnz	–pɪdʒɪnz, –ənz
–pɪdʒn	–pɪdʒɪnz	–pɪdʒən	–pɪdʒnz	–pɪdʒ̃ən	–pɪdʒɪnz
–pɪdʒən	–pɪdʒʌnz	–pɪdʒɪnz̩	–pɪdʒənz	–pɪdʒənz	–pɪdʒɪnz
–pɪdʒənz	–pɪʒənz**	–pɪdʒʌn	–pɪdʒɪnz	–pɪdʒənz	–pɪdʒɪnz
–pɪʒɪnz**	–pɪdʒənz	–pɪdʒənz	–pɪdʒʌnz	–pɪdʒənz	–pɪdʒənz

109 EAGLE JC /i:gl/[i:gɬ] RP /i:gɬ/[ɪigᵗ]

–i:gɬ	–i:gt	–i:gɬ	–i:gɬ	–i:dɬ**	–i:gl
–i:gl	–i:gl	–i:gᵊlz	–ˢi:dɬ**	–i:gɬ	–i:dl**
–i:gɬ	–i:gɬ	–i:gl	–i:dɬ**	–i:gɬ	–i:dɬ**
–i:gt	–i:gɬ	–hi:gl**	–i:gᵊl	–i:dɬ**	–i:gɬ
–i:gl	–i:gɬ	–i:gɬ	–i:dl**	–i:dɬ**	–i:gɬ
–i:gɬ	–i:gɬ	–i:dl**	–i:gl	–i:gɬ	–i:gɬ

110 BIGGER JC /biga/[bɪgɐ] RP /bigə/[bɪgə]

—bɪgə	—bɪgə	—bɪgə	—bɪgə	—bɪgə	—bɪgə
—bɪgə	—bɪgɐ	—bɪgɐ	—bɪgə	—bɪgɐ	—bɪgə
—bɪgə	—bɪgə	—bɪgə	—bɪ·gə	—bɪgɐ	—bɪg
—bɪgə	—bɪgə	—ˢbɪgə	—bɪgə	—bɪgə	—bɪgɐ
—bɪgə	—bɪgə	—bɪgə	—bɪgɐ	—bɪgə	—bɪgə
—bɪgə	—bɪgɐ	—bɪgə	—bɪgə	—bɪgə	—bɪgə

111 HORSE JC /(h)a:s/[(h)ʌ:s] RP /hɔ:s/[hɔ̟:s]

—hɔ̟:s	—hɔ̟:s	—haˑɤs	—ʔɔ:sɪz	—a:ɹs	—hɔɹs
—hɔ̟:ɤs	—hɔˑɤs	—ha:s	—ɦa:s	—hɒ:s	—haˑ:sɪz
—hɔ:s	—hɔˑɹs	—hɔ:ʌs	—hɒs(**)	—hɔ:s	—hɔ̟:s
—hɔ:ɹs	—hɔɹs	—ɔ:ʌsᵊ	—hɔ:s	—hɒɹs	—hɒ:ɹs
—hɔ:s	—hɔ:s	—a:ɹs	—hɔˑɹs	—hɑ̟ɹs	—hɔ:s
—hɔ̟:ɹs	—hɔɹsɪz	—aˑɤs	—haˑɹs	—hɔ:ɹs	—ɔ:ɹs

112 LION JC /laian/[laɛ̈en] RP /laiən/[lɑ̟ɪən]

—lɑɪɒn	—lʌɪən	—laɪ̃ən	—laɪən	—laɪən**	—laɛ̈ən
—laɪᵊn	—laɪən	—laɪɛn	—laɪan	—laɪən	—laɪənz
—laɪən	—laɛən	—laɪən	—laɪən	—lʌɪən	—laɪən
—laˑən	—laɪən	—lɒ̃ˑɪn	—ᶠlaɪənd̥**	—laɪən	—laɪən
—laɪən	—laɪən	—laɪən	—ᵍlʌɪən	—laɪən	—laɪən
—laɪən	—laɪən	—laɪən	—laɪən	—laɪən	—laɪən

113 WILD JC /wail/[waɪ̈ɮ] RP /waild/[wa̟ɪtd]

—waɪld	—wʌɪtd	—n.a.	—waɪld	—waɪl	—waəld°
—waɪld	—waɪld	—waɪl	—waɪld	—waɪl	—wʌɪl
—waɪldᵊ	—waɛl	—wʌɪld	—wʌɪld	—wʌɪɮd	—waɪld
—waɪtd	—waɪɮd	—woɪ̈l	—waɪld̥	—wa̟ɪld	—waɪld
—waəld	—waɪɮd	—waɪəl	—wʌɪld	—waɪld	—wʌɪl
—waɪld	—waɪɮd	—wʌɪl	—waɪld	—waɪɮd	—waɪld

114 ZOO JC /zu:/[zu:] RP /zu:/[zʊu]

—zu:	—zu:	—zu:	—zu	—zu:	—zʊu
—zu:	—zʉ:	—zu:	—zu̜:	—zu:	—zu:z
—zu	—zu:	—zʊü	—zu̟:	—zu̜:	—zu:
—zu:	—zu:	—zu:	—z̥ü:	—zü:	—zu:
—zu:	—zu:	—zʊu	—zü:	—zu:	—zu:
—zu:	—zu·	—zʉ:	—zu:	—zu:	—zu:

115 BEAR JC /be:r/[bieɹ] RP /beə/[bɛə]

—bɛ̝ə	—bɛ·ə	—be:ᵊɹ	—bɪə	—ˢbe:ɹ	—bɛ̝·ɚ
—bɛ·ɚ	—beɹ	—bëəɹ	—bɪɐ	—bɪ·ɚ	—bɪɛ̈·
—beɐ	—bɛ̝·ɚ	—beɐ	—beɐ	—be:ɹ	—be:ɹ
—be·ə	—be:ɹ	—beɐ	—beɐ	—beɐ	—be:ɹ
—bɛ̝ə	—bɪə, bɛ̝ə	—be·ɹ	—ˢbe:ɹ	—be:ɚ	—bɛ̝ɐ
—be:ɹ	—bɛ̝ə	—be:ɹ	—be:ɹ	—be:ɹ	—be:ɹ

116 COW JC /kou/[kɔʊ] RP /kau/[kʌʊ]

–kaʊ	–kə̯ʊ	–kɐʊz	–kaə̯	–kɐʊ	–kʌʊ
–kaʊ	–kɒʊ	–kɜ̈ʊ	–kɒ̈ʊz	–kɜ̈ʊz	–käʊ
–kaʊ	–kaʊ	–kaɻ	–kʌʊz	–kʌʊ	–kaʊ
–kɑ̟ʊ	–kɒʊ	–kaʊ	–kaʊz	–kaʊ	–kʌʊ
–kɑ̟ʊ	–kaʊ	–kɑ̟ʊ	–kɒʊz	–kaʊ	–kaʊz
–kɜ̟ʊ	–kɐʊ	–kɑ̟ʊ	–kɒʊ	–kɑ̟ʊ	–kʌ̟ʊ

117 LEATHER JC /leda/[lɛdɐ] RP /leðə/[lɛðə]

–lɛðə	–lɛðə	–lɛd̠ɐ	–lɛðə	–lɛðɐ	–lɛðɐ
–lɛðə	–lɛðə	–lɛdɐ	–n.r.	–lɛðɐ	–lɛðɐ
–lɛðə	–lɛðə	–lɛðə	–lɛðə	–lɛðə	–lɛðə
–lɛðə	–lɛðə	–lɛðə	–lɛðɤ	–lɛðə	–lɛd̠ɤ
–lɛðə	–lɛðə	–lɛðə	–lɛðə	–lɛðə̟	–lɛðə
–lɛðə	–lɛðə	–lɛdə	–lɛðə	–lɛðə	–lɛðə

118 BOOK JC /buk/[bʊk] RP /buk/[bʊk]

–bʊ̟k	–bʊk	–n.a.	–bʊk	–bʊk	–bʊk
–bʊ̟k	–bʊk	–bʊk	–bʊk	–bʊks	–bʊk
–bʊk	–bʊk	–bʊ̈k	–bʊk	–bʊ·k	–bʊk
–bʊʔk	–bʊk	–bʊkᵊ	–bʊk	–bʊk	–bʊʔk
–bʊk	–bʊk	–bʊk	–bʊk	–bʊk	–bʊk
–bʊk	–bʊk	–bʊ̈k	–bʊk	–bʊk	–bʊk

119 AUTHOR JC (see note, p. 114) RP /ɔ:θə/[ɔ̜:θə]

—ɔ̜θə	—ɔ̜:θə	—n.a.	—ɔ̜:θə	—ˢa·θə	—n.k.
—ɔ:θɐ	—ɔ:θɚ	—n.k.	—n.k.	—ɒ:θɐ	—a:θə
—ɔ:θə	—ɔ:θə	—ˢɔ:ᵛθə	—ʌ:θə	—ɔ:θə	—ɔ:θə
—ɔ:θə	—ɔ:θə	—ɔ̜:θə	—ˢɒ·θə	—ɒ·θə	—ɑ̜:tɚ
—ɔ̜:θə	—ɔ̜:θə	—ɑ̟:tə	—ˢɒ:θə, ɑ̟:θə	—ˢɑ̟:θə	—ˢɔ̜:θə
—ɒ:θə	—ɔ:θə	—ˢɔ:θə	—ɒ:θə	—ɔ:tə̜	—ʌ̠:θə

120 CHAIR JC /tʃe:r/[tʃieɹ] RP /tʃeə/[tʃɛə]

—tʃɛ̣ə	—tʃɛ·ə	—tʃe:ɹ	—tʃɪə	—tʃe:ɹ	—tʃe·ɚ
—tʃɛ·ɚ	—tʃɛ̣ɹ	—tʃeəɹ	—tʃɪə̜	—tʃeɚ	—tʃɪɛ̈ɹ
—tʃeə̜	—tʃɛ̣·ɚ	—tʃë:ɹ	—tʃeɐ	—tʃe:ɹ	—tʃɛ̣əɹ
—tʃɛ̣·ə	—tʃe:ɹ	—tʃɛə	—tʃʰɛɐɹ	—tʃɛ·ə	—tʃe:ɹ
—tʃɛ̣ə	—tʃɛə	—tʃe·ɹ	—tʃe:ɹ	—tʃe·ɚ	—tʃeɐ
—tʃe:ɹ	—tʃɛ̣ɚ	—tʃɛ̣ɚ	—tʃe:ɹ	—tʃe:ɹ	—tʃe:ɹ

121 COT JC /kat/[ka̠ᵗ] RP /kɔt/[kɒᵗ]

—kɒtʼ	—kɒt	—kɒ̣tˢ	—kɒt	—kʌt	—kɒt
—kɒt	—kɒt	—kʌt	—kät	—kʌt	—kɒt
—kɒt	—kɒt	—kɒt	—kʌ̟t	—kɒ·t	—kɒ̣t
—kɒʔt	—kɒt	—kɒtˢᵊ	—kɒ·t	—kɒt	—kaʔt
—kɒt	—kɒt	—kɒt	—kɒʔt	—kɒt	—kɒ̈t
—kɒtʼ	—kɒʔt	—ka̠t	—kɒt	—kɒt	—kɒt

122 CLOCK JC /klak/[klaːk] RP /klɔk/[klɒk]

– klɒk	– klɒk	– klɒːk	– klɒk	– klʌk	– klɒk
– klɒk	– klak	– klʌk	– klak	– klɒk	– klak
– klɒk	– klak	– klɒk	– klaːk	– klak	– klɒk
– klɒʔk	– klɒk	– klɒk	– klɒːk	– klaːk	– klɒʔk
– klɒk	– klɒk	– klɒk	– klaːk	– klak	– klɒk
– klak	– klɒʔk	– klak	– klɒk	– klɒk	– klɒk

123 ASK JC /aːks/[ʌːks] RP /aːsk/[ɑːsk]

– aːsk	– aːsk	– aːks	– aːsk	– aːks	– ɑːks
– aːsk	– ʌːsk	– ʌks	– aːks	– ʌːs C, °ʌːsk	– aːsk
– ʌːks	– ʌːksk*	– ʌːs	– hʌːks**	– ʌːsk	– hʌːks**, °ʌːks
– ɑːsk	– ʌːsk	– aːs	– ɒːks**	– ʌːksk*	– ʌːsk
– ɑːsk	– ʌːsk	– aːks	– ɐːks	– ʌːst*	– ʌːs, °ɐːks
– aːsk	– ʌːsk	– ʌːks	– ɒːs**	– ɑːks, °haːsk**	– aːsk

124 TICK JC /tik/[tɪk] RP /tik/[tɪk]

– tɪk	– tɪks	– tɪk	– tɪks	– tɪk	– tɪk
– tɪk	– tɪkɪŋ	– tɪk	– tɪk	– tɪk	– tɪks
– tɪk	– tɪk	– tɪkɪŋ	– tɪk	– tɪk	– tɪks
– tɪks	– tɪks	– tɪk	– tɪk	– tɪkɪŋ	– tɪk
– tɪk	– tɪk	– tɪk	– tɪk	– tɪk	– tɪk
– tɪk	– tɪk	– tɪk	– tɪks	– tɪks	– tɪks

125 TELEVISION JC /telividʒon/ [tɛlɪvɪdʒən] RP /teliviʒn/ [tɛlɪvɪʒn]

–tɛlɪvɪʒn	–tɛlɪvɪʒən	–tɛlɪvɪdʒən	–tɛlwɪʒən	–tɛlɪvɪʒən	–tɛlɪvɪʒən
–tɛlɪvɪʒn	–tɛlɪvɪʒən	–tɛlɪvɪʒən	–tɛlɪvɪdʒən	–tɛlɪvɪʒən	–tɛlɪvɪʒən
–tɛlɪvɪʒən	–tɛlɪvɪʒʌn	–tɛlɪvɪʒən	–tɛləvɪʒn	–tɛlɪvɪʒən	–tɛlɪvɪdʒən
–tɛlɪvɪʒən	–tɛlɪvɪʒʌn	–tɛlɪvɪʒən	–tɛlɪvɪʒn	–tɛlɪvɪʒən	–tɛlɪvɪdʒən
–tɛlɪvɪʒən	–tɛlɪvɪʒən	–tɛlɪvɪʒʌn	–tɛlɪvɪdʒən	–tɛlɪvɪʒən	–tɛlɪvɪdʒən
–tɛlɪvɪʒən	–tɛlɪvɪʒən	–tɛlɪvɪdʒʌn	–tɛlɪvɪʒən	–tɛlɪvɪʒən	–tɛlɪvɪʒən

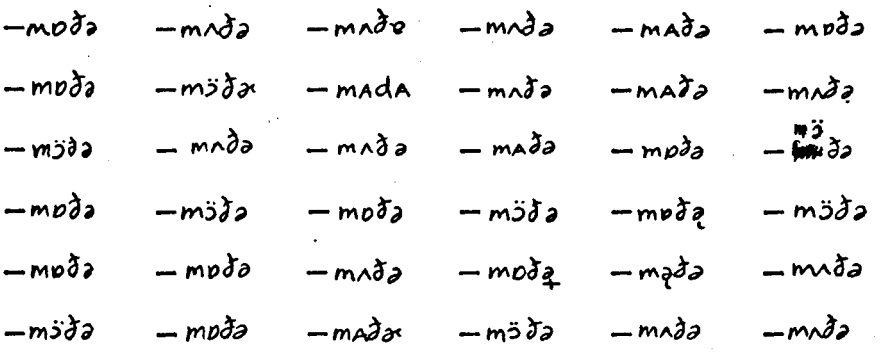
126 TROUBLE JC /trobl/[tɹɞ̈bl̩,-ʷ] RP /trʌbl̩/[tɹʌbl̩]

–tɹʌbl̩	–tɹʌbt	–tʃʌbl̩	–tɹʌbl̩	–ˢtʃʌbl̩	–tɹʌbl
–tɹʌbt	–tɹɞ̈bt	–tʃʌbl	–ˢtɹʌbl̩	–tɹʌbl̩	–tɹʌbl̩
–tʃʌbl̩	–tɹʌbl̩	–tɹʌbl̩	–tɹʌbl̩	–ˢtɹʌbl̩	–tɹʌbl̩
–tɹʌbt	–tɹʌbl	–tɹʌbl	–ʈʂɹʌbl̩*	–tɹʌbl	–tɹɞ̈bl̩
–tɹʌbl̩	–tɹʌbl̩	–tɹʌbl	–tɹʌbl	–tɹʌbl̩	–tɹʌbl
–tɹɞ̈bl̩	–tɹʌbl̩	–ˢtɹʌbl	–tɹɞ̈bl̩	–tɹʌbl	–tɹʌbl̩

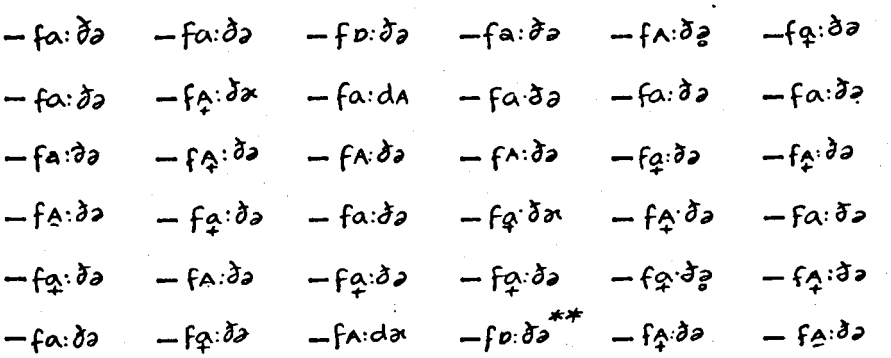
127 TOY JC /tai/[taë] RP /tɔi/[tɔɪ]

–tɔ̣ɪ	–tɔɪ	–tɒɪz	–tɔɪz	–taɪ	–tɔɪ
–tɔɪ	–tɔɪ	–tʌɪ	–tɒɪz	–tɒɪz	–taɪz
–tɔɪz	–tɔɪ	–tɒɪ	–tɒɪ	–tɒɪ	–tɔɪ
–tɔ̣ɪ	–tɔɪ	–tɔ̣ɪ	–tɔɪz	–tɔɪ	–tɔɪ
–tɔɪ	–tɔɪ	–tɔ̈ɪ	–tɔɪz	–tɒɪ	–tɒɪ
–tɒɪ	–tɔɪ	–taɪz	–tɔɪz	–tɔɪz	–tɔɪz

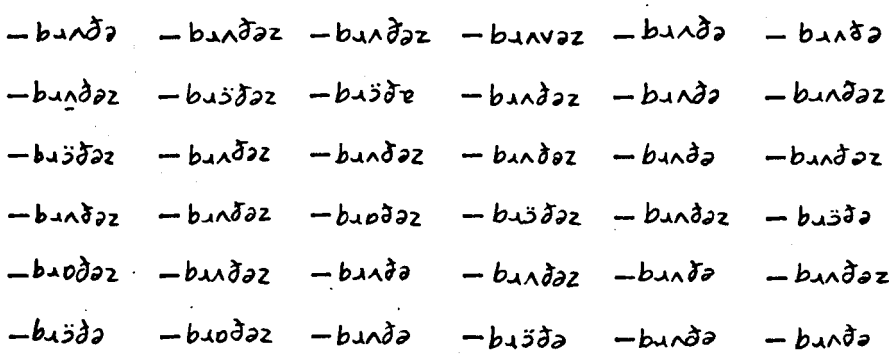
128 MOTHER JC /mada/[mad̪ɐ] RP /mʌðə/[mʌðə]



129 FATHER JC /fa:da/[fɑ:dɐ] RP /fa:ðə/[fɑ:ðə]



130 BROTHER JC /breda/[bɹɛdɐ] RP /brʌðə/[bɹʌðə]



151 JESUS JC /dʒi:zos/[dʒi:zɔ̈s] RP /dʒi:zəs/[dʒi:zəs]

—dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒizəs —dʒi:zʌs —dʒi:zəs
—dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs
—dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs
—dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs
—dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs
—dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs —dʒi:zəs

152 MARY JC /me:ri/[mieɹɪ] RP /meəri/[meəɹɪ]

—me:ɹɪ —mɛ:ɹɪ —me:ɹɪ —me:ɹɪ —me:ɹɪ —meəɹɪ
—meəɹɪ —meəɹɪ —mieɹɪ —me:ɹɪ —me:ɹɪ —me:ɹɪ
—me:ɹɪ —meəɹɪ —mɛəɹɪ —me:ɹɪ —mɛ:ɹɪ —me:əɹɪ
—mɛəɹɪ —me:ɹɪ —mɛ:ɹɪ —mɛəɹɪ —mɛəɹɪ —me:ɹɪ
—mɛəɹɪ —mieɹɪ —me:ɹɪ —me:əɹɪ —mieɹɪ —mɛ:əɹɪ
—m'e:ɹɪ —meəɹɪ —meəɹɪ —me:ɹɪ —meəɹɪ —me:əɹɪ

153 FAITH JC /fe:t/[fiɛt] RP /fe:θ/[feɪθ]

—feɪθ —feɪθ —fɛɪt̪ —feɪθ —feɪt̪ —feɪts
—feɪθ —fe:θ —ˢfɪeθ —ˢfeɪt —fe:θ —feɪθ
—feɪθ —fe:θ —ˢfeɪθ —fɪɛ̨θ —feɪθ —feɪθ
—feɪθ —fe:θ —feɪθᵊ —feɪθ —feɪθ —feɪθ
—feɪθ —fe:θ —fe:t —fe:ɪʔts —fɛ:θ —fëɪθ
—fe:θ —fe:θ —feɪt —fe:t —feɪθ —feɪθ

154 VISION JC /vidʒon/[vɩdʒə̆n] RP /viʒn̩/[vɩʒn]

—vɩʒən	—v̩ɩʒən	—vɩdʒən	—vɩʒən	—ʃvɩdʒən	—vɩʒən
—vɩʒən	—vɩʒn	—vɩdʒen	—vɩdʒən	—vɩʒən	—vɩʒən
—vɩʒən	—vɩʒʌn	—vɩʒən	—vɩdʒn	—vɩʒʌn	—vɩdʒən
—vɩʒən	—vɩʒʌn	—vɩʒn	—vɩʒn	—vɩʒən	—vɩʒən
—vɩʒən	—vɩʒʌn	—vɩʒʌn	—ʃvɩdʒən	—vɩʒən	—vɩdʒən
—vɩʒʌn	—vɩʒən	—vɩdʒʌn	—vɩʒən	—vɩʒʌn	—vɩʒən

155 CATHOLIC JC /kjatalik/ [kjatɐlɩk] RP /kaθ(ə)lik/ [kæθ(ə)lɩk]

—kaθlɩk	—kaθlɩk	—kʲæθəlɩk	—kaθəlɩk	—kjat̞əlɩk	—ka̠θəlɩk
—kæθlɩk	—kaθl̩ɩk	—kjatlɩk	—kʲatəlɩk	—ka̠θəlɩk	—kʲaθlɩk
—kʲaθlɩk	—kaθəlɩk	—kaθəlɩk	—kʲaθəlɩk	—kʲʌθ·ə`lɩk	—kæθəlɩk
—kaθl̩ɩk	—kʲaθəlɩk	—kæ̠θlɩk	—ka̠θəlɩk	—kaθlɩk	—kjatəlɩk
—kaθlɩk	—ka̠θlɩk	—kjatəlɩk	—kʲaθəlɩk	—kʲaθəlɩk	—kʲaθlɩk
—kʲaθəlɩk	—caθlɩk	—kjæt̞əlɩk	—kʲaθəlɩk	—kʲaθəlɩk	—kaθl̩ɩk

156 CHEERS JC /tʃe:r/[tʃɩeɹ] (see p.) RP /tʃiəz/[tʃɩəz]

—tʃɛəz	—tʃɩəz	—tʃɩ̟·ɹz	—tʃɩ·z, tʃɩ·ɹz	—tʃë:ɹz	—tʃeəz
—tʃi·ɚz	—tʃëɚz	—tʃɩəɹz	—tʃɩəz	—tʃɩɚz	—tʃɩ·ɹz
—tʃɩɹz	—tʃɛɚz	—tʃɩ:z	—tʃeɐ	—tʃe:ɹz	—tʃɛəɹz
—tʃɩəz	—tʃeɚz	—tʃɩ̞əz	—tʃeɐɹ	—tʃɛ̞əz	—tʃe:ɹz
—tʃɛəz	—tʃeəz	—tʃe·ɹz	—tʃɩ:ɹz	—tʃɩəɹz	—tʃeɚz
—tʃɩɹz	—tʃɩɹ·z	—tʃɛɚz	—tʃɩ·ɹz	—tʃe:ɹz	—tʃɩ·ɹz

137 FEAR JC /fe:r/[fɪeɹ] RP /fiə/[fɪə]

—fɛ̹ə	—fɪ̹ə	—n.r.	—fɪ·ɹ	—§fe:ɹ	—fe̹:ɹ
—fï·ɚ	—fë·ɹ	—fɪə˞	—fɪɐ	—§fɪ·ɚ	—fɪɛ̈
—fɪə	—fɛ̹·ɚ	—fɪɛ̈:	—feɐ	—fe:ɹ	—fɛ̹əɹ
—fɛə	—fe:ɹ	—fɛ̹ə	—feɐ˞	—feə	—n.r.
—fɛ̹ə	—feə	—fe·ɚ	—fɪ·ə	—fɛ̹·ɐ	—fɛ̹·ɐ
—fɪ:ɹ	—fɪə	—feə	—fɪ̹·ɹ	—fɛ:ɹ	—fɪ·ɹ

138 DEATH JC /det/[dɛt] RP /deθ/[dɛθ]

—dɛθ	—dɛθ	—dɛθ	—dɛθ	—dɛt̪̚	—dɛt
—dɛθ	—dɛθ	—dɛθ	—dɛt̪	—dɛθ,	—dɛθ
—dɛθ	—dɛθ	—dɛθ	—dɛt	°dɛt —dɛθ	—dɛθ
—dɛθ	—dɛθ	—ðɛt**	—dɛθ	—dɛθ	—dɛθ
—dɛθ	—dɛθ	—dɛt	—dɛʔts	—dɛθ	—dɛθ
—dɛθ	—dɛθ	—dɛt	—dɛθ	—dɛθ	—dɛf

139 CROSS JC /kra:s/[kɹʌ:s] RP /krɔs/[kɹɒs]

—kɹɒs	—kɹɒs	—kɹa:s	—kɹɒs	—kɹʌ:s	—kɹa̟:s
—kɹɒs	—kɹɒs	—kɹa:s	—kɹa:s	—kɹɔ̜:s	—kɹɒs
—kɹɒs	—kɹɔ:s	—kɹa:s	—kɹɒs	—kɹɒ·s	—kɹɒ:s
—kɹɒs	—kɹɒs	—kɹɒs	—kɹɒs	—kɹɒs	—kɹɒ:s
—kɹɒs	—kɹɒs	—kɹɒ:s	—kɹɒs	—kɹa̟:s	—kɹɒs
—kɹɒs	—kɹɒs	—kɹɒ:s	—kɹɒ:s	—kɹɔ:s	—kɹɔ:s

140 CHURCH JC /tʃo(r)tʃ/ [tʃɔ̈(ɹ)tʃ] RP /tʃə:tʃ/[tʃɜ·tʃ]

—tʃɔtʃ'	—tʃɜ:tʃ	—tʃɔ̈ɹtʃ	—tʃɚtʃ	—tʃɔ̈ɹtʃ	—tʃɜ·tʃɪz
—tʃɜ˞tʃ	—tʃɜ˞·tʃ	—tʃɔ̈ɹtʃ	—tʃœ˞:tʃ	—tʃɔ̈ɹtʃ	—tʃœɹtʃɪz
—tʃœ˞·tʃ	—tʃɐ˞:tʃ	—tʃɜ̟:tʃ	—tʃœɹtʃ	—tʃɜ˞:tʃ	—tʃœɹtʃ
—tʃɔɹtʃ	—tʃɜ˞:tʃ	—tʃɔ·tʃ	—tʃœɹtʃ	—tʃɜ·ɹtʃ	—tʃœ˞:tʃ
—tʃɜ·tʃ	—tʃɜ̩:tʃ	—tʃɜ:tʃ	—tʃɜɹtʃ	—tʃœ˞:tʃ	—tʃɔ̈ɹtʃ
—tʃɜ˞:tʃ	—tʃɜɹtʃ	—tʃɔɹtʃ	—tʃɐ˞:tʃ	—tʃœɹtʃ	—tʃɵ:tʃ

141 SMOOTH JC /smu:d/[s(t)mu:d] RP /smu:ð/[smʊuð]

—smuð	—smu:ð	—səmu:d	—smʊuð̥	—smʊud	—smu:ð
—smuð	—smu·ð	—smu:d	—səmu:dʼ	—smu:ð	—smu:ð
—smu:ð	—smu:ð	—smu:ð	—smu:ð	—smu·ð	—smu:ð
—smu:ð	—smu:ð	—smu:d°	—smu·θ	—smu:ð	—smu:ð
—smu:ð	—smu:ð	—smu:ð	—smu:d°	—smu:ð	—smu:ð
—smũ:ð	—smu:ð	—smu:ð	—s̩mũ:ð	—smu:ð	—smu:v

142 SINGERS JC /siŋa/[sɪŋɐ] RP /siŋəz/[sɪŋəz]

—sɪŋəz	—sɪŋəz	—sɪŋɐ	—sɪŋə	—sɪŋə	—sɪŋə
—sɪŋəz	—sɪŋəz	—sɪŋɐz	—sɪŋə̃z	—sɪŋə	—sɪŋəz
—sɪŋəz	—sɪŋə·z	—sɪŋəz	—sɪŋə	—sɪŋəz	—sɪŋəz
—sɪŋəz	—sɪŋəz	—sɪŋəz	—sɪŋəz	—sɪŋəz	—sɪŋəz
—sɪŋəz	—sɪŋəz	—sɪŋəz	—sɪŋəz	—sɪŋəz	—sɪŋəz
—sɪŋəz	—sɪŋəz	—sɪŋɚz	—sɪŋəz	—sɪŋəz	—sɪŋə·z

145 FORK JC /fa:k/[fA:k] RP /fɔ:k/[fɔ:k]

–fɔ:kˀ	–fɔ:k	–fɔ:ᵊk	–fɔvk	–fa:k	–fɔ:k
–fɔ:k	–fɔɹk	–fa:k	–fa:k	–fɔ:k	–fɔəɹk
–fɔ:k	–fɔ:k	–fɔ:k	–fa:k	–fɔ:k	–fɔ:k
–fɔ:k	–fɔ:ɹk	–fɔ:k	–fɔ:k	–fɔ:k	–fɔ:ɹk
–fɔ:k	–fɔ:k	–fɔək	–fa:k	–fɔ:k	–fɔ:k
–fɔ:k	–fɔ:k	–fɒɹk	–fɒ:ɹk	–fɔ:k	–fɔ:k

144 BUTTER JC /bota/[bɔ̈tɐ] RP /bʌtə/[bʌtə]

–bʌtə	–bʌtə	–bʌtˢɐ	–bʌtə	–bɔ̈tɐ	–bʌtə
–bʌtə	–bɔ̈tɐ	–bɔ̈tɐ	–bʌtə	–bʌtə	–bʌtə
–bɔ̈tə	–bʌtə	–bʌtə	–bʌtə	–bʌtə	–bʌtə
–bʌtə	–bʌtə	–bʌtə	–bʌtɐ	–bʌtə	–bɔ̈tə
–bʌtə	–bʌtə	–bʌtə	–bɑ̨tə	–bɔ̈tə	–bʌtə
–bɔ̈tə	–bʌt̪ə	–bʌtɐ	–bɔ̈tə	–bɑ̨tə	–bʌtəɹ

145 BAKER JC /be:ka/[biɛkɐ] RP /be:kə/[beɪkə]

–beɪkə	–beɪkə	–beɪkəɻ	–beɪkə	–beɪkɐ	–beɪkɐ
–beɪkə	–be:kɐ	–biɛkɐ	–beɪkə	–beɪkə	–beɪkə
–beɪkə	–be:kə	–beɪkə	–be:kə	–beɪkə	–beɪkə
–beɪkə	–beɪkə	–beɪkə	–beɪkɐ	–beɪkə	–beɪkə
–beɪkə	–beɪkə	–be:kə	–beɪkə	–bẹ:kə	–beɪkɐ
–be:kɐ	–beɪkə	–be:kɐ	–be:kə	–beɪkə	–be:kəɹ

146 COST JC /ka:s/[kA:s] RP /kɔst/[kɒst]

– kɒst	– kɔst	– kɔ̝ɒst	– kɒst	– ka:s	– kɒ:st
– kɒsts	– kɒst	– ka:s	– kɔ:s	– kɔ̝:s	– kas
– kɒst	– ka:st	– kɒst	– ka:s	– kɔ:s	– kɒst
– kɒst	– kɒst	– kɒs	– kɔs	– kɒst	– kɒ:st
– kɒst	– kɒst	– kɒ:s	– kɒst	– kɒ:st	– kɒs
– kɒ:st	– kɒst	– kɒst	– kɒ:st	– kɔ:st	– kɔ:st

147 CUT JC /kot/[kɔ̈t] RP /kʌt/[kʌt]

– kʌ̱t	– kʌtɪŋ	– kʌtɪn	– kʌtɪŋ	– kʌt	– kʌt
– kʌt	– kɔ̈tɪŋ	– kɔ̈t	– kʌt	– kʌtɪn	– kʌt
– kʌt	– kʌt	– kʌt	– kʌtɪn	– kʌtɪŋ	– kʌtɪŋ
– kʌt	– kʌt	– kʌtɪn,	– kʌtɪn	– kʌtɪŋ	– kɔ̈t
– kʌtɪŋ	– kʌt	– kʌtɪn	– kʌt	– kʌ̤t	– kʌt
– kɔ̈tɪn	– kʌtɪŋ	– kʌt	– kɔ̈t	– kʌt	– kʌt

148 FARM JC /fa:m/[fA:m] RP /fa:m/[fɑ̟:m]

– fɑ̃:m	– fa:mz	– fɒ̃:m	– fa:ᵊm	– fɑ̃:m	– fɑ̟̃:m
– fa:mz	– fAᵊ·ɹm	– fɑ̃:m	– fɑ̃·ᵛm	– fɑ̟·ɹm	– fa·ɹm
– fA:m	– fɑ̟:m	– fA:m	– fɒ̃·m**	– fɑ̟̃:m	– fA:ɹm
– fɑ̟:m	– fɑ̟:ɚm	– fa:m	– fɑ̃:m	– fA:m	– fa:ᵊm
– fɑ̟̃:m	– fA:m	– fɒ:m**	– fɒ:m**	– fɒ̤̃m	– fɒ:m
– fɑ̃:m	– fɑ̟:m	– fɒ:ɚm	– fɒ̃:m**	– fA:m	– fɔ̃:ɹm**

149 POT JC /pat/[pa̲t] RP /pɔt/[pot]

– pɒt	– pɒt	– pa̲t	– pɒt	– pA̟t	– pɒt
– pɒt	– pɒt	– pAt	– pat	– pAt	– pat
– pɒt	– pɒt	– pɒt	– pa̟t	– pɒt	– pɒ̟t
– pɒʔt	– pat	– pɒt	– pat	– pɒt	– pat
– pɒt	– pɒt	– pAt	– pɒtˢ	– pɒt	– pa̟t
– pɒ̟t	– pɒt	– pAtˀ	– pɒt	– pɒt	– pɔt

150 GAS JC /gjas/[gjas] RP /gas/[gæs]

– gas	– gaes	– gᵉas	– gas	– n.a.	– gæs
– gas	– gas	– gæs	– gæs	– gæs	– gA̟ːs
– gas	– gas	– gæs	– gas	– gA̟s	– gjæs
– gæs	– gas	– gjæs	– gas, ga̟s, ga̲s	– gæ̟s	– gas
– gas	– gA̟s	– gæ̟s	– ɟæs	– ɟæs	– gja̟s
– gjas	– gAs	– gæ̟s	– gjæs	– gjas	– gæs

151 BOIL JC /bwail/[bwaël] RP /bɔil/[bɔɪt]

– bɔɪl V	– bɔɪl V	– bɔɪld(**)	– bɔɪl	– bwɔɪl V	– bɔɪl
– bɔɪl V	– bɔɪl	– bwaɪl	– bwɔɪld(**)	– bɔɪl	– bɔɪl
– bɔɪl V	– bɔɪl	– bɔɪl	– bɔɪl	– bɔɪl	– bɔɪl
– bɔɪl	– bɔɪl	– bɔ̟ɪl	– bɔɪlm	– bɔɪlŋ	– bɔɪl
– bɔɪlŋ	– bɔɪl	– bɔɪl	– bɔɪlm	– bɔɪl	– bɔɪl
– bɔɪl V	– bɔɪl	– bɔɪl	– bɔɪl	– bɔ̟ɪl	– bɔɪl

152 PORK JC /po:k/[puɔk] RP /pɔ:k/[pɔ̝:k]

– poːkˈ	– pɔ̝ːk	– poːʊk	– poːk	– pʊːʊk	– pövk**
– poʊk	– poʊk	– pʊɔk	– pɔ̝ːk	– poːʊk	– poːᵊk
– poᵊʊk	– poːɔ̝k	– poːʊk	– fpoːʊk (with this pronunciation)	– poːʊk	– poːək
– pɔːk	– pʊɹk	– pɔ̝ːk	– pɔ̝ːᵊk	– pɔːk	– poːʊk
– pɔːk	– pɔːᵊk	– pʊʊk	– pʊːʊk	– poːʊk	– pɔːk
– poːk	– pɔ̝ɹk	– poʊk	– poʊk	– poːʊk	– poʊk

153 GONE JC /gaːn/[gʌːn] RP /gɒn/[gɒn]

– gɒn	– gɒn	– gaːn	– gɒn	– gɒːn	– gɔːn
– gɒn	– gɒn	– gaːn	– gɔ̃ːn	– gɒn	– gɔːn
– gɒn	– goːn	– gɒn	– goːn	– gɔːn	– gɔːn
– gɒn	– gɒn	– gɒn	– gõn	– gɒn	– gɒːn
– gɒn	– gɒn	– gɔːn	– gɒn	– gɔːn	– gɒ̝ːn
– gɒn	– gɒn	– gɒn	– gɒn	– gɔːn	– gɔːn

154 FOOD JC /fuːd/[fuːd] RP /fuːd/[fʊʊd]

– fuːd	– füːd	– fuːd	– fuːd	– fuːd	– fuːd
– fud	– fuːd	– fuːd	– n.n.	– fuːd	– fuːd
– fuːdᵊ	– fuːd	– füːd	– fuːd	– fuːd	– fuːd
– fuːd	– fuːd	– füːd	– fuːd	– fuːd	– n.a.
– fuːd	– fuːd	– fũːd	– fuːdᵊ	– fuːd	– fuːd
– fuːd	– fuːd	– fuːd	– fuːd	– fuːd	– fuːd

155 SUCK JC /sok/[sɔ̈k] RP /sʌk/[sʌk]

– sʌkˀ	– sʌk	– sɔ̈k	– sʌk	– sʌkt	– sʌks
– sʌks	– sɔ̈k	– sɔ̈k	– sʌk	– sʌk	– sʌks
– sʌk	– sʌks	– sʌks	– sʌk	– sʌk	– sʌk
– sʌk	– sʌks	– sʌk	– sʌk	– sʌk	– sɔ̈k
– sʌk	– sʌks	– sʌk	– sʌkt (xxk)	– sʌk	– sʌk
– sɔ̈k	– sʌks	– sa̤k	– sɔ̈k	– sʌk	– sʌks

156 TIN JC /tin/[tɪn] RP /tin/[tɪn]

– tɪn	– tɪn	– tĩn	– tɪn	– tɪn	– tɪn
– tɪn	– tɪn	– tɪn	– tɪn	– tɪn	– tɪnz̥
– tɪn	– tɪ̤n	– tɪn	– θɪn**	– tɪn	– tɪn
– tɪn	– tɪ̤n	– tɪn	– tɪn	– tɪn	– n.a.
– tɪn	– tɪn	– t̪ɪn*	– tɪn	– tɪn	– tĩn
– tɪn	– tɪn	– tɪn	– tɪn	– tɪn	– tɪn

157 THICK JC /tik/[tɪk] RP /θik/[θɪk]

– θɪk	– θɪk	– θɪkɐ	– θɪk	– t̪̊θɪk	– t̪̊ɪk
– θɪkə	– θɪk	– tɪk	– tɪk	– θɪk	– θɪk
– θɪk	– θɪ̤k	– θɪk	– θɪk	– ˢθɪk	– θɪk
– θɪk	– θɪ̤k	– θɪk	– θɪk	– θɪk	– θɪk
– θɪ̤k	– θɪk	– θɪk	– θɪ̤k	– θɪk	– θɪk
– θɪkə	– θɪ̤k	– θɪk	– θɪk	– θɪk	– θɪk

158 THIN — JC /tin/[tɩn] — RP /θin/[θɩn]

— θɩn	— θɩn	— θɩ̃n	— θɩn	— t̪θɩn	— t̪θɩn
— θɩnə	— θɩn	— tɩn	— tɩn	— θɩn	— θɩn
— θɩn	— θɩ̧n	— θɩn	— θɩn	— θɩn	— tɩn
— θɩn	— θɩn	— θɩn	— θɩn	— θɩn	— θɩn
— θɩn	— θɩn	— θɩn	— θɩn	— θɩn	— θɩn
— θɩnə	— θɩn	— θɩn	— θɩn	— θɩn	— θɩn

159 COAL — JC /ko:l/[kuɔɫ] — RP /ko:l/[kəvt]

— kȩ̈vɫ	— këvt	— kɒvld**	— kəvld**	— kɔ̈vɫ	— kö:ᵊl
— kevl	— koul	— ko̧:ɫ	— kevld**	— ko:ɫ	— kɔ̈vɫ
— kv:l	— ko:ɫ	— ko:l, kövl	— koɔ̈l	— kouɫ	— ko:ɫ
— kout	— ko̧:l	— kɐvl	— koul	— koul	— kould**, ko:l
— ko̧vl	— ko:ɫ	— ko:l	— ko:ld**	— ko̧ul	— kɔ̈vl
— ke̱vl	— koul	— ko:ɫ	— ko:ɫ	— ko:ld**	— ko:ɫ

160 SACK — JC /sak/[sa̱k] — RP /sak/[sæk]

— sak'	— saks	— sa̱k	— sak	— ʃSAK	— SAK
— sak	— sa̱k	— sak	— sAk	— sak	— ʃSAK
— sak	— sa̱k	— sæk	— sa̱k	— SAKS	— SAKS
— saʔk	— sa̱k	— sæk	— sak	— sa·k	— SAʔk
— sak	— sak	— SAk	— sA̟k	— sA̟k	— sak
— SAk	— SAKS	— sæk	— SAk	— SAk	— sa̱k

161 MORTAR JC /ma:ta/[mᴀ:tɐ] RP /mɔ:tə/[mɔ̞:tə]

—mɔ̃:tə	—mɔ:tə	—mɔ̃·θɐ**	—ma:tɐ	—ma:ɹtɚ	—mɔ:ᵊtə
—mɒ̃:tə	—mɔɹtə	—mã:tɐ	—mã:tə	—ma:tə	—mã:tə
—mɔ:tə	—ma̠:tə	—mɔ:tɐ	—mᴀ:tə	—mã·θɐ**, mã:tɐ	—mã:tə
—mɔ:təɹ	—mɔ̞:tə	—mã:tə	—mɒ:θə**	—mᴀ:θə**	—ma̟:tə
—mɔ:tə	—mɔ:tə	—ma̟:tə	—mᴀ̠:tə	—ma̟:tə	—ma:tə
—ma:tə	—mɔ̞:tɚ	—mᴀ:t̪ə*	—mɒ̃:tə	—mᴀ:tə	—mᴀ̠̃:θə**

162 CAR JC /kja:r/[kjᴀ:ɹ] RP /ka:/[ka̟:]

—ka:	—ka:	—ka:	—ka:ɹ	—kᴀ:ɹ	—kᴀ̠:ɹ
—ka:	—kᴀ˔:	—ka:ɹ	—ka:	—kᴀ:ɹ V	—ka·ɹ
—ka:ɹ̥	—kᴀ:ɚ	—kᴀ̟:	—kᴀ:ɹ	—ka̟:ɹ	—ka̟:ɹ
—ka̟:	—kᴀ:ɹ	—ka:	—ka:ɹ	—kᴀ̠:	—ka:ɹ
—kᴀ:	—kᴀ:ɚ	—kᴀ̟:ɹ	—kᴀ:ɹ	—kᴀ:ɚ	—kᴀ̟:
—ka:ɹ	—kᴀ:	—ka̟:ɹ	—kɒ:ɹ**	—kᴀ:ɹ̥	—kᴀ˔·ɹ̥

163 ROAD JC /ro:d/[ɹuɔd] JC /ro:d/[ɹəʊd]

—ɹo:d	—ɹəʊd	—ɹɐʊd̪*	—ɹəʊd	—ɹɐʊd	—ɹəʊd
—ɹö:d	—ɹo:d	—ɹo̞:d	—ɹɔ̈ʊd	—ɹəʊd	—ɹɔ̞̈ʊd
—ɹoʊd	—ɹo:d	—ɹɵʊd	—ɹəʊd	—ɹö̞:d	—ɹo̞ʊd
—ɹoud	—ɹoud	—ɹə̞ʊd	—ɹəʊd	—ɹoud	—ɹoud
—ɹoud	—ɹoud	—ɹo:d	—ɹɵʊd	—ɹoud	—ɹəʊd
—ɹoud	—ɹoud	—ɹö̞:d	—ɹö:d	—ɹɔ̈ʊd*	—ɹoud

164 FASTER JC /fa:sa/[fʌ:sɐ] RP /fa:stə/[fɑ̟·stə]

– fa:stə	– fa:stə	– fɒ:stɐ	– fʌ·stə	– fa:stɑ	– fʌ:stə
– fa·stə	– fɑ̟:stɑ	– fʌ:sɐ	– fa:stə	– fa:sə	– fa:stə
– fʌ:stə	– fɑ̠:stə	– fa:stə	– n.a.	– fa:stə	– fɑ̟:stə
– fʌ̠:stə	– fʌ:stə	– fa:stə	– fa:stɑ	– fa:stə	– fʌstə
– fɑ̟:stə	– fʌ:stə	– fɑ̠:stə	– fɑ̟:stə	– fɑ̟:stə	– fʌ:stə
– fa:stə	– fɑ̟:stə	– fa:stə	– fɒ:stə**	– fɑ̟:stə	– fɑ̠:stə

165 FAST JC /fa:s/[fʌ:s] RP /fa:st/[fɑ̟·st]

– fa:st	– fa:st	– fɒ:s	– fʌ·st	– fʌ:s	– fʌ:st
– fa:st	– fɑ̟:st	– fʌ:s	– fa:s	– fa:s	– fʌ:st
– fa:st	– fa:st	– fa:st	– fa:st, fɑ̠:s	– fa:s	– fɑ̟:st
– fɑ̟:st	– fʌ:st	– fa:st	– fɑ̟:st	– fa:st	– fʌ·st
– fɑ̟:st	– fʌ:st	– fɑ̠:s	– fɑ̟:st	– fɑ̟:st	– fɑ̟:st
– fa:st	– fʌ:st	– fa:st	– fɒ:st**	– fʌ:st	– fɑ̠:st

166 TOWN JC /toun/[tɔʊn] RP /taun/[tʌʊn]

– tˢæʊn	– tɑ̠ʊn	– tɑ̃ʊn	– tʌə̃n	– tɐʊn	– tʌ̃ʊn
– tɑʊn	– tʌʊn	– tɔʊn	– tʌʊn	– tʌʊn	– tʌʊn
– tɑʊn	– tɑ̟ʊn	– tɪ̈ʊ̟n	– tɑʊn	– tɐʊn	– tʌʊn
– tɑ̟ʊn	– tɒʊn	– tɑʊn	– tɑʊn	– tɑʊn	– tɑ̈ʊn
– tʌʊn	– tʌ̠ʊn	– tʌʊn	– tɑ̈ʊn	– tɑʊn	– tɑ̟ʊn
– tɒʊn	– tɐʊn	– tɑʊn	– tɒʊn	– tʌ̠ʊn	– tɑ̟ʊn

167 BLOCK JC /blak/[bla̠k] RP /blɔk/[blɒk]

—blɒk	—blɒk	—blak	—blɒk	—blak	—blɒk
—blɒk	—blɒk	—blak	—blʌk	—bla̠k	—blak
—blɒk	—blɒk	—blɒk	—bla̠k	—blɒk	—blɒk
—blɒʔk	—blɒk	—blɒk	—blakɪdʒ	—bla̟k	—blaʔk
—blɒk	—blɒk	—bla̠k	—blɒʔk	—bla̟k	—blɒk
—blɒk	—blɒʔk	—blæ̠k	—blʌk	—blɒk	—blɒk

168 AFFORD JC /afo:d/[ɐfuɔd] RP /əfɔ:d/[əfɔ̝:d]

—əfɔ̝:d	—əfɔ̝:d	—əfo̞:ᵊd̪*	—əfoʋd	—əfo:ɹd	—əfoɹd
—əfɔ̝:d	—əfo·ɚd	—afoᵊd	—əfɔ̝̈ʋdɪd**	—əfo:ɹd	—əfoɹd
—əfo·ɹd	—əfo·ɚd	—əfɔ̝ʋd	—ɐfo̞ə̈d	—əfo·ɹd	—əfo·ᵊd
—əfɔ̝əd	—əfʋɹd	—fɔ̝:ʋd	—əfouð**	—əfɔ̝:d	—əfo:ɹd
—ə̝fɔɹd, əfɔ:d	—əfɔ̝̆:d	—əfoɚd	—əfo·əd	—əfʋəd̦	—əfɔ̝:d
—əfo:ɹd	—əfɔɹd	—əfoɹd	—əfo·ɹd	—əfo:ɚd	—əfoɹd

169 FARE JC /fe:r/[fɪeɹ] RP /feə/[fɛə]

—fɛ̝ə	—fɛ:	—fɪ:ɹ	—fɪ:ᵊ	—fɛ̝:ɹ	—fɛ̝ə
—fɛ̝ə	—fɛ̝ɹ	—fe:ɹ	—fɛ̝ə	—fe·ɚ	—fe·ɹz
—fɛ̝əɹ	—fe·ɚ	—fɛ̝:ɚ	—feɐ	—fɛ̝·ɹ	—fɛ̝·ə
—fɛ̝ə	—fe:ɹ	—fɛ̝ə	—fɛə	—fɛ̝·ə	—fe:ɹ
—feə	—feə	—fɛɚ	—fe:ɚ	—feɐɹ	—fɛ̝ɐɹ
—fɛ̝əɹ	—fɛ:	—feɐɹ	—fe:ɹ	—fe:ɹ	—fe:ɹ

170 LOST JC /la:s/[lʌ:s] RP /lɔst/[lɒst]

– lɒst	– lɔst	– lɔ̣:st	– lɒst	– lʌ:s	– lɒ:st
– lɒst	– lɒst	– la:s	– la:st	– la:st	– la:st
– lɒst	– last	– la:st	– lʌst	– la:st	– lɒst
– lɒst	– lɑ̟:st	– lɒst	– lɒst	– lɒst	– lɒst
– lɒst	– last	– la:st	– lɒst	– la:st	– lɒst
– lɒ:st	– lɒst	– la:st	– lɒ:st	– lɒst	– lɒst

171 COURT JC /ko:t/[kuɔt] RP /kɔ:t/[kɔ̣:t]

– kɔ̣:t	– kɔ̣:t	– ko:ɹ˥	– ko:t	– kɔ̣:ɹt	– ko:ɹt
– kɔ̣:ˀt	– kʊɹt	– kɔ̣:t	– kˀo:t	– ko:ɹt	– ko:ɹt
– ko:ɹt	– kʊ:ɹt	– kɔ̣vt	– koə̈t	– ko:ɹt	– kɔ̣:ɹt
– kɔ:ʔt˥	– koɹt	– kɔ̣:t	– kɔ:t	– kɔ̣:t	– kʊ:ɹt
– kɔ:t	– kɔ̣:t	– koːɹt	– ko:ɹt	– ko:t˥	– kɔ̣:t
– kʊ:ɹt	– kɔ̣ɹt	– koɹt	– ko:ɹt	– kö:ɹt	– koɹt

172 JUDGE JC /dʒodʒ/[dʒə̈dʒ] RP /dʒʌdʒ/[dʒʌdʒ]

– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ
– dʒʌdʒ	– dʒə̈dʒ	– dʒə̈dʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ
– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒədʒ	– dʒʌdʒ
– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒə̈dʒ
– dʒʌdʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒə̈dʒ	– dʒʌdʒ	– dʒʌdʒ
– dʒə̈dʒ	– dʒʌdʒ	– dʒʌdʒ	– dʒə̈dʒ	– dʒʌdʒ	– dʒʌdʒ

175 DEBT JC /det/[dɛt] RP /det/[dɛt]

– dɛt	– dɛt	– dɛt	– dɛt	– dɛt̚ˀ*	– dɛt
– dɛt	– dɛptˀ	– dɛt	– dɛt̪*	– dɛt	– dɛt
– dɛt	– dɛt	– dɛθ**	– dɛt	– dɛt	– dɛt, dɛbt
– dɛʔt	– dɛt	– dɛt	– *d̪ɛt̪*	– dɛpt	– dɛθ**
– dɛt	– dɛt	– dɛt	– dɛtˢ	– dɛt̪θ*	– dɛθ**
– dɛt	– dɛpt	– dɛt	– dɛt̪θ*	– dɛt	– dɛθ**

174 COP, COPPER JC /kap(a)/[kạp(ɐ)] RP /kɒp(ə)/[kɒp(ə)]

– kɒpə	– kɒp	– kapɐ	– kɒpə	– ᶠkApɐ	– kɒp
– kɒpɐ	– kɒp	– kap	– kapä	– kAp̪	– kɒp
– kɒp	– kap	– kapə	– kApA	– kɒpə	– kɒpə
– kɒpə	– kɒp	– kɒp	– kɒp	– kɒpə, °kɒpɐV	– kɒpə
– kɒp	– kap	– kɒpə	– kɒpəz	– kAps	– kɒpə
– kɒp	– kɒʔp	– kạpɐ	– kɒpə	– kɒpɐ̝	– kɒpə

175 TRUE JC /tru:/[tɹu:] RP /tru:/[tɹvu]

– tɹɯ:	– tɹü:	– tɹu:	– t̪ʂɹu:*	– t̪ɒɹu:*	– ᶠt̪ʂɹu:*, t̪θɹu:*
– tɹu:	– tɹu:	– tɹu:t	– ˢθɹu:**	– tɹu:	– t̪ˢu:*
– tʃu:	– tɹu:	– tɹvu	– tʂu:	– tʂɹu:	– tɹu:
– tɹu:	– tɹu:	– tʂɹu:	– tɹu:	– tɹu:	– tʃɹu:
– tɹu:	– tɹu:	– tɹu:	– t̪ʂɹu:*	– tɹɯ:θ	– tɹu:
– tɹu:	– tɹu:	– tʂɹɯ:	– tɹu:	– tɹu:	– n.a.

176 THAMES JC /temz/[tɛmz] RP /temz/[tɛmz]

– tɛmz	– tɛmz	– tɛmz	– tɛmz	– tɛmz	– tɛmz
– tɛmz	– tɛmz	– tɛ̣mz	– tɛmz	– tɛmz	– tɛmz
– tɛmz	– θɛmz(**)	– teɪmz	– tɛmz	– θɛmz(**)	– tɛmz
– tɛmz	– tɛmz	– tɛmz	– tʰɛmz	– θɛmz(**)	– teɪmz
– teɪmz	– tɛmz	– tɛmz	– tɛmz	– θɛmz(**)	– tɛmz
– tɛmz	– θɛmz(**)	– tɛmz	– θɛmz(**)	– tɛmz	– tɛmz

177 THROUGH JC /tru:/[tɹu:] RP /θru:/[θɹu:]

– θɹu:	– θɹü:	– θɹu̟:	– t̠ʂɹu:	– fɹu:	– t̠ɕɹu:
– θɹu	– θʃu:	– ᶠtɹu:	– θɹu:	– θɹu:	– θᶠɹu:
– θɹu:	– θɹu:	– θˢɹvu	– θɹu:	– θɹu:	– θɹu:
– θɹu:	– θɹu:	– θɹu:	– θˢɹu:	– θɹu:	– ʧɹu:
– θʃu:	– θɹu:	– θɹu:	– θɹu:	– tɹu:	– θʃu:
– θɹu:	– θɹu:	– θɹu:	– θɹu:	– θɹu:	– θɹu:

178 TOGETHER JC /tugeda,-gjada/ [tʊ'gɛdɐ, -'gjadɐ] RP /təgeðə/ [tə'gɛðə]

– təgɛðə	– tə̠gɛðə	– tʊgɛðɐ	– təgɛðə	– təgjɛðə	– təgɛðə
– tʊgɛðə	– təgɛðə	– təgɛdɐ	– tʊgɛdɐ	– tʊgɛðə	– tʊgɛðə
– təgɛðə	– tʊgɛðə	– təgɛðə	– tʊgɛðɐ	– təgɛðə	– təgɛðə
– təgɛðə	– tʊgɛðə	– təgɛðə	– təgɛðɤ	– tʊgɛðə	– tʊgɛðə
– təgɛðə	– təgɛðə	– təgɛdə	– tʊgɛ̟ðə	– tʊgɛ·ðə	– təgɛðə
– təgɛðə	– təgɛðə	– tʊgɛdɤ	– tʊgɛðə	– tʊgɛðə	– tʊgɛðə

179 CASTLE JC /kja(:)sl/ [kjasl̩, kjʌ:sl̩] RP /ka:sl̩/[ka̟:st]

—ka:sl̩	—ka:st	—ka:sl̩	—kʌ·sl̩	—kʌ:sl̩	—ka:sl̩
—ka:sl̩	—kasl̩	—kjasl̩	—kʌ:sl̩	—kʲasl̩	—kʌ̟:sl̩
—kasl̩	—kʲasl̩	—ka:sl̩	—kasl̩	—ka̟:sl̩	—kʲa̠:sl̩
—ka̟:st	—kʌ̟:sl̩	—ka:sl̩	—ka:sl̩	—kasl̩	—kʲasl̩
—kʌ:sl̩	—ka̟:sl̩	—kja:sl̩	—kʲastl̩	—kʲasl̩	—ka̟:sl̩
—kʲasl̩	—ka̠sl̩	—ka̟:sl̩	—kʲæsl̩	—kʲasl̩	—ka̠sl̩

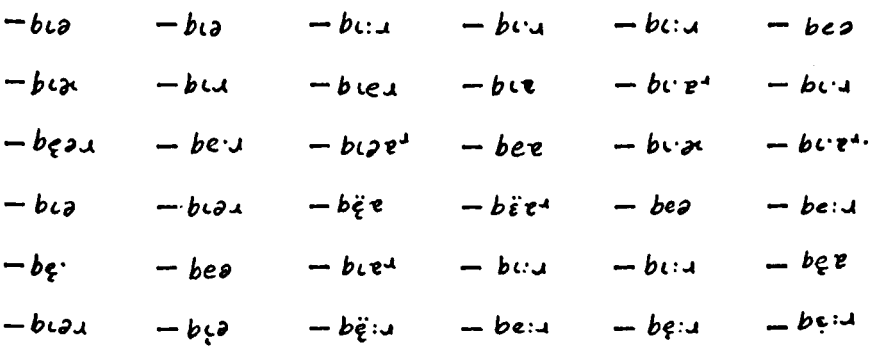
180 UNDERNEATH JC /andani:t, on(d)a-/[a̠ndɛni:t, ɔ̈nɛ; ɔ̈ndə]
RP /ʌndəni:θ/[ʌndəni:θ]

—ɒndəni:θ	—ʌndəni:θ	—ɔ̈ndəni:t	—ɒndəni:θ	—ʌndəni:t*	—ʌndəni:t
—ɒ̈ndəniθ	—ɒndəni:θ	—ʌndʌni:t	—ɔ̈ndəni:t	—ʌndə^s ni:θ	—ʌndəni:θ
—ʌndəni:θ	—ɔ̈ndəni:θ	—ʌndəni:θ	—ʌndəni:θ	—ʌndə^s ni:t	—ɔ̈ndəni:θ
—ʌndəni:θ	—ʌndəni:θ	—ɒndəni:t^s?	—ʌndəni:θ	—ɒndəni:θ	—ʌndəni:t
—ɒndəni:θ	—ɒndəni:θ	—ʌndəni:t	—ɒ̟ndəniʔt^s	—ʌndəni:θ	—ʌndəni:θ
—ɔ̈ndə^s ni:θ	—ɒndəni:θ	—ʌndə˞ni:θ	—ɔ̈ndə˞ni:θ	—ʌndəni:t	—ʌndəni:θ

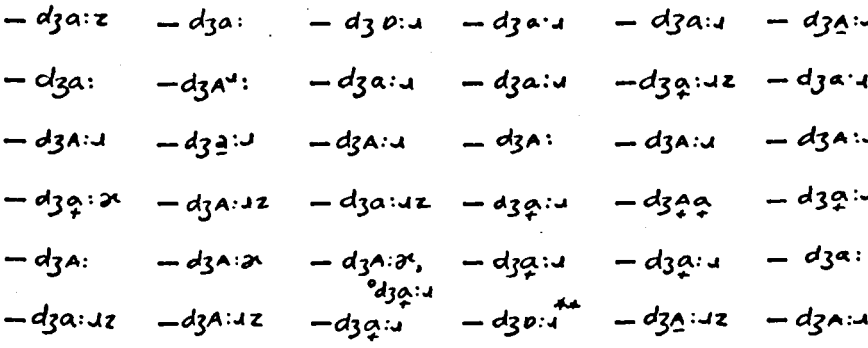
181 BAY JC /be:/[biɛ̄] RP /be:/[beɪ]

—be̩ɪ	—beɪ	—bɛ̩ɪ	—beɪ	—beɪ	—beɪ
—beɪ	—beɪ	—be:	—bɛ̨:	—beɪ	—be̩ɪ
—be·ɪ	—be:	—bɛ̨ɪ	—be:	—be·ɪ	—beɪ
—beɪ	—be:	—beɪ	—beɪ	—bɛɪ̨	—be:
—beɪ	—be·	—beɪ	—be·ɪ	—be̩ɪ	—beɪ
—be:	—beɪ	—bë̩:	—be:	—beɪ	—beɪ

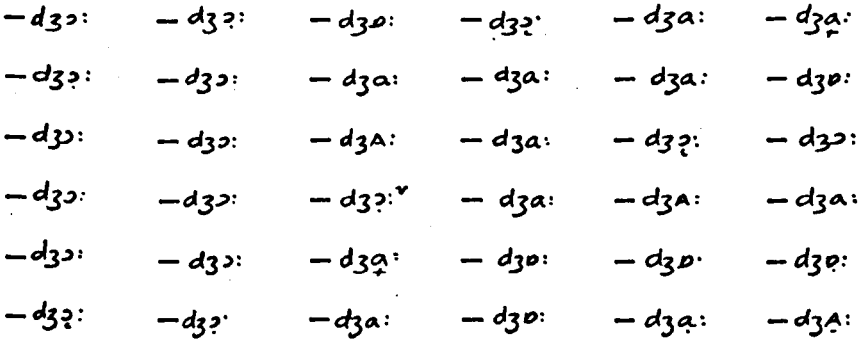
182 BEER JC /be:r/[bɪɐɹ] RP /bɪə/[bɪə]



183 JAR JC /dʒa:r/[dʒA:ɹ] RP /dʒa:/[dʒɑ̟:]



184 JAW JC /dʒa:/[dʒA:] RP /dʒɔ:/[dʒɔ:]



185 SORE JC /so:r/[suǫɹ] RP /sɔ:/[sɔ̨:]

— sɔ:	— sɔ̨:	— sǫvᵊɹ, sv·ᵊɹ	— sö:	— so:ɹ	— soəɹ
— sɔ̨:	— soɹ	— svɔɹ	— sǫ:ə	— so·əɹ	— svɔɹ
— sv:ɹ	— so·əɹ	— sɔ̨:ᵊ	— soɔ̈	— so:ɹ	— sǫ:ɚ
— sɔ:	— so:ɚɹ	— sɔ̨:	— sɔ:	— sɔ̨:	— sǫ:ɹ
— sɔ:	— sɔ̨·ᵊ	— svəɹ	— so:ɹ	— ˢso:ᵊ, sɔ̨:ɹ	— sɔ̨:
— sǫ̈:ɹ	— sɔ̨·	— sv:ɚ	— söəɹ	— so:ɹ	— sǫ:ɚ

186 SEW JC /so:/[suɔ] RP /so:/[səv]

— səv	— sëvz	— sö:	— sə:ᵛ	— sɔ̈o	— söv
— səvz	— sǫ̈:	— svɔ	— sǫ̈:	— sɵv	— sǫ̈v
— sɵv	— so:z	— sɵv	— sɐv	— sæǫ:	— sɵv
— söuz	— so:z	— səv	— səv	— səv	— s°o:
— sǫ̈v	— so:z	— so:z	— səvɪŋ	— sǫu	— sɵv
— söv	— sö·	— sɔ̈v	— sö·	— söu	— so:

187 AMERICAN JC /amerikan,-mork-/ RP /əmerikən/[ə'mɛɹɪkən]
[ɐ'mɛɹɪkən,-mɔ̈ɹk]

— əmʌɹɪkən	— əmɛɹɪkən	— n.a.	— əmɛɹkən	— mɔ̈ᶦɪkɨn	— mʌɹkən
— əmëɹɪkən	— əmëɹkən	— əmʌɹɪkən	— əmɛʌɪkən	— əmɛɹkən	— əmɛɹkən
— əmɛɹɪkən	— əmɛɹɪkən	— əmɛɹɪkən	— əmɛɹɪkən	— əmɛɹɪkən	— əmɛɹəkən
— əmɛɹɪkən	— əmɛɹkʌn	— əmɛɹɪkən	— əmɛɹɪkən	— əmɛɹkən [·ˀ]	— əmɛɹɪkən
— əmëɹkən	— əmʌɹkən	— əmɛɹɪkʌn	— əmɛɹɪkən	— əmëɹɪkən	— əmëɹkən
— əmëɹkən	— əmʌɹɪkən	— əmɛɹkən	— əmɔ̈ɹɪkən	— əmɛɹɪkən	— əmɛɹɪkən

188 GUESSING JC /gesin/[gesɪn] RP /gesiŋ/[gesɪŋ]

-gesɪŋ	-gɛsɪŋ	-gestɪn**	-gesɪŋ	-gɛsɪn	-gesɪŋ
-gesɪŋ	-gesɪŋ	-gɛsɪn	-gestɪn**	-gesɪŋ	-gɛsɪn
-gesɪn	-gesɪn	-gesɪŋ	-gesɪn	-gesɪŋ	-gesɪŋ
-gesɪŋ	-gesɪŋ	-gesɪn	-ˈgestɪn**	-gesɪŋ	-gesɪŋ
-gesɪŋ	-gesɪŋ	-gɛsɪn	-gestɪn**	-gesɪn	-gesn
-gesɪn	-gesɪŋ	-gesɪn	-gesɪŋ	-gesɪn	-gesɪŋ

189 FORM JC /fa:m/[fɑ:m] RP /fɔ:m/[fɔ:m]

-fɜ̃:m	-fɔ:m	-n.a.	-n.a.	-fɑ̃:m	-fɔ̃:m
-fɔ:m	-fɔɹm	-fɑ̃:m	-fõ:ᵊm	-fõ:m	-fa:m
-fɔ̃:m	-fɔ:m	-fɔ:m	-fɜ̃:m	-fɔ̃:m	-fɜ̃:m
-fɔ̃:m	-fɔ:m	-fɔ:m	-fɔ:m	-fɜ̃:m	-fɔ:ɹm
-fɔ:m	-fɔ:m	-fɒ:m	-fõ:ᵛm	-fɔ:m	-fɑ̃:m
-fɔ:m	-fɜ̃:m	-fa:ɚm	-fõ:m	-fɔ̃:m	-fɔ:ɹm

190 END JC /en/[en] RP /end/[end]

-End	-ɛnd	-End	-End	-ɛnd	-End
-End	-En	-En	-End	-End	-End
-End	-End	-End	-End, ˈhend**	-Endᵊ	-Endᵊ
-End	-End	-Endᵊ	-Endᵊ	-End	-End
-End	-End	-End	-Endᵊ	-End	-End
-End	-End	-End	-Endᵊ	-End	-ɛ̝end*

Chapter III.2

ANALYSIS

In order to make it possible to compare the performance of different categories of respondent, scores were calculated for each respondent's behaviour in respect of fifteen phonetic and/or phonological variables.

The first five scores, dealing with the variables θ, ð, t, d, and h, were calculated as percentages, using the formula

$$100 \left(\frac{a}{A} - \frac{h}{H} \right)$$

where A denotes the number of items for which adaptation would be appropriate, a the number actually adapted in the data for the respondent concerned, H the number of items where hyperadaptation (inappropriate adaptation) would be possible, and h the number of items actually hyperadapted by that respondent. The score is thus the percentage of appropriate adaptations minus the percentage of inappropriate adaptations.

This score formula is believed to be suitably phonological: it measures contrastiveness rather than absolute values. Thus the score for θ comes out as 100 percent only if all words where the assumed target pronunciation, RP, has [θ] are actually pronounced with [θ] and none of the words where RP has [t] are said with [θ]. If all of the words where JC has [t] are pronounced with [t], or if they are all pronounced with [θ], the resultant score iz zero. In other words, if thin, etc., are consistently distinguished from tin, etc., a high score results;

if they are habitually confused, a low score results. A random use of [θ] and [t] wherever JC has /t/ also produces a low score.

The latter ten scores, dealing with the variables j, w, r1-5, ɔ, ɔ:, ɔ', e: and o:, were calculated in a similar way except that the maximum was ten instead of a hundred.

In all scores except that for r3-4, a maximum score corresponds to a consistently RP-like performance, a minimum score to a consistently JC-like performance. Table III.2.i, overleaf, shows the scores recorded for each respondent on each variable, together with the mean score obtained by averaging over all 36 respondents.

We now discuss each in turn of the fifteen variables for which scores were calculated, and then those for which scores were not calculated. Reference will be repeatedly made to Appendix III, Statistics, where calculations of significance and so on are set out.

Tl. θ

The questionnaire contains 19 words where RP has /θ/ *. They are mouth, teeth, throat, thumb, three, thirty, third, fourth, tenth, month, north, bath, faith, Catholic, death, thick, thin, through, and underneath. In JC all these words have /t/. Adaptation is therefore called for, by means of Rule (15), p. 59. The questionnaire also contains 50 words where RP agrees with JC in having /t/. These are clearly the words available for hyperadaptation to [θ], e.g. [dɛθ] for debt. In the

* Excluding from consideration thigh and author. See p. 96, 114.

SCORES OBTAINED (per cent or per decem) Table III.ii.1

No	ɵ	ð	t	d	h	jw	rl	r2	r_4^3	r5	ɔ	ɔ:	ɔ'	e:	o:
1	81	76	72	73	100	8	5	6	1	1	8	5	4	9	9
2	82	95	100	95	26	10	8	9	1	7	9	9	10	10	10
3	100	100	100	100	100	10	10	9	0	10	10	10	10	10	9
4	100	100	100	100	100	10	7	8	1	2	10	10	10	10	9
5	100	95	100	100	100	7	3	5	0	5	10	10	10	9	8
6	95	100	100	100	100	6	6	6	1	0	10	10	8	6	7
7	15	25	0	0	100	4	3	0	0	0	1	9	1	3	4
8	47	71	40	15	19	4	4	6	3	0	1	10	1	8	10
9	15	56	25	28	59	7	3	0	0	8	4	8	4	8	9
10	69	100	12	45	100	7	4	5	1	1	6	10	6	9	8
11	93	100	60	28	100	9	4	6	3	3	9	10	7	10	10
12	87	90	100	63	100	10	9	5	1	7	9	9	7	9	10
13	71	100	100	88	80	7	3	7	2	1	9	10	7	10	9
14	59	89	100	98	100	6	3	5	2	0	9	10	7	8	9
15	58	79	30	75	68	7	4	0	1	9	5	9	7	6	8
16	81	100	40	63	100	7	4	5	1	0	9	10	5	10	9
17	81	80	67	70	75	9	6	8	3	6	8	9	9	10	10
18	87	100	92	75	75	9	7	8	1	10	8	9	10	10	10
19	98	100	80	25	86	7	3	10	1	8	8	9	7	10	10
20	66	84	80	38	35	8	8	8	0	9	10	10	10	9	10
21	70	79	83	45	68	7	5	6	2	3	10	8	10	10	9
22	88	100	100	100	75	7	4	4	2	2	3	8	4	6	8
23	48	56	92	38	57	7	6	6	6	2	4	8	6	7	8
24	100	100	100	63	100	10	6	5	7	6	10	10	10	8	8
25	99	100	100	88	100	10	10	10	0	9	10	10	10	10	10
26	100	100	100	100	100	10	8	9	0	8	10	10	9	8	7
27	95	100	100	63	100	6	6	5	2	2	10	9	5	6	6
28	100	100	100	100	100	9	6	5	2	0	10	10	9	6	7
29	49	89	40	25	72	7	7	5	1	4	6	8	4	6	7
30	100	100	100	100	100	10	9	10	0	10	10	10	10	10	10
31	65	95	80	83	75	6	3	5	1	2	9	9	6	8	9
32	85	89	100	88	68	9	5	5	4	0	10	8	7	8	8
33	67	100	100	63	100	6	5	6	2	0	5	2	6	6	7
34	100	100	100	100	100	10	8	9	2	9	10	10	10	10	10
35	100	100	100	100	100	9	7	5	1	6	10	10	10	7	9
36	56	79	100	63	71	9	5	3	1	4	9	9	5	8	8
Mean	77	90	80	69	84	8	6	6	2	4	8	9	7	8	9

scoring formula given at the beginning of the chapter, *A* therefore has the value 19, and *H* the value 50.

The values for *a* and *h* in the scoring formula were calculated for each respondent individually. Each word with [θ] counted 1, each [t] counted 0. Of the various other pronunciations encountered, [f] (the Cockney form) was scored as 1, since it is clearly adapted; [t̬] scored 0; phonetically intermediate pronunciations, namely [t̪, t̜, t͡θ] scored $\frac{1}{2}$; and cases where the informant spontaneously offered two versions (usually [t] immediately corrected to [θ]) were also counted as $\frac{1}{2}$.

Respondent no. 6, for example, has [θ] for all /θ/ words except one (*throat*). He has no hyperadapted [θ]'s. His *θ*-score therefore comes out as

$$100\left(\frac{18}{19} - \frac{0}{50}\right) = 95 .$$

Respondent no. 7 has only three /θ/ words with the adapted [θ]—for the remaining 16 he has the JC [t]. His pronunciation of *night* with final [t̪] counts as $\frac{1}{2}$ a hyperadaptation. His *θ*-score is therefore

$$100\left(\frac{3}{19} - \frac{\frac{1}{2}}{50}\right) = 15 .$$

As a last example, no. 15 has twelve /θ/ words with [θ], two with intermediate forms or two versions, and five with [t]. He also has five hyperadapted [θ]'s, e.g. [θʌŋ] for *tongue*. We calculate his *θ*-score as

$$100\left(\frac{13}{19} - \frac{5}{50}\right) = 58 .$$

Inspection of the 56 respondents' Q-scores shows that they ranged from 15 to 100, with an average of 77.42. Nine respondents scored 100: they were all in non-manual occupations. Six respondents scored less than 50; they were all in manual occupations. When we divide up the respondents according to the five classifications described on p. 79 and work out the average score for each group, we obtain the following table (which is an extract from the T1 table in App. III, p.268).

T1 Q-score			
	Overall mean	77.4	
	(a) Women	83.1	
	Men	75.2	
	(b) Non-manual	99.1	Highly significant
	Manual	66.6	
	(c) Arrived young	75.3	
	Arrived at 20+	79.2	
	(d) Arrived by 1960	68.9	
	Arrived since	81.2	
	(e) From West	73.0	
	From East	78.7	

The t-tests described in App. III are used to calculate whether the differences in mean scores--between men and women, for example, or between manual and non-manual occupational classes--are so great that they are unlikely to have arisen by mere chance. For these Q-scores, we see that only the difference between occupational classes is statistically significant: it would not arise even one time in a thousand by chance alone, and we con-

clude that the association between a high θ-score and being in a nom-manual occupation is highly significant. But no statistical significance can be established between θ-score and sex, age on arrival, date of arrival, or parish of origin.

It is also of interest to examine the frequency of adaptation or hyperadaptation for the various different questionnaire words. For example, almost everybody said bath with [θ], but only 19 of the 36 respondents has [θ] in throat. Arranged in order of frequency of adaptation, we have throat, fourth, thumb, north, underneath, teeth (all not adapted ten times or more), tenth, faith, death, mouth, month, Catholic, thirty (five times or more), thin, through, third, thick, three, bath (less than five). These seem to be more or less random results (cf. discussion on p. 60). Only for the last three can we guess at an explanation, namely that the words thick, three and bath are ones which schoolteachers in Jamaica are fond of using as examples when teaching their pupils the JE /t-θ/ contrast.

Among θ hyperadaptations, the most frequent was debt ($6\frac{1}{2}$ cases). Next came Thames (6), teeth ($5\frac{1}{2}$), mortar (5), tree ($4\frac{1}{2}$), and then in order true, tongue, forty, water, towel, tired, tin, hot, foot, night, trouble. The remaining 33 /t/ words were hyperadapted by no-one. The most frequent hyperadaptation, Thames, can be easily accounted for as a spelling pronunciation (cf. p. 124). The special factor with teeth could be its two JC /t/'s, one needing adaptation and one not (p. 60); mortar could be hyperadapted either through confusion with the name Martha, its JC homophone, or through being a

thing felt as belonging to Jamaican culture, little used in England, and therefore of uncertain English-English pronunciation. Tree and true could be influenced by their JC homophones three and through.

Cockney-type pronunciations with [f] were mentioned above. Four certain cases of this were found*; two concerned three (making it homophonous with free, as in Cockney), one death, and one through. Two came from respondent no. 8, and one each from no. 9 and no. 52 (all in manual occupations).

T2. ð

The questionnaire contains 9 words where RP has /ð/. In JC all have /d/, and adaptation by Rule (13) is again in question. There are also 20 words where RP and JC both have /d/ and which are therefore candidates for hyperadaptation. So in the scoring formula A now has the value 9, H the value 20. Pronunciations with [ð] scored 1, those with [d] 0, and those with [d̪, d͡ð] or a spontaneous correction ½. Cockney [v] scored 1.

The respondents' ð-scores were higher than their θ-scores, ranging from 25 to 100 with an average of just on 90. Nineteen respondents, over half the sample, had scores of 100. Abridged from the T2 table in App. III, p. 268 , we have:

*There is reason to suppose the number to be actually slightly higher. It is difficult to distinguish [f] from [θ] on tape, and my memory of the interviews is that the number of cases I saw was greater than four.

T2 $\underline{\check{o}}$-score	Overall mean	89.6	
	(a) Women	93.7	
	Men	88.1	
	(b) Non-manual	99.2	Probably significant
	Manual	84.7	
	(c) Arrived young	84.3	
	Arrived at 20+	94.0	
	(d) Arrived by 1960	86.6	
	Arrived since	91.0	
	(e) From West	85.6	
	From East	90.8	

The only difference between groups that is even probably significant is that between occupational classes, which could arise by chance just under one time in fifty.

Since occupational class is clearly so strongly associated with high scores on several variables, including $\underline{\theta}$ and $\underline{\check{o}}$, some additional $\underline{t}$-tests were carried out on the manual-class respondents only. Any other differences there might be would then not be swamped by the effects of occupational class. These are set out in App. III, p.273 . The only interesting finding as far as $\underline{\check{o}}$ is concerned is that relating to age on arrival:

Manual only	(c) Arrived young	75.5	Probably significant
	Arrived at 20+	91.4	

In other words, those who immigrated as adults scored higher than those who came as adolescents (with less than one chance in twenty

of this difference in mean scores arising by chance). Could this difference be due to there being greater social pressure to make a /d-ð/ contrast in the West Indies than in England? Those who migrated as adults would then have been subjected to it for a longer time. (Adult arrivals scored higher than adolescent arrivals on all the first five variables, whether we take the means for all respondents or only for those in manual occupations. But none of the other differences between adult and adolescent arrivals is individually statistically significant.)

The /ð/ word most often not adapted was smooth (6 cases). Then followed bathe and together (4 cases), leather (3), father (2), breathe (1), mother (1), that (½), and brother (in every case adapted). Cockney forms with [v] were noted once each for brother and smooth (but see note on p. 201, which applies here too); they came from respondents no. 2 and 32.

Hyperadaptations to [ð] affected breed(er) 9 times and ladder 7 (perhaps through the effects of breathe and lather or leather). Other words hyperadapted were bed (2½), afford (1½), needle, death, (once each), road, debt, underneath (½ each).

T3. t

There were five questionnaire words involving an RP morpheme-final /st/ cluster. The corresponding JC forms have /s/ only, and the adaptation rule involved is Rule (27), p. 71. In four of the five items the /s(t)/ is word-final, but in the fifth, faster, it is morpheme-final within a word.

There were also twelve questionnaire words which were candidates for hyperadaptation, since they end with /s/,/f/,or /ʃ/ in JC and RP. (In one of them, guessing, it is a morpheme rather than a word which ends in /s/.)*

Thus A was 5 and H 12. Scoring was simple, with 1 for [t] and 0 for its absence. From the T3 table (p.268) we have:

T3 t-score			
	Overall mean	80.3	
	(a) Women	96.3	Marginally significant
	Men	74.2	
	(b) Non-manual	100.0	Significant
	Manual	70.5	
	(c) Arrived young	74.7	
	Arrived at 20+	84.8	
	(d) Arrived by 1960	70.6	
	Arrived since	84.6	
	(e) From West	68.0	
	From East	83.8	

All non-manual respondents scored 100 (and so did 8 manual). The difference between mean scores for occupational classes is significant, being such that it could arise by chance only once in over 100 cases. The difference between men's and women's scores could arise by chance about once in twenty times. When the effect of occupational class is removed (p.274), the difference by sex remains only of marginal significance.

Of the five /st/ words, faster and lost failed to get

*Voiceless fricatives only counted. Words in /k/ and /p/, e.g. sack, not counted here.

a final [t] only twice, as compared with first (7), fast ($7\frac{1}{2}$), and cost (11). Now lost was almost always followed by it (p. 123), a word which is closely linked to the word it follows (being a 'clitic'). So it seems that medial /s(t)/ was more readily adapted than final /s(t)/.

The commonest hyperadaptations were guessing and wash* (4 times each); hoarse and face were hyperadapted once each.**

T4. d

JC lacks the final consonant clusters /ld, nd/; eight questionnaire words have one or other of these final clusters in RP. The corresponding JC forms end in simple /l/ or /n/ or, in the case of ground, /n/ or /ŋ/ (see below). Another 21 items in the questionnaire were candidates for hyperadaptation, ending in simple /l/ or /n/ in RP as in JC (including in the figure of 21 five cases of final syllabic /l/ and one at least of syllabic /n/). From the T4 table (p.269) we have:

T4 d-score	Overall mean	69.3	
	(a) Women	81.6	-
	Men	64.5	
	(b) Non-manual	92.8	Significant
	Manual	57.5	
	(c) Arrived young	68.8	
	Arrived at 20+	69.7	

* Cf. note on p. 104
** A final [t] on mask, ask, or wasp was not counted here.

(d)	Arrived by 1960	58.9
	Arrived since	71.5
(e)	From West	63.1
	From East	71.0

Scores here ranged from 0 to 100. The difference between occupational classes is again significant (less than one chance in a hundred). None of the other differences are, even when the effect of occupational class is removed (p. 274).

The word most frequently unadapted was second (16 cases); then came ground (15), followed by blonde (13), hand (12), blind (11), wild (9), cold (5), and lastly end (2). The most frequent hyperadaptation was coal ($5\frac{1}{2}$ cases); the others encountered were lion (once) and boil (twice; cf. p. 119).

We have not so far actually formulated the adaptation rule involved here. It is:

(25) $$\emptyset \rightarrow d \; / \; \left\{ \begin{matrix} l \\ n \end{matrix} \right\} - \neq \; .$$

--and of course it needs a lexical diacritic to restrict its operation to appropriate cases of JC final /l, n/.

As mentioned above, ground may have final /ŋ/ in JC. So may round and pound; and the vowel preceding this /ŋ/ is typically /o/, thus /groŋ/, /roŋ/, /poŋ/. Clearly this JC input requires another rule before Rule (25) applies, to bring about the change

(26) $$oŋ \rightarrow oun \; .$$

It seems that Rule (26) must be given an environment restricting it from applying before velars, $[^{+cons}_{-cor}\ -ant\ ]$ (because of words like monkey and bungle). Obviously, too, the environment should be partly lexically specified, to prevent its applying to words like tongue.

The form [gɪʌn] recorded on p. 161 suggests that Rule (26) should be broken into two parts:

(26)(i) $\eta \rightarrow n\ /\ o\ \_\_$;

(26)(ii) $o \rightarrow ou\ /\ \_\_\ n$.

Then [gɪʌn] results from applying (i) but not (ii).

Actually, evidence from the informants I studied in Westmoreland suggests that Rule (26), severely lexically restricted, belongs to the syntopic rules of JC rather than to JC-RP adaptation rules. These informants insisted that town and tongue were different, /toun/ vs. /toŋ/, and likewise that crown and gown, (to) found, drown, frown, and clown always had /-oun/ and not /-oŋ/. They conceded that other words fluctuated between the two possibilities: down, round, sound, pound, brown, ground, all with variation between /-oun/ and /-oŋ/. This seemed to be an accurate description of their usage: I noted no instance of town as /toŋ/, in spite of DJE, p. liii, and Cassidy, 1961: 38-39. Perhaps this is a question of regional difference between Westmoreland and elsewhere; but it is noteworthy that no hyperadaptations of the type */taun(d)/ for tongue turn up in the data. More likely, I think, there has been a change between generations, and /toŋ/ for town is now old-fashioned in Jamaica (my Westmoreland informants for this point were aged 20-30).

The words which did exhibit variation in Westmorcland seemed to have their /-oun/ variants most typically before a following /d/, as /groundov/ ground-dove; /mi 'na: go ˌdoun de/ 'I'm not going down there'. Another example noted, from a 20-year-old man in Westmoreland, shows that /toun/ is not incompatible with pronunciation features characteristic of the broadest and most rural JC:

/dʒa:man lib a si:fod toun/ 'Germans live in Seaford Town'.

As a final comment on the question of /oŋ/ vs. /oun/ (/aun/), I must record my impression that /oŋ/ is held in much greater social disapproval, or is much more old-fashioned, in Jamaica than in other parts of the West Indies. One virtually never hears /oŋ/ for /aun/ from Jamaicans in London, and never from those who are educated; but there is a Guyanese Ph.D. on the staff of University College London who uses it consistently, clearly not feeling it to be substandard. I have repeatedly noticed the same thing with other Guyanese, as well as with Trinidadians, in London. What Jamaicans consider broad or non-standard, those from the Southern Caribbean and Guyana evidently don't. (This does not stop other West Indians from commenting that Jamaicans have the 'worst' English in the West Indies.)

T5. h

There were 9 questionnaire items whose RP form includes initial /h/ (one of the nine, hotel, may lack /h/ in old-fashioned RP). There were 14 words whose RP form begins with a vowel, offering thereby the possibility of inserting a hyperadaptive /h/.

Starting from an /h/-less form of JC, the adaptation rule involved here is clearly

(27) $$\emptyset \rightarrow h \ / \ \# \ — \ \begin{bmatrix} +syll \\ -cons \end{bmatrix} .$$

--with, additionally, a lexical diacritic in the environment.

Scores, as shown in the T5 table, p. 269 , were as follows:

T5 h-score*	Overall mean		83.6	
	(a)	Women	89.1	
		Men	81.4	
	(b)	Non-manual	100.0	Significant
		Manual	75.4	
	(c)	Arrived young	81.4	
		Arrived at 20+	85.3	
	(d)	Arrived by 1960	70.1	Probably significant
		Arrived since	89.5	
	(e)	From West	100.0	Probably significant
		From East	78.9	

Maximum scores were recorded for all respondents in non-manual occupations and for all respondents from Eastern parishes. The association was significant for occupational class (less than one chance in 100 of the difference between means arising at random), but only probably significant for parish of origin (one chance in over 20). There was also a probably significant link between high h-score and recent arrival. When the effect of occupational class was cancelled out, we derived (p.274)

Manual only	(d)	Arrived by 1960	58.8	Probably significant
		Arrived since	83.6	

*Voiceless vowel onset counted ½.

	(e) From West	100.0	
Manual only			Significant
	From East	67.2	

--which confirms the significance of parish of origin but leaves that of date of arrival unconfirmed.

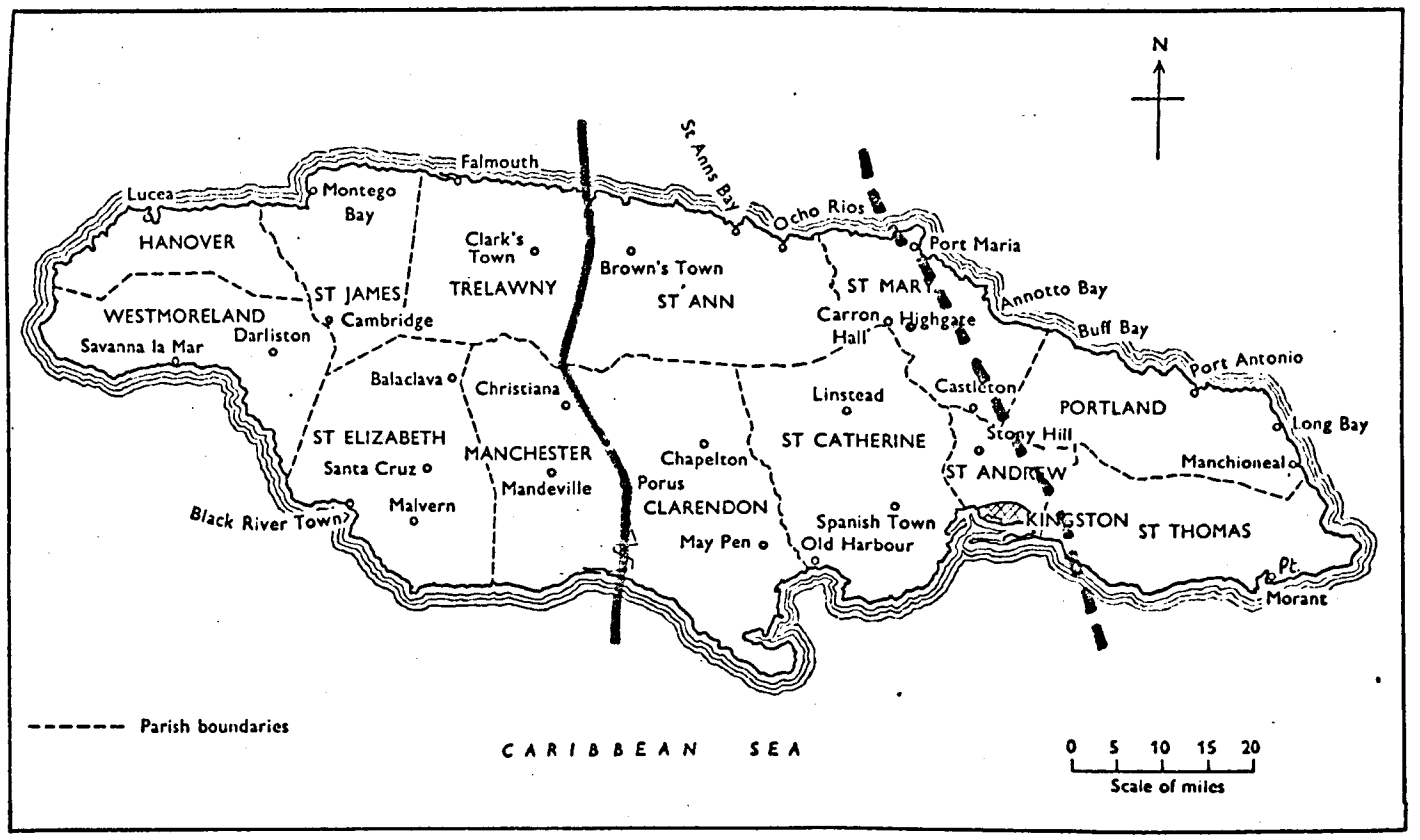
These scores therefore provide compelling additional evidence for my contention that a phonemic /h/ exists in the Western parishes of Jamaica (see pages 22-23). No score of less than the maximum for h was recorded for any respondent whose home parish was to the west of the thick line on the map on page 211. Conversely, only two manual-occupation respondents from east of the line scored 100 (and one of those was from Clarendon).

When we average over all variables, the respondent who scores lowest, i.e. has the most JC-like pronunciation and the least adaptation, is no.7. Yet he scores 100 percent on h--no failures to adapt, no hyperadaptations. He comes from Westmoreland*.

For the path of the northern end of the isogloss no evidence is to hand, owing to the regretted lack of respondents from the three North-Eastern parishes.

Note The other, broken, line on the map on p. 211 shows the Eastern limit of /k(j)asl/ for castle in the data collected in London. The form /k(j)a:sl/ is found for all from east of this line and from some others (presumably through influence of RP/Cockney).

*It is a pity that De Camp, 1960, was so blinded by the assumption that [h] is not contrastive in JC that he failed to note that the informant from St Elizabeth whose speech he transcribes at length in fact uses [h] contrastively. This does not deter De Camp from asserting (1960: 159) that "Initial /h/ [sic] alternates with zero".



approximate line of the /h/ isogloss

approximate line of the isogloss of /a(:)/ in castle

T6. j/w

The variables j and w were given a combined scoring, involving as they both do the deletion of a semivowel. The variable j, governed by Rule (11), has already been discussed (pages 55-57). It is represented in the questionnaire by the items cap, garden, cat, Catholic, gas, car, castle.

The other variable, w, is represented by only two items, pointing and boil. If we represent the /p-b/ archiphoneme by /P/, these words have a JC /Pwai-/ corresponding to RP /Pɔi-/. Now the variable ɔi, not yet discussed, requires a rule

(28) $ai \rightarrow ɔi \ / \ [+B]$

--where [+B] is a lexical diacritic determining the application of the rule in toy and voice (as against tie and vice, where it ideally does not apply). Since the /Pwai/ words all require [+B], we can formulate a rule

(29) $ai \rightarrow [+B] \ / \ P\ w —$

--to operate before the w-deletion rule with which we are here mainly concerned, viz.

(30) $w \rightarrow \emptyset \ / \ P — .$

This latter rule requires no lexical diacritic as it is always appropriate in the stated phonetic context. The order of these three rules must be (29), (30), (28), and the adaptation of boy would proceed as follows:

bwai	JC input
bwai[+B]	by Rule (29)
bai[+B]	by Rule (30)
bɔi	by Rule (28) .

From the T6 table, p. 269, we have (recall that hence-forward scores are out of ten, not out of 100):

T6	j,w-score	Overall mean	7.89	
		(a) Women	7.80	
		Men	7.92	
		(b) Non-manual	8.92	Probably significant
		Manual	7.58	
		(c) Arrived young	8.13	
		Arrived at 20+	7.70	
		(d) Arrived by 1960	7.55	
		Arrived since	8.04	
		(e) From West	7.00	
		From East	8.14	

So the only correlation between groups of respondents and the j,w-score is that the higher score for non-manual occupation than for manual is probably significant.

Scores here were calculated on the basis that complete deletion scored 1, firm presence of /j/ or /w/ scored 0, and intermediate stages such as [ca-, ka-, ka-] scored ½. It may be felt that these intermediate stages, implying the retention of a consonantal opposition in cat vs. cot, should have scored 0. But there is no firm criterion by which the question whether the distinction is primarily consonantal or primarily vocalic can be resolved.

Hyperadaptation does not arise in the case of j and w.

Analysis of the j results by questionnaire item reveals an unexpected anomaly. Cap had a /j/ or some remnant of consonantal palatalization in 24 of the 56 cases, and cat, Catholic, and gas in 23, 19, and 19 cases respectively. Then castle was intermediate with 11 cases. But there were no cases at all of palatality with garden and car. It seems that, for reasons that are not clear, semivowel deletion before short /a/ is difficult in a way that semivowel deletion before long /a:/ is not. (As we have seen, castle may have either /a/ or /a:/.) Perhaps the backness of the RP/Cockney /a:/ makes the absence of a /j/ before it stand out in a way it does not, to a Jamaican ear, before the front and not fully open /a/.

The two w items, pointing and boil, occurred three times apiece with /w/. In Westmoreland, by the way, the prevailing form for the second of these two words was /bail/, without /w/.

T7. rl

This variable concerns the vowel quality and the possible presence of an /r/ in words such as church. Relevant questionnaire items, seven in number, were shirt, thirty, first, third, stir, bird, church.

Except for stir, the broadest JC pronunciations of these words contain no /r/: /ʃot/, /toti/, etc. The RP forms have no /r/, either: /ʃə:t/, /θə:ti/, etc. But in adapting from one extreme to the other it is clear that, as with beard and pork, we have to proceed via successive stages of r-insertion, vowel

adjustment, and finally r-deletion. The method of scoring for this variable was designed to reflect this threefold process.

The first rule needed is an r-insertion rule comparable to Rule (22). It has the form

(31) $$\emptyset \rightarrow r / o \text{ —— } C$$

where C is a consonant, $[^{-syll}_{+cons}]$. A lexical diacritic is also needed; if it is inappropriately attached, or if the rule is allowed to apply to all words satisfying its phonetic environment, hyperadaptations such as /bord/ for bud result.

It is clear that Rule (31) is at least to some degree a syntopic rule of JC. In Westmoreland I had the opportunity of observing over several weeks the pronunciation of a 9-year-old boy, who consistently said /bord/ for bird, even though he usually said /ton/ for turn. His uncle of 20, though, usually said /bod/.

We may note that the sequence /or/ is found in even the broadest JC when word-final, as /for/ fur, /stor/ stir, or morpheme-final, as /borbuʃ/ bur-bush. The sequence /orC/ can arise not only through Rule (31) or through the /or/ being morpheme-final, but also through the elision of unstressed morpheme-medial /a/ (or perhaps other short vowels). I noted /korsi:n/ kerosene, /torli:n/ terylene, and /sorsi/ for what DJE spells cerasee, and take these forms to be derived from vowel-elision followed by a change from /e/ to /o/ forced by the morpheme-structure Rule (7), which requires that any short vowel before /rC/ can only be /o/. Anyhow, the result is that preconsonantal /or/ is quite an 'easy'

sequence in JC, and--presumably because of this fact--pronunciations with /or/ of bird, church, etc., seem to extend much further down the social and stylistic scale than does, say, /ɵ/ or /ɔ/.

Respondents could score a maximum of 5 points for having applied Rule (51) to the questionnaire items concerned. Since nobody used pronunciations of the type [tʃɜtʃ] church, all scored the maximum--with the exception of the one respondent who had a hyperadapted /or/ in bud(s) and therefore lost 0.5 points on that.

Next comes phonetic adjustment of the vowel quality. JC /o/ is backish and rounded, while RP /ə:/ is central and unrounded. A very wide range of vowel qualities were used by respondents, and it was decided to judge them for this part of the score on rounding only. This is considered the most important component of the relevant vowel adjustment rule,

(52) $$o \rightarrow ə \;/\; \_\_ \; r \left\{ \begin{matrix} C \\ \# \end{matrix} \right\} .$$

For unrounding the vowel, respondents again scored a maximum of three points.

The final stage is deleting the /r/, or rather perhaps converting it into vowel length:

(53) $$[-\text{long}] \rightarrow [+\text{long}] \;/\; \_\_ \; r \; [-\text{syll}]$$

followed by the familiar r-deletion rule, Rule (24). For this last part of the score, respondents gained a maximum of 4 points for having no kind of [r] or r-colouring in the words. On this, one of the major points of difference between JE and RP, only two respondents scored the maximum.

Maximum score for r thus added up to 10; means were as follows.

T7 r1	Overall mean	5.67
	(a) Women	5.60
	Men	5.69
	(b) Non-manual	7.17
	Manual	4.92
	(c) Arrived young	6.38
	Arrived at 20+	5.10
	(d) Arrived by 1960	5.73
	Arrived since	5.64
	(e) From West	4.13
	From East	6.11

None of these differences were significant.

There were no striking differences between different r1 questionnaire items, except that stir kept its /r/ more regularly than other words, doubtless because, as in RP, linking /r/ remains in the phrase stir it with which many respondents answered.

T8. r2

This variable concerns the vowel and possible /r/ in words like beard, pork, whose adaptation was discussed on pages 65-69. Only five items were in question: beard, hoarse, pork, afford, and court. Like the r1-score, the r2-score was built up of two components. The first was based on whether the split of beard from bathe and of court from coat had been made; this

counted for 5 points, and was based on whether the respondent's pronunciation of the two pairs was considered to show substantial contrasts between them (not counting final [ŏ-d], of course). The second was based on whether the non-RP /r/'s had been deleted again, and counted for another 5. The maximum was thus 10; mean scores were as follows.

T8 r2		
	Overall mean	5.94
	(a) Women	6.30
	Men	5.81
	(b) Non-manual	7.17
	Manual	5.33
	(c) Arrived young	5.88
	Arrived at 20+	6.00
	(d) Arrived by 1960	5.45
	Arrived since	6.16
	(e) From West	4.75
	From East	6.56

Scores here ranged from 0 to 10, and the variation within groups was so great that none of the differences in mean were statistically significant. Comparing different items, hoarse had /r/ 27 times, beard 22 times, pork and court 20 times, and afford 17½ times. A hyperadaptive /r/ was recorded in bathe once, in coat not at all.

T9. r3,4

This variable is unusual in that it is the only one where JC and RP would both score zero. It concerns the possible

incidence of /r/ in two environments: one, r3, preconsonantally after a vowel which in JC is /a:/ and in RP may be /a:/ or /ɔ:/, and the other, r4, after the unstressed vowel which is /ə/ in JC and /ə/ in RP. There were ten r3 items in the questionnaire, e.g. short, forty, garden, park, and 19 r4 items, e.g. razor, slippers, hour, tired.

Scores were on the simple basis of a point for any pronunciation which included anything considered to realize an /r/, and no point otherwise. The combined r3/4 score was half for r3, half for r4. Only one respondent got his score reduced because of hyperadaptation, namely through putting /r/ in dog, the first syllable of water, and the last syllable of lion.

T9	r3,4	Overall mean	1.56	
		(a) Women	1.40	
		Men	1.62	
		(b) Non-manual	1.33	
		Manual	1.67	
		(c) Arrived young	0.88	Probably significant
		Arrived at 20+	2.10	
		(d) Arrived by 1960	1.18	
		Arrived since	1.72	
		(e) From West	1.38	
		From East	1.61	

Scores here ranged from 0 (from the least and most adapted) to 7. The only correlation which is even probably significant (less than one chance in twenty of arising at random) is that between a high r3,4-score and adult rather than adolescent entry

into the U.K. A possible explanation, if this is indeed not just a random result, is as follows. As a Jamaican reaches adulthood in his own country, he becomes increasingly subject to, and aware of, rhoticizing pressure (perhaps from American English*). Some adults respond to this pressure by acquiring a style of speech including the relevant preconsonantal /r/'s. They retain this style on coming to the U.K. But those who come as adolescents have not been subject to so much rhoticizing pressure, which is certainly not at work in England, and so have fewer /r/'s.

It is nevertheless very likely that a high r3,4-score corresponds to personal or social factors which we have not been able to reveal--contact with Americans, admiration of things American, being taught by American, Irish, or Bajan schoolmasters, membership of a church with American-trained leadership, etc.

Analysis by item reveals some remarkably high variation. Thus 20 of the 36 respondents put an /r/ in horse, and 16 of them in garden. But only three used one in forty and north, and only two in the first syllable of mortar. A possible East-Jamaican homophonic clash with arse (in JC /ra:s/ anyhow) does not seem sufficient explanation for the high r3 in horse. The other items, park, farm, short, fork, and form, had 10, 9, 6, 6, and 4 rhotic pronunciations respectively.

Among the r4 words, there were 15½ cases of /r/ in tired, but none at all in the final syllables of razor and brother.

*Or conceivably from Barbadian or other rhotic accents.

Dissimilation could be playing a part in these last two. Baker had 7 rhotic pronunciations, bigger and butter 5 each, and the remaining thirteen r4 words from 1 to $4\frac{1}{2}$.

The r-insertion rule which operates here is not one that is relevant to adaptation from JC to RP. It is:

(34) $$\emptyset \rightarrow r \;/\; [^{V}_{+low}] \;\_\_\; C$$

--which covers both r5 and r4. The [ɑ] occurring in rhotic r4 pronunciations is best regarded in terms of JC phonemics as /or/ rather than /ar/. It is usually closer phonetically to the vowel of fur than to that of /kjar/ 'carry'. So Rule (7) applies after (34) in the way discussed at the foot of page 215.

T10. r5

The last of the r variables concerns those morpheme-final /r/'s after long vowels which were claimed (pages 54-55) to be present in JC, but are absent in RP except insofar as they are retained as linking /r/'s in connected speech. There are 17 relevant questionnaire words*; examples are hair, fourth, stars, fear.

The adaptation here is a straightforward one of deletion, effected by the rule

(35) $$r \rightarrow \emptyset \;/\; \_\_ \;\neq$$

--which is part of the derhoticizing rule, Rule (24) discussed above.

*Ear(s) was excluded from consideration for the reasons set out on page 93.

Scores, on the basis of zero for the presence of /r/, 1 for its absence, were as follows.

T10 r5	Overall mean	4.28	
	(a) Women	3.90	
	Men	4.42	
	(b) Non-manual	5.58	
	Manual	2.06	
	(c) Arrived young	5.56	
	Arrived at 20+	3.25	
	(d) Arrived by 1960	5.27	
	Arrived since	3.84	
	(e) From West	1.25	Probably significant
	From East	5.14	

The range here was all the way from 0 to 10. As can be seen, /r/ was commoner with women, manual workers, older arrivals, more recent arrivals, and those from the West; but only the last of these was even probably significant. Closer examination of the results by parish of origin does not reveal any geographical variation such as characterizes [h]: zero scores, i.e. consistent rhoticity, were recorded by speakers from Kingston, St Andrew, St Mary, Clarendon, Manchester (5), and Westmoreland. Others who scored 2 or less came from Kingston (4), St Mary, St Ann, St Elizabeth, and Westmoreland. High scores, i.e. a tendency not to have /r/, were also scattered. Scores of 10 came from Kingston and St Mary (2), scores of 8 or more also from Kingston (4), St Catherine, St Elizabeth, and St Mary. At best, therefore, there is a North-South difference, with low incidence of /r/ particularly in

St Mary and a very varied situation in Kingston.

The complete absence of hypercorrections of the type [fəu] four, [bei] beer, argues for the view that their JC phonological representation cannot be /fo:/, /be:/, but only /fo:r/, /be:r/, etc. If Le Page and Cassidy are right (DJE, p. liii) in quoting the form [fuo] for four, it must either be non-homophonous with foe or else result from an optional and synchronic r-deletion rule operating in colloquial speech. And either selected parts of St Mary and Kingston have developed a 7-term long vowel system in place of the usual 5-term one or, more likely, they happen to have contributed to our sample speakers who for reasons we cannot discover are more ready than most to delete their postvocalic /r/'s.

Analysing the results by keyword instead of by speaker, we find one striking fact: that /r/ is retained more generally after /a:/ (stars, jar--29 speakers each) than after /e:/ and /o:/ (hair, four, and 13 other words--between 16 and 24½ speakers each). Word-final rather than just morpheme-final position plays no part in this, since fourth was rhotic exactly as often as four, stairs exactly as often as bear, and stars, as we have seen, exactly as often as jar.

T11. ɔ

This is an important vowel variable, the one reflecting the split of JC /a/ into RP-JE /a/ vs. /ɔ/, e.g. pat vs. pot.

The adaptation rule concerned is Rule (15), page 63, a subrule of Rule (17). The relevant questionnaire items are blonde, sock(s), bottle, etc., --eleven in all. There are also eight items available for hyperadaptation: hat, hand, etc.*

Detecting whether a vowel opposition is made is more difficult than detecting consonantal oppositions like /t-θ/. To save a lot of cross-referring and uncertainties it was decided to count as adapted all vowels in ɔ words which were backer in quality than [ʌ]. Hyperadaptations were counted in the same way, greater backness than [ʌ] in (ɔ) words counting as hyperadapted. Respondents' scores ranged from 1 to 10, with means as follows:

T11 ɔ	Overall mean	8.03	
	(a) Women	9.60	Probably significant
	Men	7.42	
	(b) Non-manual	10.00	Significant
	Manual	7.04	
	(c) Arrived young	7.50	
	Arrived at 20+	8.45	
	(d) Arrived by 1960	7.09	
	Arrived since	8.44	
	(e) From West	7.25	
	From East	8.25	

So making the black--block distinction is significantly associated with non-manual occupation. It is commoner with the women

*/a/ after /Cj/ was not included here. See p. 64-65.

in the sample than with the men, though this association was only probably significant (arising by chance less than one time in twenty), and remains only probably significant when we cancel out the effect of occupational-class differences (p. 275).

Only three manual-class respondents scored 10 for ɔ, but 11 non-manual respondents did. But only 3 respondents had scores of under 3 (consistent with not having any real opposition /a--ɔ/).

Analysing the results word by word, we find a particularly high incidence of front vowels in wasp (11 respondents) and a particularly low incidence in hot (2) and clock (3). The other words had front vowels for from 5 to 8 respondents each. The infrequency of /ɔ/ in wasp is attributable to spelling pronunciation. It may be that hot is often compared with hat as a schoolroom example of the opposition. Hyperadaptation to /ɔ/ occurred for five speakers in crab, for four in pat, for one in each of hand, rat, and sack, and for none in hat, that, black, or the /Kj-/ words. But I suspect that with the two Westmoreland respondents, if not with any others, the back vowel in crab is not actually hyperadaptation so much as a back allophone of unsplit /a/, conditioned by the following labial /b/.

T12 ɔ:
========

This variable reflects the split of JC /a:/ into JE-RP /a:/ vs. /ɔ:/, e.g. farm vs. form, bath vs. north. The adaptation rule concerned is Rule (16), p. 63, a subrule of Rule (17). There are nine relevant questionnaire words--jaw, short, water,

etc., and twelve candidates for hyperadaptation--mask, star, park, etc. (We exclude from consideration here the ɔ' words like cross, dog.)

The firmness of an /a:--ɔ:/ opposition is more difficult to establish than that of /a--ɔ/, since phonetically the qualities of RP /a:/ and /ɔ:/ are much closer to one another. Scoring was done on the basis that any ɔ:-word said with a vowel of quality [ɑ̟] or fronter counted as unadapted, while any (ɔ:)-word said with [ɒ] or closer counted as hyperadapted. This means that the scores given below probably slightly overestimate the extent of adaptation, since a quality of [ɑ] all round would reduce a respondent's score for neither group of words. Scores nevertheless ranged from 2 to 10, as follows.

T12	ɔ:-score	Overall mean	9.05	
		(a) Women	9.50	
		Men	8.92	
		(b) Non-manual	9.92	Probably significant
		Manual	8.58	
		(c) Arrived young	9.00	
		Arrived at 20+	9.05	
		(d) Arrived by 1960	9.09	
		Arrived since	9.00	
		(e) From West	8.25	
		From East	9.25	

The only correlation of even probable significance is between high ɔ:-score and non-manual occupational class.

Word-by-word analysis reveals a high degree of non-adaptation for mortar (pronounced with /a:/ by 9 out of the 56 respondents; no other word received more than one non-adaptation). This may be due to the wording of the question, which asked what was used to grind up coffee "back home". Then Jamaican culture engenders JC-type pronunciation.

A strikingly high degree of hyperadaptation occurred with farm (which had /ɔ:/ for 8 speakers; other words had from 0 to 5 hyperadaptations). This could be due to its homophony with form, a commoner word, in JC. Contrary to expectation, garden was hyperadapted three times and car once; so either the argument on p. 64-65, that /Kj/ can be relied on to prevent the backing of a following open vowel, is erroneous, or some speakers haven't realized its applicability (even unconsciously), or some speakers have JC representations of these words with no /j/ after the /K/.

T13. ɔ'

There is one group of words with JC /a:/ for which the corresponding RP vowel is neither /a:/ nor /ɔ:/, but /ɔ/. There were seven of these in the questionnaire: coffee, off, dog, cross, cost, gone, and lost.

For the adaptation of these words we need a vowel shortening rule, followed by obligatory application of the backing rule, Rule (17). We can formulate it as

(36) $$a: \rightarrow \underset{[+B]}{a} \; / \; \overline{\quad [+S]}$$

where [+S] ('plus shortening') is the lexical diacritic needed to

sort out ɔ'-words, like cross, from ɔ:-words such as sauce and (ɔ:)-words such as pass. The [+B] introduced by Rule (36) then causes Rule (17) to be applied. The features-only equivalent of Rule (36) is

(36') $$[^{+syll}_{-cons}] \rightarrow [^{-long}_{+B}] \; / \; [^{+\overline{low}}_{+S}] \; .$$

Alternatively, Rule (17) could apply first, and then the shortening rule. In fact, it is clear that many of the respondents have applied a backing rule to these words, but not a shortening rule--they treat cross, off, etc., the same as north, jaw, etc. All four possible combinations of vowel quality and quantity were found, though, although shortening without backing was the least common. Scoring was on the basis of 0 for no adaptation, vowel range [a:--ɑ:], 1 for shortening or backing, [a--ɑ, ɒ:--ɔ:], and 2 for shortening and backing, [ɔ, ɒ , ɑ]. Hypercorrections were ignored owing to difficulty of definition*.

T13 ɔ'-score	Overall mean	7.51	
	(a) Women	7.90	
	Men	7.08	
	(b) Non-manual	9.25	Significant
	Manual	6.55	
	(c) Arrived young	7.73	
	Arrived at 20+	7.45	
	(d) Arrived by 1960	6.91	
	Arrived since	7.48	
	(e) From West	6.25	
	From East	7.61	

* E.g. shortening in mask could be just American influence, and so could shortening and backing in horse.

The range of scores here was from 1 to 10. Word-by-word analysis reveals that coffee was fully adapted very much more regularly than the other words (only 4 exceptions, all to /a/; no other word had less than 12--off, mostly to /ɔ:/). Least adapted was lost (11 speakers with /a:/). This latter word can perhaps be accounted for by its JC homophone last, for which adaptation is not appropriate. As for coffee, it seems to be widely known that JC /ka:fi/ is a non-standard pronunciation, and I have been accused of teasing when saying /ka:fi/ in the presence of Jamaicans in a way that would certainly not happen with /la:st/ for lost.

T14. e:

The last two of the scored variables are purely realizational. This one, e:, relates to the realization of /e:/ in words such as face, razor (8 items in the questionnaire).

The kind of realizational adaptation rule which might govern e: was briefly mentioned in the footnote on page 67, though several questions about its precise form remain open. As set out on page 52 and elsewhere, JC has an opening diphthong for /e:/, JE characteristically a monophthong, and RP a closing diphthong. Cockney has a wider closing diphthong. So it was considered appropriate to score as follows: opening diphthong, e.g. [ie], 0; monophthong, e.g. [e:], 1; closing diphthong, e.g. [ei], 2. Scores on this basis are necessarily open to the objection that they fail to reveal scatter: a per decem score of 5 could be achieved either by consistent use of monophthongs, or by half opening diphthongs and half closing diphthongs, or by various combinations of all three types. In fact only three

respondents ranged over all three; and they were also the only respondents who used opening diphthongs at all.

T14 e:-score		
	Overall mean	8.28
	(a) Women	8.80
	Men	8.08
	(b) Non-manual	8.33
	Manual	8.23
	(c) Arrived young	8.44
	Arrived at 20+	8.15
	(d) Arrived by 1960	8.27
	Arrived since	8.28
	(e) From West	7.50
	From East	8.50

Only one respondent scored less than 5--no. 7, who used four opening diphthongs, three monophthongs, and one closing diphthong, giving a score of 5.

Scoring individual words in the same way, we find values ranging from 49 to 65 (maximum = 72). But here an interesting pattern emerges if we bear in mind whereabouts in the interview each item came. The following table shows the number of realizations of each type for each word in order.

Questionnaire no.	15 face	17 razor	52 day	53 daily	78 bathe	133 faith	145 baker	181 bay
Opening diphthongs	-	-	-	1	3	2	1	0
Monophthongs	7	7	14	14	15	10	9	10
Closing diphthongs	29	29	22	21	17	24	26	26
(Wide	4	3	3	3	2	1	1	2)

break

The last line, bracketed and labelled "Wide", shows the number of Cockney-type realizations with [ɛɪ, æɪ] etc.

What the table shows is the respondents' tendency to use less and less adaptation as the interview progressed and they grew more relaxed. This trend was interrupted at the point marked 'break' and shown by a broken line, which was where the flow of questions was interrupted for the collection of personal data (and, often, for a little free speech). Being asked these details evidently had a tensing-up effect, for after the break we find more adaptation of e: again, though not so much as at the beginning of the interview.

The table also makes it clear that the Cockney-type realization is the most adapted and least relaxed variant--contrary to what would be the case for a working-class Londoner! There are in fact only two respondents who have a majority of wide closing diphthongs; only one of them keeps them up to the end of the interview (lapsing only once into a monophthong), for the other abandons them after bathe. I don't know whether it is relevant that these two respondents happen to be the two I have known longest (over five years in each case)*.

T15. o:

The other scored variable concerning realization only is o:, the question of how /o:/ is pronounced in nose, throat, and seven other questionnaire words.

* The only other respondent I have known for over five years is the one who used a lot of opening diphthongs, no. 7.

With /o:/ the range of possible realizations is greater than with /e:/, since we have to deal not only with the dimension opening diphthong--monophthong--closing diphthong, but also with the questions of (a) the roundedness and (b) the backness of the first element in a closing diphthong. Six principal types of realization could be discerned, represented by [uɔ], [o:], [ou], [əʊ], [ɐʊ], and [ɛʊ] respectively. It not being thought possible to arrange these into any meaningful scale, scoring was done on the same basis as for e:, grouping together all the closing-diphthong types.

T15 o:-score		
	Overall mean	8.58
	(a) Women	8.80
	Men	8.50
	(b) Non-manual	8.33
	Manual	8.71
	(c) Arrived young	8.69
	Arrived at 20+	8.50
	(d) Arrived by 1960	8.91
	Arrived since	8.44
	(e) From West	7.75
	From East	8.82

Scores were rather higher for o: than for e:. This reflects the fact that only two respondents had any opening diphthongs, in each case using one less for /o:/ than for /e:/. It will be seen that the only groups whose o: mean did not exceed their e: mean were Women and Non-manual. The o: scores, like those for e:, cannot be significantly correlated with any grouping of

the respondents, though the way in which the manual group score higher on average than the non-manual group is unexpected.

Wide opening diphthongs were used reasonably consistently by three respondents--the same three who used wide opening diphtongs for /e:/ in more than one word. This Cockney-type realization, [ɐʊ] etc., is of sharply different value in the native Londoner's sociolinguistic scale from a mid-front-to-back diphthong, [ɛʊ] etc., which was used by only one respondent (who had had speech training and was now employed teaching English to foreigners).

Analysis of the results word by word shows something of the same process of increasing relaxedness as e:, though by no means so clearly. The number of closing diphthongs for each successive o:-word is respectively 32, 29, 24, 25, 24, 30, (break), 20, 27, 24.

For both e: and o:, words with a following r in the spelling were excluded from consideration, for obvious reasons.

Other phonetic/phonological variables

There are several minor variables on which the questionnaire data furnishes evidence. They are regarded as minor either because they affect so few items in the questionnaire that a score for them could not satisfactorily be calculated, or because only a handful of speakers deviated from a majority pronunciation, or because the variation concerned is of little importance from the point of view of adaptation.

T1. In JC, /-tl/ and /-dl/ are not phonologically admissible sequences. Words such as bottle and needle have a velar rather than an alveolar plosive before the /l/, thus /bakl/, /ni:gl/. Many Jamaicans, though, use the forms with /-tl/ and /-dl/ in their more elegant style of speech. The adaptation rule concerned is

(37) $$K \rightarrow T \;/\; [\overline{}_{+A}]\; l$$

where [+A] is a lexical diacritic to make the rule operate on bottle, needle, etc., but not on buckle, eagle, etc. Incorrect assignment of [+A] leads to hyperadapted forms such as /botl/, /i:dl/ for the latter--forms which were among the commonest hyperadaptations recorded in the London Jamaican data. Expressed in terms of distinctive features, (37) is the equivalent of

(37') $$\begin{bmatrix} -\text{son} \\ -\text{cont} \\ -\text{ant} \\ -\text{cor} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{ant} \\ +\text{cor} \end{bmatrix} \;/\; [\overline{}_{+A}] \begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{cont} \\ +\text{lat} \end{bmatrix}.$$

The four items mentioned were the only ones in the questionnaire which were relevant to this variation. The pronunciation assumed to be most characteristically JC and unadapted, viz. with /Kl/ in all four words, was not used by any speaker. One respondent had a hyperadapted /t/ in buckle but unadapted /K/ in the other three words, which would have given him a negative score if one had been calculated on the same basis as used hitherto. A group of eight respondents, all in manual occupations but heterogeneous in respect of sex, age on arrival, date of arrival, and parish of origin, had /T/ in all four words, which would represent a phonological score of zero. Another seventeen respondents had the standard-accent incidence (/K/ in buckle

and eagle, /T/ in bottle and needle): this group comprised eleven of the twelve non-manual and six of the 24 manual respondents. The remaining ten speakers had inconsistencies of incidence.

Word-by-word analysis shows that bottle had /t/ for 54 of the 56 respondents; this /t/ was realized inter alia as [ʔ] twice, as [t̬] twice, and as [ʔt] and [tʔ] once each. Needle was even more universally adapted, having /d/ for 55 out of the 56 respondents. But buckle was hyperadapted to /t/ for just on half the sample, 17 out of 56; eagle had /d/ for 9 of them. (Again, we count three cases of [ʔ] and one of [t̬] in buckle as realizing /t/.)

Ž. There being no /ʒ/ in JC, words which in other accents have /ʒ/ are pronounced with /dʒ/. An adaptation rule is needed to convert this to [ʒ] in the places, all intervocalic, where [ʒ] is used in standard accents (Rule (14"), discussed on pages 60-62 above). This matter was tested in the questionnaire by the items television, vision, and pigeon. Ten respondents used an affricate [dʒ] in one or both of television and vision: all were in manual occupations. Six of them had the affricate in both words, three in vision only, and one in television only. The hyperadapted form, a fricative [ʒ] in pigeon, was used by only two respondents; both, interestingly, were in non-manual occupations and had been in England only a short time (2 years, 1 year).

a:. The realization of /a:/ is hardly a matter for adaptation, since the JC quality is typically quite similar to the RP quality. Investigation of this variable nevertheless reveals a geographical variation within Jamaica.

Qualities recorded for /a:/ ranged from fully front, [a:], to fully back, [ɑ:], with a preference for central qualities (around [ʌ:]). Excluding words where the /a:/ is followed by JC /r/, there are nine questionnaire words where JC and RP agree in having /a:/. If we list those manual-occupation informants who used a vowel of quality fronter than [ʌ:] in four or more of these words, we find that the list comprises precisely those who come from the parishes of St Ann, St Mary, and (northern) St Catherine, plus one Kingstonian. So a front rather than central quality for /a:/ is characteristic of the North coast of the island, or at least for those North coast parishes from which we were able to get informants.

Tr. It is evident that JC /tr, dr/ are not thoroughly or consistently in contrast with /tʃ, dʒ/ (though in Westmoreland I did not find them confused). The questionnaire included 3 words with RP initial /tr/, 3 with /θr/, 4 with /tʃ/, and 4 with /dʒ/. It is regretted that no words with initial /dr/ were included.

A bewildering range of initial consonants turned up in tree, trouble, and true. A straightforward palato-alveolar affricate was used 4 times in trouble, once in true, but never in tree. There were also several instances where the initial

element of the affricate was dental, [t̪ɹ-, t̪s̪ɹ-, t̪s̪ɹ-], and several where hyperadaptation by Rule (15) has operated: [θɹ-, θʂɹ-, θɾ-].

There were no hyperadaptations of the /tʃ/ in chair, cheers, or church, but seven of chew (see p. 156)--presumably under the influence of its potential JC homophones true and through. The three forms with [tʂ-] are regarded as being half-adapted from /tʃ/ to /tr/, though this is an analysis which cannot be proved. Of the /dʒ/ words, jump was hyperadapted to [dɹ-] 4 times--something that cannot be explained as resulting from the influence of a homophone.

ɫ, ɫ'. RP, as is well known, has /l/ allophones with tamber differences conditioned by the phonetic environment--clear before vowels, dark otherwise. Assuming [l] to be clear to start with, RP applies a rule

(38) $$l \rightarrow [+back] \;/\; \_\_ \;[-syll]\;.$$

This rule is missing in all kinds of Jamaican speech.

Only two respondents regularly used [ɫ] in accordance with Rule (38)--no. 30 and no. 34. The first of these two is the one who has had speech training, while the second is the only person in our sample who entered the U.K. aged under ten years. Clearly special factors apply in both cases. What is striking is the failure of any other respondents to adapt their /l/ tambers. Even the respondent who entered the U.K. at ten years has kept Jamaican clear /l/'s.

ɔi. The split of JC /ai/ into RP /ai/ and /ɔi/ is one that all respondents except one have effected. The exception is no. 7, who scored lowest on the scored variables. One other respondent, no. 20, has [ɒɪ] in /ai/ words (e.g. tie), but has a closer startingpoint for his /ɔi/, which is [ɔ̟ɪ] (e.g. toy)--as in Cockney.

o:-ou. Two respondents show evidence of an interesting phenomenon, namely hyperadaptive loss of a phonemic contrast. No. 8 made throat [tʂɹɐʊt] rhyme with out [hɐʊt], and made hoarse and house identical, [ɐʊs]. No. 1, too, makes throat and out rhyme, though (on this occasion at any rate) he put an /r/ in hoarse and so distinguished it clearly from house.

Yet throat and out, hoarse and house rhyme neither in Jamaica nor in England. How, then, has the opposition become lost for these London Jamaicans? The reason, clearly, is that the phonetic realization of London /o:/ overlaps with, or is at least very similar to, that of JC /ou/. A Londoner hearing, say, [nɐʊ], hears no or know; a Jamaican in Jamaica hearing the same sounds hears now.

A Jamaican in London may adopt an adaptation rule converting his /o:/, which sounds so strikingly different from the Londoner's /o:/, into the same phonetic output as his /ou/. If, however, he has not by some prior rule adapted his JC /ou/ into a quality more like that of RP or Cockney /au/, he loses one phonemic contrast by doing this. His know sounds more London-like, but at the price of becoming identical with his now.

Residual Jamaicanisms. The question arises, did any respondent take the adaptation process to the extreme of losing all Jamaican pronunciation traits? The two who came nearest to doing this are the two who alone used dark /l/ more or less in an English way. It is instructive to look in detail at their speech.

No. 50 is the respondent who had undergone speech-training and indeed had spent two terms at an English drama school. She comes of a family able to live on its income from investments, and had attended boarding school and then Teacher Training College in Jamaica before coming to England in 1968. She has effectively mastered the acquisition of RP. Most of the time there is nothing in her speech which would reveal her West Indian origins. Indeed, her most striking non-RP-ism is a rather Cockney /ai/, [ɑɪ], which she uses incongruously from time to time. She also has occasional clear /l/'s in nonprevocalic position, and in free speech says /wɒn/ for one (though as the answer to a questionnaire question it was /wʌn/). She has mastered the RP use of weak forms and within-word gradation. Adaptation from JE to RP was professionally necessary for her, and she has achieved her aim.

No. 54, now an undergraduate at University College London, came to England with his parents at the age of nine. He, too, has very occasional clear /l/'s in nonprevocalic position, though his main non-RP trait is sporadic rhoticity (exemplified in his pronunciation of hoarse, shirt, short, etc.). He also has no /iə-eə/ opposition, often uses strong forms where

RP would have weak ones (e.g. unstressed them), and has /ɔ/ rather than /ʌ/ in other and under.

On the scored variables, no. 25 came out equal highest. But she has rather more Jamaican traits than the other two mentioned. Apart from clear /l/'s in all positions, she has rather back /o:/'s, [o̝ʊ̯] or [ou], no /iə-eə/ opposition, fronted /w/ before front vowels, /o/ (/ʌ/) rather than /o:/ in hotel and window, /ɔ/ rather than /ʌ/ in one, once, mother, brother, and under, nasalization of juxta-nasal vowels to a degree unusual in RP but common in Jamaica, sporadic rhoticity in r2 words in free speech, somewhat Jamaican intonation, and no gradation of -ent in words like student /stju:dent/, accident.

So it is clear that in general our respondents share the fate of all migrants. They come to sound like foreigners to everybody. To Jamaicans in Jamaica most of our respondents will seem to have acquired an 'English accent', although to Englishmen in England they still seem to have a 'Jamaican accent'.

Stylistic variation: free speech

To provide some idea of how performance in free speech differs from performance in answering the questionnaire, samples of four of the respondents' free speech was scored for the variables θ, ð, h, and e: (Appendix I, p. 252-254). Results were as follows.

	θ q.	θ free	ð q.	ð free	h q.	h free	e: q.	e: free
Resp. no. 13	71	75	100	64	80	96	10	9
15	58	0	79	80	68	50	8	6
26	100	100	100	95	100	100	8	3
29	49	55	89	38	72	25	7	3

It must be remembered that free-speech scores are not really comparable with questionnaire-based scores. Free-speech θ-scores, for example, rely disproportionately on the common words thing and think, which did not even come in the questionnaire. With such reservations in mind, one nevertheless notices the expected drop in scores as one passes from questionnaire answers to free speech--particularly dramatic in the case of e: for the high-scoring respondent no. 26 and with all variables for the medium-scorer no. 29.

Chapter III.5

CONCLUSIONS

The best-known sociolinguistic study in the field of English, Labov's study of New York speech (Labov, 1966), divided the respondents into nine social classes and five ethnic groups but investigated only five phonetic/phonological variables. It was thus sociologically sophisticated but linguistically simple. Compared with Labov's study, the work embodied in this present thesis is sociologically simple (two social classes, a total of five two-way classifications of the respondents) but linguistically more sophisticated (fifteen major variables). It is also, of course, on a much more modest scale.

Linguists, including particularly neo-Bloomfieldian structuralists and Chomskyan transformationalists, may seem often to have been guilty of oversimplifying by describing a language as though it were a single coherent system ("où tout se tient") when this was not strictly the case, even though it may admittedly have been fruitful to pretend that it was. An example of the dilemma the linguist faces is at hand in Bailey's Jamaican Creole Syntax: for there is no person living whose syntactic competence is restricted to what Bailey describes. Bailey is fully aware of this, and mentions the problems of "applying structural principles to non-homogeneous material" (Bailey, 1966: 1). Quite rightly, she defends her work as "an attempt to describe one of the systems which lie at the core of this co-structure [of Jamaican Creole and 'English'], that is, the Creole

syntax". In fact, a sociolinguistic approach has to grapple with precisely this absence of homogeneity in the material (in the case of the present study, phonological material rather than syntactic), by attempting to describe linguistic variables and then relate them statistically or otherwise to sociological categories.

The lack of homogeneity characterizes not only a speech community as a whole but also each individual who belongs to it. People are not as consistent in their pronunciation as the phonemicist, for instance, might like to assume. For instance, one could not say that the manual-occupation respondents studied in this thesis either really have or really lack the /t--θ/ opposition: with all the scored variables, in fact, any score other than zero or the maximum is indicative of an inconsistent, non-homogeneous phonological/phonetic system.

So the lack of homogeneity is not any special peculiarity of Jamaicans in London. Labov found the same kind of inconsistency in New York, where he claims that it should somehow be incorporated into the system that is being described, rather than be unrealistically labelled "code-switching" or "free variation" (Labov, 1970: 54-55). Blom and Gumperz (1970) describe Norwegian students going from university back to their rural home town and there using "'mixed' forms of speech which surprise their users and displease some of the local inhabitants into the bargain" (quoted by Pride, 1970: 295). Bernard, too, faces the same phenomenon when he describes the difficulties he encountered

in trying to make tape-recordings of "Broad Australian":

> Most Broad [Australian] speakers no doubt use most of the Broad allophones [...] most of the time. Where it breaks down is at the individual level. In the experience of this writer few indeed are the Australians who show a homogeneous set of allophones. The individual pattern fragments both habitually and casually. Thus a man who is correctly classified as a Broad speaker may habitually use the General or even Cultivated forms of one or more of the critical phonemes, say /ai/ or /i/, and casually avail himself of the "higher" forms of the others, either consciously or unconsciously.
>
> (Bernard, 1969: 67-68)

It is hoped that the description contained in this thesis has been able to shed some light on the particular kind of "systematic non-homogeneity" to be found in Jamaican speech in London.

Since Jamaican speech in Jamaica is not homogeneous (cf. the quotation on p. 11), it is obvious that Jamaicans who come to live in the London area bring with them an ability to shift up and down the stylistic range from JC to JE. Many of the variables we have discussed, e.g. <u>θ</u>, <u>h</u>, <u>ɔ</u>, are important in Jamaica as indicators of education and social class. Indeed, education in the West Indies has recently been criticized on the very grounds that ability to control such variables is a major factor in the selection of pupils for secondary and higher education and for the white-collar and middle-class jobs that they lead to:

> the prizes go to the best mimics rather than to the most talented, so that in any sample of secondary school children who have come up from primary schools, or in any sample of undergraduates at the University of the West Indies, there is far too high a proportion of mimics who lack real creative and critical ability.
>
> (Le Page, 1968: 438)

It follows that the sharp differences in performance which we have found between manual and non-manual occupations is something essentially imported into London from Jamaica, rather than any kind of difference in adaptation to the new linguistic environment the immigrant encounters in England. The variables for which we found "highly significant" or "significant" correlation with occupational class are θ, t, d, h, ɔ, ɔ'. Educated Jamaican speech in Jamaica differs from Jamaican Creole in each one of these variables, and it is likely that our non-manual respondents are in many cases in non-manual occupations precisely because when growing up in Jamaica they learnt or acquired the phonological oppositions and incidences concerned. That they now live in London has nothing to do with the matter.

The only other instance where we have found a "significant" correlation is between the variable h and parish of origin. Clearly, this too is something Jamaicans in London have brought with them from Jamaica, not any difference in adaptability in London.

Only five of our variables specifically measure adaptation towards London speech (whether RP or Cockney), namely r1, r2, r5, e:, and o: --if we assume, as I think we may, that the JE pronunciation differs from RP in each of these cases. Most of the other variables represent matters in which JE agrees with RP (θ, ð, t, d, h, ɔ, ɔ:, ɔ', and probably j/w); the remaining one, r3/4, is mysterious in that it seems to represent adaptation neither towards JE nor towards RP. Investigation of the overall average scores for the variables throws up

some interesting differences (all scores standardized as percentages):

θ	77	e:	83	r1	57	r3/4	16
ð	90	o:	86	r2	59		
t	80			r5	45		
d	69						
h	84						
j/w	79						
ɔ	80						
ɔ:	90						
ɔ'	75						

The first column contains all the variables in respect of which JE agrees with RP. As can be seen, in every case the overall mean score exceeds 65. The remaining columns contain the variables where JE and RP are in disagreement. In the second column are the variables which concern realization only--phonetic rather than phonological variables. These, too, produce high scores comparable to those in the first column. The third column contains the variables in which there is a phonological difference between JE and RP (distribution of /r/ in nonprevocalic environment): here scores are around 50 percent, definitely lower than in the first two columns but higher than the last. The last column contains the variable in which JC agrees with RP but the situation in JE is not quite clear: here the score is very low. Comparing the first two columns with the last two, we must draw the conclusion that, faced with a new linguistic environment,

adolescents and adults do not tend to acquire new phonological oppositions or alter the distributional restraints on their phonology; but they do tend to adapt by modifying the realization of their phonemes.*

This conclusion is supported by our failure to find statistically significant correlations between linguistic variables and classification of respondents by age on arrival in the United Kingdom or length of time spent in the U.K. Evidently youthfulness on entry--once childhood is past--and having been in the country a long time do not lead an immigrant to adapt more fully.** Realizational adaptation was carried out equally well or badly by all classifications of respondent.

In the course of the work presented in this thesis, I have tried to cast some light on the processes of phonological and phonetic adaptation. I believe that I have not only achieved this aim, but also incidentally made small contributions to the phonetic description and linguistic geography of Jamaican Creole, to phonological theory, and to the use of statistics in linguistic research.

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* Cf. Norman, 1970: "If we assume that children possess the ability to construct an optional grammar on the basis of a finite number of speech performances, while adults at best are capable of superficial alterations in competence, then linguistic change breaks down neatly into two basic categories. Simplification, rule loss, and reordering typically occur only in the child's attempt to create the best possible grammar. Change in the adult grammar, on the other hand, consists of the addition of low-level rules."

** The scores recorded are consistent with there being a slight association between age on arrival or length of time in England and high score on phonological variables. See App. III, p. 282.

Appendix I

TEXTS

This appendix contains transcriptions, phonetic or orthographic, of stories, monologues, or conversations recorded either in Jamaica or in London.

(1) The story of Lookno JC

Recorded in Westmoreland, Jamaica, from a woman of 45-50. Given here in phonetic transcription with translation into Standard English. The transcription is phonemic except in the following respects: [ð] is used for the voiced dental fricative when it occurs; [ɔi] is used for a diphthong corresponding to JE/RP /ɔi/; nasalization of vowels is shown as such rather than as /Vŋ/; a long mid central vowel is shown as [ə:] rather than as /or/. This is an exact transcription of a tape-recording; material shown in square brackets represents hesitations, mistakes, conversation with the fieldworker, etc.

a man ne:m lukno [it nat op] pla:nt rais doun tʃaini paint, go doun riva mout, an im av a likl bɔi, kjar di likl bɔi an kjari tu: ho:, trouzaz, pat, ziŋk pan wid wa:ta, an evri likl tiŋ tu i:t. [se:m we: ju wa:nt it? rait] an im ga:n wi di likl bwai, travl a:n di si:, pla:nt rais. i: had a hot ðe:r, an wen im go tu di [ho di riva di] si: bi:tʃ im tek out evritiŋ out di kanu an kjar it o:va we di hot iz, an kjar di likl bɔi an im work fi

A man called Lookno [it's not switched on...] planted rice down at Chinese Point, went down to the river mouth, and he had a little boy, he took the little boy and took two hoes, trousers, a pot, a zinc pail with water, and all sorts of little things to eat. [Is that how you want it? Right.] And he had gone with the little boy, travelled on the sea, and planted rice. He had a hut there, and when he got to the seashore he took everything out of the boat and carried them over to where the hut was, and took the little boy and worked for

di ho:l de:. komin a:n tu i:vnin nou, about [f] ha:f pa:s fo:r tu faiv o:klak, im tek di tiŋz fram di hot an kjari a di si: bi:tʃ an put it doun pan di bag, put di likl bwai pan di bag. an im ha:l op di kanu nou tu tek di tiŋz put in di kanu. an wen im ga:n bak nou, kom bak tu si: di kanu, i drif ga:n out, fa:r out, fa:r out. an wat im du, iŋ go doun ina di si: wa:ta, go in fi kjatʃ di kanu, an fran iŋ go out de:r go in no:badi si: im agen. li:v di likl bwai alo:n a di [riva] di si: bi:tʃ, lai doun a:n som krokos bag. ðe:r wor [som boi] tri: boiz fiʃnin wid a fain net. de: wen tu si: about tri: oklak, an wen den ne:li kjatʃ doun tu di spat nou dem ʃu:t di net, an dẽ he:r a kraiin o:va di buʃ, a likl pju:ni vais kraiin o:va di buʃ. an iŋ kjatʃ dem fre:d nou. wan se tu di ada, a dopi. di ada wan se, a abna. wan se, mi na: fiʃn jaso ma:sa, mi de go forda dõũ. mu:v, kom wi gu we. an den tek op di taklin an evri wan a dem go forda doun, fiʃn go doun. wen de: lait

the whole day. Coming on to evening, then, about half past four to five o'clock, he took the things from the hut and carried them to the seashore and put them down on the bag, and put the little boy on the bag. And he hauled up the boat then, to take the things and put them in the boat. And when he had gone back, when he came back to see the boat, it had drifted away out, far out, far out. And what he did, he went down into the sea water, going to reach the boat, and from the moment he went out there and went in nobody has seen him again. He left the little boy alone on the seashore, lying on some sacking.

There were three boys fishing with a fine net. They had gone to sea about three o'clock, and when they had nearly reached the spot they shot the net. And they heard a crying over the bush, a little puny voice crying over the bush. And it made them afraid now; one said to the other, "It's a duppy!" The other one said, "It's an abner!" One said, "I'm not fishing here, master, I'm going further down. Move, come let's go away." And they took up the tackle and every one of them went further down, started fishing further down. When daylight

nou komin bak nou, den fiʃn komin op, an wen deŋ kjatʃ a di spat wan se tu di ada wan, mek wi gu o:va deso go luk a wa ben de krai so la:s nait. an wen dem go:, si dis likl be:bi bwai [li] le: doŋ pan di krokos bag wid a big [p] wail pus rap op di likl bwai, le: doŋ a di si: bi:tʃ, fa:s asli:p. an wen deŋ go dem we:k im, and a:fta im we:k op dem si: dat i woz wel hoŋgri. de giv im ke:k tu i:t, an ĩ i:tin di ke:k, im woz so hoŋgri dat wen ĩ i:tin di ke:k i dis a go doŋ ina di beli laik i goin doŋ intu [a] a ke:v ho:l. [laughs] an wats hapn agen, deŋ giv im som wa:ta tu driŋk, an im driŋk. an dem tek im an tek op di tiŋz an put ina di kanu, an dem pagl a:l di we: a:n di si: kom op. an wen deŋ ketʃ a di si: bi:tʃ dem mek an ala:m, an plenti pi:pl an a ho:l ke:twel a poli:s kom doun, an wen dem a:ks di likl boi wats hapn, we im fa:da, im se im ga:n doŋ wa:ta, ina di wa:ta, an mi no si: m agen. an den tek mo:ta bo:t nou, an plenti

was coming back, they fished and came back up, and when they reached the spot one said to the other, "Let's go over there and see what was crying like that last night." And when they went, they saw this little baby boy lying on the sacking with a big wild cat wrapped around the little boy, lying down on the seashore, fast asleep.

And when they went they woke him, and after he had woken up they saw that he was very hungry. They gave him some cake to eat, and he was eating the cake, he was so hungry that when he was eating the cake it was just going down into his belly as if it was going down into a cave-hole.

And what happened further? --they gave him some water to drink, and he drank. And they took him and took up the things and put them in the boat, and they paddled all the way on the sea and came up back. And when they reached the seashore they made an alarm, and a lot of people and a whole Black Maria of police came down, and when they asked the little boy what had happened, where his father was, he said, "He's gone down into the water, and I haven't seen him since."

And they they took a motor-boat then, and a lot

	pi:pl go in di mo:ta bo:t, an wen	of people went in the motor-boat, and when they
	dem go doŋ tu di spat we di likl	went down to the spot which the little boy
	bwai ʃo: dem, dem woz sə:tʃin	showed them, they've been searching until now, they
	ontil nou, den do:n fain lukno.	haven't found Lookno.
75	das di end av di sto:ri.	That's the end of the story.

(2) Conversation JE

Recorded in Westmoreland, Jamaica, from a school-mistress at a village school. Phonetic transcription at the side shows the realization of each th spelling (= RP /θ, ð/). Long mid vowels are regularly monophthongal, [e:, o:]. Consistent /h/.

I teach in the primary school, ages between seven and fifteen.		d
(Do you move round from class to class, or stay with one class?)		
--You stay with one class for a year or so, or more--it depends on just how the teachers come and go. Sometimes you will find that you have to stay into a class maybe two years or so. But there are other times when you move up with your class.		ð d d dd
(Which subjects do you most enjoy teaching the children?)		
--I love teaching them maths, arithmetic, and English.	tθ	ð
(Do they like that? I know some children get very bored having to learn their tables and so on. Do you find that?)		
--It depends on just the method you use in teaching them their tables, you know, because I generally build up their tables and sometimes we use stones and sticks and build up these tables and break them down and so on and then... sometimes they are interesting. Maybe we make little songs, ... because learning tables is really boring.	ɸ	ð dð ð d ðð d
(...When they finish school, how far have they got in maths?)		
--Well, they was in the Form Three, they will do	t	ðð

algebra and a little geometry and so on. And a little stocks and shares and, yes, they will just know a little stocks and shares and algebra and geometry. Most of them--some will go to the--um--to take the Jamaica Local. ð / ðd / d

(Is that a difficult exam, is the standard high?)

--Yes, because you have to pass all subjects. You see? No, the Jamaica Local pupils we find are generally the all-rounders, for they are compelled --if you fail one, then you fail the exam. So you have to pass all your subjects. ð / ðd / ðd

(Now I hear there's a quarrel going on between the teachers' union and the Minister of Education. Can you explain it all to me and tell me about it?)

--How shall I put it? The Minister of Education, he wants to be a despot. And he must rule, he must hire and fire teacher, just as--at least it just must be just as his whim and fancy. Well, you can't treat education like that. You are playing with the children's--you can't play with the children's mind like that, because if the Minister of Education feels that he's not satisfied with me personally, he will just say, well go. ð / ð / øaø / dðð / ð / ð

(And at present who decides if a teacher is to be dismissed? Is it the headmaster of the school, or what?)

--Is the School Board. At present, for a teacher to be dismissed, they must do some professional misconduct, and they would go to the Board of Enquiry and have a fair trial ... ð / ð / ðð

These two passages have served to exemplify different styles of free speech recorded in Jamaica. The remaining passages in this appendix are from the material recorded with the questionnaire data in London.

Free speech, questionnaire respondent no. 13

(à propos of the meaning of hand...)	θ	ð	h	e:
No, it's not really. It doesn't mean a different thing in Jamaica, because, you see, what people	t			c
don't seems to realize, that we speak the same		ðð		
English, we're taught the same English in school,	*	d		
but, like the Americans dó, we have that accent,		ðð		
you know what I mean? And ever so much in a				
while the average child or the average Jamaican		ðð		m
go back to the accent, you understand? And they		ðd		
don't think of the pron(o)unciation of the words	θ	ðd		
properly. Because for instance in Jamaican if				m
you want to say "Come here", you know what I mean?			h	c
You say /kom ja/. And you don't say "say", you				--c
say /se/, you don't say "say", you know? But it's				--c
the accent, just like you go to Yorkshire and you		d		
listen to the people in Yorkshire speak--they		dd		
sound deplorable.				
...No, I don't think any female is ever really	θ			m
pleased--not one like me, anyway. My husband say			h	cm
that I am living with my head in the (h)air all		ððd	h**	
the time, but it's not that; I'm searching for		dd		
something that I really can't find. No, well--	θ	ð		
I don't know if I'll find it in your country.				
Excuse me saying so, but it's a little bit dull.				m
England is dull. ... I don't think I would like	θ			
in America. I don't mind the Americans out of		ð		
the country, but--you know, thinking of all this	θ	ðd		
coloured prejudice they say, you know, in this		ðð		-c
country and so on, but I think that it would be	θ	ð		
worse in America for the N....-especially my		d		
Jamaicans, because we're--you see the kind of		d		c
life we're lived, a free-living life, you know				
what I mean--everybody is free and happy and we				
don't like to be fenced in. And I detest walk				
in the place and everybody say I can't come in		ð		c
there, because I'm not used to it, you know?		d		
And, er, (h)England isn't so bad, really. Eng-			*	
lish people are a little bit cold, and--but I			*	
don't think it's really cold, but the point about	θ	d		
it, I think they have never learned to have fun.	θ	ð	h	
Scores	75	64	96	8.8

Key to symbols: ** hyperadaptation * semi-hyperadaptation

c closing diphthong m monophthong
o opening diphthong ø zero
- inapplicable or indecipherable.

Free speech, questionnaire respondent no. 15

	θ	ð	h	e:
(What films have you seen recently?)				
--Double O Seven. Her Majesty's Secret Service.			h	
(What d'you think of the new James Bond?)				
--(h)Oh, not as good as the real James Bond.		-	**	
(The real one!?)				
--Yeah. James Bond made a lot of good one, ennit?				c
(Sean Connery, you mean.)				
--Sean Connery, yeah. But this guy (h)own is not as nice as...		d	**	
(What's wrong with it?)				
--(h)Oh, I don't think it's very hot. Sean Connery's hotter than him.	t	ð	ø hø	
...				
--Some day I been to a night club, and there it was, um--what's the girl name, what, um?-- Oh, I forget her name. Mary Wells is supposed to come there, but another girl come. She wasn't too bad. Have a nice time. Me and my mate who go up there, we come back down. Well, from that I go to my bed and that's the (h)end of it. Didn't have a bit of the other, though.		ð - dð ð ððð ðð ð	 h ** h	m m m o
(Oh, what a pity. Were you looking for it?)				
--But of course. I seen a nice little thing up there I would take home and give it a good fu--good hiding, but she was a bit shy. But I wasn't shy, only you know I was too quick.	t	ð	ø h	m
(If you're too quick, that puts them off.)				
--Yeah. But I don't like to show slowness. Slowness take a long time, but I like to be fast. If she's ready, I'm ready too. And he's a devil.			h	c
...				
--Yeah, that's the (h)end.		ðd	**	
Scores	0	80	50	5.7

Free speech, questionnaire respondent no. 26

	ɵ	ð	h	e:
(Have you ever been in a situation where you were really frightened? ...)				
Not really. I can think back to when I was	ɵ			
very small and I went to the country for my		ð		
vacation, and I was put on top of this donkey		ð		o
...and I think it was a friend, I can't remember	ɵ			
exactly who it was, but he was leading this		ð	h	
donkey along the road. And you know the Jamaican		ðð		m
countryside: you have this gravel road with a		ðð	h	
sort of hill on this side and a sheer drop on		ð	h	
the other, and this donkey went across to the		ððð		
edge of the drop, you know, and started crop-		ð		
ping grass from, you know, round the edge,		ð		
Good Lord! I could never forget that--I must		ð		
have been about seven or eight, you know, and				o
it--it still stands out very close. ...Well,				
you know, nothing, this chap came across, he	ɵ	ð		m
was very calm, you know, and he just coaxed the		ð		
donkey away. But this was my first ride ever,		ð		m
you see, so I was terrified completely, because,				
you know, the thought of, you know, that sheer	ɵ	ðð		
drop must have been some hundred feet or more.			h	
I think that was the closest I've ever been,	ɵ	dð		
apart from, say, car incidents where, you know,				m
I've sort of, you know, driven recklessly, sort				
of thing...	ɵ			
Scores	100	95	100	3.3

Free speech, questionnaire respondent no. 29.

I think about death a lot... Well, you know,	ɵt			
if I'm--if I feel sick, have a pain or anything	t"		ą	o
I always think and... I smoke a lot and I	ɵ			
always say, My God, I'm getting cancer, some-				m
thing like that. And I think about it. I	tt	ð		
get--I get scared, you know, but I will think	t			
until I say, Oh, doesn't matter, I've only got				m
to die one day, or something like that. But	-	ð		m
I always--if I get a pain, ... that's the only		d-		o
thing I can ever think about is cancer.	tɵ			
Through smoking and that. ... I still, you	t	ð		
know--you get this funny feeling, now in a		d		
while, or you read the paper this m- --they		ddd		-
say is so many people dying of cancer, you say				--
well I don't mind if time is come... No, but				
... smoking help me a lot, you see. Maybe if			ø	m
I try I could give it up. Always take up				
drinking...				
Scores	55	58	25	3.3

Appendix II

PHONOLOGICAL THEORY

The adaptation rules formulated in this study presuppose a theory of phonology similar to the "generative" phonology expounded by Chomsky and Halle (1968: particularly Part IV, Phonological Theory). This theory assumes that the function of phonology is to act as the "phonological component" of a generative-transformational grammar; this component takes as its input the surface-structure syntactic string produced by the syntactic component and provides a phonetic interpretation for the sentence represented by that string. There are three blocks of rules in the phonological component. The first consists of the rules requiring syntactic information for their operation: they are concerned with the assignment of stress contours to sentences, and are commonly referred to as the "transformational cycle". They are outside the scope of this study. The second block, the phonological rules proper, convert the underlying systematic phonological representations into a "systematic phonetic" (virtually phonemic) representation, which the third block, the low-level phonetic rules (realization rules), provide with detailed phonetic specifications. The second block, the phonological rules, are assumed, in King's words (1969: 23), "to operate on and produce segments stated in terms of binarily specified (either + or -, but no other value) distinctive features". Although Chomsky and Halle allow the phoneme no place in their theory, I consider that the psychological reality of the phoneme demands its admittance to the theory. I would incorporate the phoneme by having the second block of rules produce an output consisting of segments which represent phonemes (as well as such suprasegmental features and boundaries as are appropriate). The third block, the phonetic rules, then produce segments "whose intersecting set of features may contain n-ary values of these features: not necessarily only + and -, but values specified in terms of a sequence of integers" (ibid.; cf. footnote, p. 67).

The adaptation rules studied here are assumed to be additions to the second block (phonological rules), or alterations of or additions to the third block (realization rules). It is adaptation rules of the second block which characteristically give rise to new heterophones (breed--breathe) and to most kinds of hyperadaptation (eagle with /-d-/). As we have seen, many of the adaptation rules require a lexical diacritic if they are to be successful in producing only appropriate changes: this implies some kind of modification of the features recorded in the lexicon (which falls outside the phonological component as such).

Adaptation rules in the third block may be very important from the point of view of having a Jamaican or an English accent, but they do not affect the existence of phonological oppositions or the phonological representations of words. Examples have been discussed in connection with the realization of /e:/, /o:/, /l/, /w/, etc.

The most important characteristics of a phonological theory such as that outlined are (i) its making provision for the description of processes in the shape of rules; and (ii) its use of features as phonological units. The advantages of the first-mentioned characteristic for the description of phonological adaptation must be self-evident; the justification for the second has been put very clearly by Chomsky and Halle:

> The decision to regard speech sounds as feature complexes rather than as individual entities has been adopted explicitly or implicitly in almost all linguistic studies. Specifically, it is almost always taken for granted that phonological segments can be grouped into sets that differ as to their "naturalness". Thus, the sets comprising all vowels or all stops or all continuants are more natural than randomly chosen sets composed of the same number of segment types. No serious discussion of the phonology of a language has ever done without reference to classes such as vowels, stops, or voiceless

> continuants. On the other hand, any linguist would react with justified skepticism to a grammar that made repeated reference to a class composed of just the four segments [p r y a]. These judgments of "naturalness" are supported empirically by the observation that it is the "natural" classes that are relevant to the formulation of phonological processes in the most varied languages, though there is no logical necessity for this to be the case. In view of this, if a theory of language failed to provide a mechanism for making distinctions between more or less natural classes of segments, this failure would be sufficient reason for rejecting the theory as being incapable of attaining the level of explanatory adequacy.
>
> (Chomsky and Halle, 1968: 335)

A recurrent and serious criticism of Chomsky and Halle's treatment of English phonology is that they regard it as incorporating not only genuinely productive rules but also a mass of derivational rules acknowledged by Chomsky (1965: 186) to be only "quasi-productive"--the most notorious of which is the systematic-phonological representation of English vowels in the form they took before the operation of the Great Vowel Shift. This criticism has been cogently formulated by Maher (1969), in his claim that Chomsky and Halle mix together "sets of data manifesting a superficial identity of patterning, some sets of which have a psychological reality for a society as a rule-generated scheme, but others not". And Chomsky and Halle themselves seem clearly to be on the defensive as they reach for italics to insist:

> We have argued that the underlying lexical forms in English contain vowels in pre-Vowel-Shift representation, and that these forms are what would have psychological reality given the other assumptions in our model--in particular, the assumption of instantaneous language acquisition. To the extent that these assumptions are false to fact, the conclusions that follow from them may also be false to fact. In particular, it is no doubt the case that the linguistic forms that justify our postulation of the Vowel Shift Rule in contemporary English are, in general, available to the child only at a fairly late stage in his language acquisition,

> since in large measure these belong to a more learned stratum of vocabulary. [...] If it were the case that language acquisition were instantaneous, then the underlying lexical forms with pre-Vowel-Shift representations would be psychologically real.
>
> (Chomsky and Halle, 1968: 332)

(But language acquisition is not instantaneous, and some of Chomsky and Halle's phonology is not psychologically real.)

Adaptation rules clearly operate only after the operation of rules as "deep" as the Vowel Shift Rule must be, if indeed we consider it to be part of synchronic English phonology. Any doubts about the validity of such non-productive or "quasi-productive" rules for Standard English must apply a fortiori to Jamaican Creole, lacking as it does the majority of the words belonging to the "more learned stratum" of the Standard English vocabulary (cf. page 27-28). Accordingly we can disregard the whole question of the proper lexical representation of English words or morphemes ("formatives"), assuming for a word as time a representation which is the feature equivalent of /taĭm/ rather than of /ti:m/, etc. If the former is not the word's lexical representation, then at least it is the representation it has acquired by the stage in the generative process where the rules we are interested in have a part to play.

While accepting the general principles of the distinctive-feature theory propounded by Chomsky and Halle (1968), I do not accept exactly their selection of features or all their definitions. Accordingly I now give a brief statement and description of each of the phonological (and ultimately phonetic) distinctive features which I have assumed for this study.

Unless otherwise stated, unattributed quotations are from Chomsky and Halle (1968: Chapter Seven).

[seg] SEGMENT vs. NONSEGMENT (BOUNDARY)

"The terminal string produced by the syntax consists of units of two types, segments and boundaries (or junctures). To distinguish these two classes of units, we shall utilize the feature "segment", marking boundaries [-segment] and segments [+segment]." We shall not discuss here what further features may be necessary to distinguish different kinds of boundary, e.g. word boundary vs. morpheme boundary. We assume that [-seg] implies unmarked values for all phonetic features which follow, and in particular that boundaries are [-syll] (e.g. for Rule (24), p. 69).

[syll] SYLLABIC vs. NONSYLLABIC

Syllabic segments constitute a syllabic peak. Vowels and syllabic consonants are [+syll]; nonsyllabic consonants and glides (including semivowels) are [-syll].

This feature partly corresponds to Chomsky and Halle's "vocalic", which it replaces in accordance with their afterthought (1968: 554) inspired by Bailey and Milner and proposed, one is told, in their unpublished article (1967).

[cons] CONSONANTAL vs. NONCONSONANTAL (VOCOID)

Consonantal segments "are produced with a radical obstruction in the midsagittal region of the vocal tract". Plosives, affricates, fricatives, nasals, and liquids are [+cons]; glides and vowels are [-cons]. I interpret "consonantal" as a synonym of Pike's term "contoid" and the antonym of his "vocoid": a [+cons] segment is then any segment which is not a "median resonant oral".

[son] SONORANT vs. NONSONORANT (OBSTRUENT)

"Sonorants are sounds produced with a vocal tract cavity configuration in which spontaneous voicing is possible; obstruents are produced with a cavity configuration that makes spontaneous voicing impossible"; obstruents have an acoustic spectrum characterized by an aperiodic component. Plosives, affricates, and fricatives are [-son]; nasals, liquids, glides, and vowels are [+son].

In Chomsky and Halle's framework, [son] is redundant in English, since sonorants are all and only those segments which are simultaneously [-vocalic], [+cons], [-nas]. Once we replace "vocalic" by "syllabic", [sonorant] becomes classificatory, since it is needed to distinguish liquids from fricatives. The feature [nasal] then becomes redundant in turn.

[cont] CONTINUANT vs. NONCONTINUANT (STOP)

Continuant segments are produced with an oral tract "not narrowed to the point where the air flow past the constriction is blocked". Fricatives, glides, and vowels are [+cont]; plosives, affricates, and nasals are [-cont]. Liquids are here assumed to be [+cont], notwithstanding certain weak evidence in favour of treating [l] as [-cont] (with appropriate revision of the definition of this feature--cf. Wells, ms.).

[fric] FRICTIONAL vs. NONFRICTIONAL

Frictional segments are that subclass of obstruents during whose production turbulence resulting in audible friction is generated in the vocal tract. Affricates and fricatives are [+fric]; all other segments, including plosives and vowels, are [-fric].

This feature corresponds exactly in practice to Chomsky and Halle's "delayed release", although its definition is revised in such a way as--in my submission--to accord more closely with phonetic fact.

[dist] DISTRIBUTED vs. NONDISTRIBUTED

This feature is an extension of the familiar articulatory distinction between "groove" and "slit" fricatives. "Distributed sounds are produced with a constriction that extends for a considerable distance along the direction of the air flow; nondistributed sounds are produced with a constriction that extends only for a short distance in this direction." Distributed obstruents include [ɸ, pɸ, p, ts, s, tʃ, ʃ, ç, x, c, k], while [f, pf, θ, tθ, S] are nondistributed*. Dental and alveolar /T/ are [-dist]

*S represents an apical alveolar fricative, as in Castilian Spanish.

and [+dist] respectively.

Harris, 1969, argues convincingly for the explanation of the historical development of the Spanish sibilants by reference to this feature, and shows that Chomsky and Halle's feature "strident" can be regarded as "entirely redundant" in general phonetics.

[nas] NASAL vs. NONNASAL (ORAL)

"Nasal sounds are produced with a lowered velum which allows air to escape through the nose; nonnasal sounds are produced with a raised velum so that the air from the lungs can escape only through the mouth." Nasal consonants and nasalized sounds are [+nas]; other sounds are [-nas].

[lat] LATERAL vs. NONLATERAL

"This feature is restricted to coronal consonantal sounds. Lateral sounds are produced by lowering the mid section of the tongue at both sides or at only one side, thereby allowing the air to flow out of the mouth in the vicinity of the molar teeth; in non-lateral sounds no such side passage in open". Laterals, whether frictionless or fricative, are [+lat]; all other sounds are [-lat].

Chomsky and Halle are wrong, however, to restrict [+lat] to coronals. Bilabial and velar laterals are familiar sound-types in general phonetics, though possibly not found in languages; but palatal laterals are quite common, occurring in Italian, Castilian Spanish, and--allophonically--in Modern Greek.

[ant] ANTERIOR vs. NONANTERIOR

"Anterior sounds are produced with an obstruction that is located in front of the palato-alveolar region of the mouth; nonanterior sounds are produced without such an obstruction." Labials, dentals, and alveolars are accordingly [+ant]; palato-alveolars, retroflex sounds, palatals, velars, uvulars, pharyngeals, and vowels are [-ant].

[cor] CORONAL vs. NONCORONAL

"Coronal sounds are produced with the blade of the tongue raised from its neutral position; noncoronal sounds are produced with the blade of the tongue in the neutral position." Dentals, alveolars, retroflex sounds, and palato-alveolars are [+cor]; other sounds are [-cor].

[voi] VOICED vs. NONVOICED (VOICELESS)

Voiced sounds are produced with accompanying vibration of the vocal cords, nonvoiced sounds without. I use this familiar category in its 'phonological' rather than its narrowly 'phonetic' sense: that is, I regard English /b/, for example, as phonologically [+voi], notwithstanding the fact that low-level rules alter this specification to [-voi] in the context of a pause or a phonologically [-voi] segment. Equally, the phonetic correlates of phonological [-voi] for English /p/ are considerably more than lack of vocal cord vibration: depending on environment, they can include aspiration (i.e. late onset of voicing on a following sonorant segment), 'fortis' articulation and breath pressure, and reduction in the duration of a preceding sonorant segment.

[high] HIGH vs. NONHIGH

"High sounds are produced by raising the body of the tongue above the level that it occupies in the neutral position; nonhigh sounds are produced without such a raising of the tongue body." So vowels such as [i, u, ɨ] are [+high] (in IPA terminology, "close"), while mid and open vowels are [-high]. This feature can also characterize consonants, and Chomsky and Halle treat palato-alveolars, palatals, velars, palatalized and velarized sounds, as well as semivowels [j, w, ɥ] as [+high], but other sounds--including uvulars, pharyngeals, glottals, and uvularized and pharyngealized sounds--as [-high].

[low] LOW vs. NONLOW

"Low sounds are produced by lowering the body of the tongue below the level that it occupies in the neutral position; nonlow sounds are produced without such a lowering of the body of the tongue." The neutral height of the tongue is assumed to be mid, so that it is the open vowels [a, ʌ, ɑ] that are most typically [+low]; so also, in Chomsky and Halle's analysis, are pharyngealized sounds and glottals (including [h]*).

[back] BACK vs. NONBACK

Back sounds are produced by raising the back of the tongue towards the velum. Vowels such as [u, o, ɔ, ɑ, ɯ] are [+back]; so are [w] and velars, uvulars, pharyngeals, and sounds which are velarized, uvularized, or pharyngealized. Other sounds are [-back].

[front] FRONT vs. NONFRONT

Front sounds are produced by raising the front of the tongue towards the palate. Vowels such as [i, e, ɛ, a, y, œ] are [+front]; so are [j, ɥ], palatals, palato-alveolars, alveolo-palatals, and sounds which are palatalized. Other sounds are [-front].

I venture to propose this distinctive feature, one not mentioned by Chomsky and Halle, in order to make possible a phonological distinction between [e] and [ə]. Chomsky and Halle use only one feature to specify tongue advancement in vocoids, namely the feature [back]; the binarity of phonological features then means that they can cater for only two "columns" of vowel oppositions, front (nonback) vs. back. By adding the feature [front] we can cater for an extra "column", central vowels specified as $\left[\begin{smallmatrix}-\text{front}\\-\text{back}\end{smallmatrix}\right]$. This in my view makes possible greater realism in the phonology of languages such as Welsh and Bulgarian, whose stressed central vowels would otherwise presumably have to be

*While it is clear that phonetically [h] may range from open to close, and from front to back, depending on the quality of a following vowel, I can offer no proposal to replace Chomsky and Halle's treatment of it as phonologically [+low], unsatisfactory as I find this.

treated as [$^{+back}_{-round}$], as if they were back unrounded vowels.

[round] ROUNDED vs. NONROUNDED

"Rounded sounds are produced with a narrowing of the lip orifice", i.e. with approximation of the labial commissures and usually with protrusion of the lips; "nonrounded sounds are produced without such a narrowing". Rounding is characteristic of back vowels [u, o, ɔ] and also of certain central and front vowels, [ʉ, ɵ, y, œ]; also of [w, ɥ], and labialized consonants. Spread-lip and neutral-lip sounds are [-round].

[long] LONG vs. NONLONG (SHORT)

Long sounds have greater duration than comparable nonlong sounds. The phonological feature [long] is often accompanied, as in the case of English vowel pairs such as /i:/ vs. /i/, by phonetic differences of tamber involving low-level modifications of highness, lowness, frontness, and backness. As with the feature "voiced", so with "long": it must be considered a phonological feature whose phonetic correlates need not necessarily always include great duration. It is nevertheless normally the case that a [+long] segment is of greater duration than a [-long] segment in an identical environment.

Chomsky and Halle call this feature "tense" rather than "long", thereby emphasizing the tamber differences and the variations in articulatory tension assumed to be responsible for them. They imply, without firmly committing themselves, that tensity is also a feature of voiceless obstruents, in English at least. This does not remain true if "tense" is replaced by "long".

Certain other features posited by Chomsky and Halle for their universal feature framework are without phonological relevance for English and many other languages. Amongst these are "covered", and the features describing non-pulmonic sound-types. Features of "stress" and "pitch", whose feature formulation is open to discussion (cf. Woo, 1969), are relevant to English, but

not to its word-level phonology. The feature Chomsky and Halle refer to as "heightened subglottal pressure", credited with responsibility for the phonetic category "aspirated", is relevant in English only for low-level (realization) rules, as must be a mass* of other articulatory features governing the neurological and muscular activity of the speaker.

Summing up, then, I accept the Chomsky-Halle feature framework (which is based, of course, on Jakobson's earlier treatment and on the ideas of the Prague school in general)--but with certain reservations and revisions. I reject the feature "vocalic", whose purported definition strikes me as untrue, using in its place the feature "syllabic". I also reject the feature "strident", which cannot be defined articulatorily and which can handle nothing that cannot better be handled by "distributed" or "frictional". I make a minor correction to the definition of "lateral". I tentatively introduce a new feature "front", and give new names and definitions to the features "delayed release" ("frictional") and "tense" ("long").

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* giving a total of "possibly between twenty and forty" phonetic features (Postal, 1968: 69).

Appendix III

STATISTICS

There follow first of all summaries of calculations for values of Student's t (Moroney, 1951: 227-233). These are used to decide whether the difference between two mean values (e.g. women's scores for Q and men's scores for Q) is significant of a real difference between the parent sources. In each case t represents the ratio of an observed difference in mean scores to its standard error. A high t value therefore means that a significant link probably exists. When the number of degrees of freedom is 54 (which is the case here, since it is calculated as the number of respondents, 56, minus the number of classes into which they are divided for the purposes of any one calculation, 2), then there is only one chance in 5 of t exceeding 1.3 purely by random variation; there is only one chance in 20 of its exceeding 2.0, one chance in a hundred of its exceeding 2.7, and one chance in a thousand of its exceeding 3.6.

In the following tables, the fifteen scores are represented as T1, T2, T3, ... T15, while the five classifications into which the sample was divided are denoted by the symbols a, b, c, d, and e. These were treated as dummy variables for the purposes of the calculations: a denotes sex, and has the value 1 for women and the value 0 for men; b denotes occupational class, and has the values 1 for non-manual and 0 for manual; c denotes age on arrival in England, with the values 1 for 19 years and under, 0 for 20 years and over; d denotes date of arrival (and, therefore, the number of years the respondent has been in the country), with the

values 1 for arrival in 1960 or earlier (i.e. ten years or more in England) and 0 for arrival since 1960 (i.e. less than ten years here); and lastly e denotes the regional provenance of the respondent, 1 for the parishes of Manchester, St Elizabeth, and Westmoreland (with, vacuously, Hanover, St James, and Trelawny), and 0 for the remaining parishes (see map, p. 80).

In the Difference Tests whose tabulation follows, $\bar{x}$ is the mean score for all respondents and s the standard deviation (calculated as the square root of $\frac{\Sigma(\bar{x} - x)^2}{35}$). Then $\bar{x}_1$ is the mean when a, b, ... take the value 1, and $\bar{x}_0$ the mean when they take the value 0. The difference between $\bar{x}_1$ and $\bar{x}_0$, ignoring the sign, is w, whose standard error s_w is calculated as $s\sqrt{\frac{1}{n_1} + \frac{1}{n_0}}$. To find t, w is divided by s_w. The probability of the stated value of t arising by chance, p, is mentioned only when smaller than 0.05 (= one chance in twenty).

Numbers of respondents in each half of the classifications a, b, ..., and the values of $\sqrt{\frac{1}{n_1} + \frac{1}{n_0}}$, were as follows:

	a	b	c	d	e
n_1	10	12	16	11	8
n_0	26	24	20	25	28
$\sqrt{\frac{1}{n_1} + \frac{1}{n_0}}$	.371	.354	.335	.362	.401

		a	b	c	d	e
θ-score	T1					
$\bar{x}$	77.42					
s	24.0					
$\bar{x}_1$		83.1	99.1	75.25	68.9	73.0
$\bar{x}_0$		75.2	66.6	79.15	81.2	78.7
w		7.9	32.5	3.9	12.3	5.7
s_w		8.90	8.50	8.04	8.69	9.62
t		0.89	3.82	0.49	1.42	0.59
p			$<.001$			

δ-score	T2					
$\bar{x}$	89.64					
s	16.5					
$\bar{x}_1$		93.7	99.2	84.25	86.6	85.6
$\bar{x}_0$		88.1	84.7	93.95	91.0	90.8
w		5.6	14.5	9.7	5.6	5.2
s_w		6.12	5.84	5.53	5.97	6.62
t		0.92	2.48	1.75	0.94	0.79
p			$<.02$			

t-score	T3					
$\bar{x}$	80.31					
s	29.51					
$\bar{x}_1$		96.5	100	74.69	70.55	68.00
$\bar{x}_0$		74.2	70.46	84.80	84.60	83.82
w		22.1	29.54	10.11	14.05	15.82
s_w		10.95	10.45	9.89	10.68	11.83
t		2.02	2.83	1.02	1.32	1.34
p		$\approx .05$	$<.01$			

		a	b	c	d	e
d-score T4						
$\bar{x}$	69.27					
s	29.78					
$\bar{x}_1$		81.60	92.83	68.75	58.92	65.15
$\bar{x}_0$		64.54	57.50	69.70	71.48	71.04
w		17.14	35.33	0.95	12.56	7.91
s_w		11.05	10.54	9.98	10.78	11.94
t		1.55	3.35	0.10	1.17	0.66
p			<.01			
h-score T5						
$\bar{x}$	83.58					
s	22.6					
$\bar{x}_1$		89.10	100.	81.44	70.09	100.
$\bar{x}_0$		81.46	75.4	85.3	89.52	78.89
w		7.64	24.6	3.86	19.43	21.11
s_w		8.38	8.00	7.57	8.18	9.06
t		0.91	3.08	0.51	2.38	2.33
p			<.01		<.05	<.05
j,w-score T6						
$\bar{x}$	7.89					
s	1.73					
$\bar{x}_1$		7.80	8.92	8.13	7.55	7.00
$\bar{x}_0$		7.92	7.38	7.70	8.04	8.14
w		0.12	1.54	0.43	0.49	1.14
s_w		0.64	0.61	0.58	0.63	0.69
t		0.19	2.52	0.74	0.78	1.65
p			<.05			

		a	b	c	d	e
r1-score T7						
$\bar{x}$	5.67					
s	2.12					
$\bar{x}_1$		5.60	7.17	6.38	5.73	4.13
$\bar{x}_0$		5.69	4.92	5.10	5.64	6.11
w		0.09	2.25	1.28	0.09	1.98
s_w		1.75	1.67	1.58	1.71	1.89
t		0.05	1.35	0.81	0.05	1.05
p						
r2-score T8						
$\bar{x}$	5.94					
s	2.59					
$\bar{x}_1$		6.30	7.17	5.88	5.45	4.75
$\bar{x}_0$		5.81	5.33	6.00	6.16	6.36
w		0.49	1.84	0.12	0.71	1.61
s_w		0.96	0.92	0.87	0.94	1.04
t		0.51	1.18	0.14	0.75	1.55
p						
r3,4-score T9						
$\bar{x}$	1.56					
s	1.58					
$\bar{x}_1$		1.40	1.33	0.88	1.18	1.38
$\bar{x}_0$		1.62	1.67	2.10	1.72	1.61
w		0.22	0.34	1.22	0.54	0.23
s_w		0.59	0.56	0.53	0.57	0.63
t		0.37	0.61	2.30	0.95	0.36
p				$< .05$		

		a	b	c	d	e
r5-score T10						
$\bar{x}$	4.28					
s	3.65					
$\bar{x}_1$		3.9	5.58	5.56	5.27	1.25
$\bar{x}_0$		4.42	3.52	3.25	3.84	5.14
w		0.52	2.06	2.31	1.45	3.89
s_w		1.35	1.29	1.24	1.31	1.46
t		0.39	1.60	1.86	1.09	2.66
p						<.05

		a	b	c	d	e
ɔ-score T11						
$\bar{x}$	8.03					
s	2.66					
$\bar{x}_1$		9.6	10.	7.5	7.09	7.25
$\bar{x}_0$		7.42	7.04	8.45	8.44	8.25
w		2.18	2.96	0.95	1.35	1.00
s_w		0.99	0.94	0.89	0.96	1.07
t		2.20	3.15	1.07	1.41	0.93
p		<.05	<.01			

		a	b	c	d	e
ɔ:-score T12						
$\bar{x}$	9.03					
s	1.58					
$\bar{x}_1$		9.3	9.92	9.00	9.09	8.25
$\bar{x}_0$		8.92	8.58	9.05	9.00	9.25
w		0.38	1.34	0.05	0.09	1.00
s_w		0.59	0.56	0.53	0.57	0.63
t		0.64	2.39	0.09	0.16	1.59
p			<.05			

		a	b	c	d	e
ɔL-score T13						
$\bar{x}$	7.31					
s	2.64					
$\bar{x}_1$		7.9	9.25	7.75	6.91	6.25
$\bar{x}_0$		7.08	6.33	6.95	7.48	7.61
w		0.82	2.92	0.78	0.57	1.36
s_w		0.98	0.94	0.88	0.96	1.06
t		0.84	3.11	0.89	0.59	1.28
p			$<.01$			
e:-score T14						
$\bar{x}$	8.28					
s	1.76					
$\bar{x}_1$		8.8	8.33	8.44	8.27	7.5
$\bar{x}_0$		8.08	8.25	8.15	8.28	8.5
w		0.72	0.08	0.29	0.01	1.00
s_w		0.65	0.62	0.59	0.64	0.71
t		1.12	0.13	0.49	0.02	1.41
p						
o:-score T15						
$\bar{x}$	8.58					
s	1.39					
$\bar{x}_1$		8.8	8.33	8.69	8.91	7.75
$\bar{x}_0$		8.5	8.71	8.50	8.44	8.82
w		0.3	0.38	0.19	0.47	1.07
s_w		0.52	0.49	0.47	0.50	0.56
t		0.58	0.76	0.40	0.94	1.91
p						

Since the effect of classification (b), occupation, was clearly so overwhelming, certain additional t-tests were performed just for the manual-occupation respondents (i.e. those for whom the dummy variable b had the value 0). Numbers of respondents in each half of the classifications a, c, ..., and the values of $\sqrt{\frac{1}{n_1} + \frac{1}{n_0}}$, were then as follows:

	a	c	d	e
n_1	6	10	8	6
n_0	18	14	16	18
$\sqrt{\frac{1}{n_1} + \frac{1}{n_0}}$	.471	.414	.433	.471

Θ-score T1

$\bar{x}$ (b = 0)	66.6			
s	22.5			
$\bar{x}_1$	72.9	60.4	57.25	64.0
$\bar{x}_0$	64.6	71.0	71.25	67.4
w	8.3	10.6	14.0	3.4
s_w	10.6	9.3	9.8	10.6
t	0.78	1.14	1.43	0.32
p				

Θ̌-score T2

$\bar{x}$ (b = 0)	84.7			
s	18.5			
$\bar{x}_1$	90.3	75.5	81.6	81.7
$\bar{x}_0$	82.8	91.4	86.2	85.7
w	7.5	16.1	4.6	4.0
s_w	8.6	7.6	7.9	8.6
t	0.87	2.12	0.58	0.46
p		<.05		

		a	c	d	e
t-score T3					
$\bar{x}$ (b = 0)	70.46				
s	32.0				
$\bar{x}_1$		93.8	59.5	59.5	74.0
$\bar{x}_0$		62.7	78.3	75.9	69.3
w		31.1	18.6	16.4	4.7
s_w		15.1	13.2	13.9	15.1
t		2.06	1.41	1.18	0.31
p		$\approx .05$			
d-score T4					
$\bar{x}$ (b = 0)	57.50				
s	28.6				
$\bar{x}_1$		77.5	51.2	50.9	50.8
$\bar{x}_0$		50.8	62.0	60.8	59.7
w		26.7	10.8	9.9	8.9
s_w		13.5	11.8	12.4	13.5
t		1.98	0.91	0.80	0.66
p					
h-score T5					
$\bar{x}$ (b = 0)	75.4				
s	23.8				
$\bar{x}_1$		81.8	70.3	58.8	100.
$\bar{x}_0$		73.3	79.0	83.6	67.2
w		8.5	8.7	24.8	32.8
s_w		11.2	9.9	10.3	11.2
t		0.77	0.88	2.40	2.96
p				$< .05$	$< .01$

		a	c	d	e
j/w-score T6					
$\bar{x}$ (b = 0)	7.38				
s	1.57				
$\bar{x}_1$		7.50	7.70	6.63	6.67
$\bar{x}_0$		7.33	7.14	7.75	7.61
w		0.17	0.56	1.12	0.94
s_w		0.74	0.65	0.68	0.74
t		0.23	0.86	1.65	1.27
p					

ɔ-score T11					
$\bar{x}$ (b = 0)	7.04				
s	2.79				
$\bar{x}_1$		9.33	7.00	6.00	6.33
$\bar{x}_0$		6.28	7.07	7.56	7.26
w		3.05	0.07	1.56	0.93
s_w		1.31	1.16	1.21	1.31
t		2.32	0.06	1.29	0.71
p		.05			

ɔ'-score T13					
$\bar{x}$ (b = 0)	6.33				
s	2.58				
$\bar{x}_1$		7.33	6.60	5.75	5.17
$\bar{x}_0$		6.00	6.14	6.63	6.72
w		1.33	0.46	0.88	1.55
s_w		1.22	1.07	1.12	1.22
t		1.09	0.43	0.79	1.28
p					

There now follow the calculations for multiple regression analysis.

Table [1.1] contains the class mean for each T (T1, T2, ... T15), expressed as deviations from the general mean. At the foot of the table we have the value of s for the T concerned.

[1.1]	T1	T2	T3	T4	T5	T6	T7	T8	...
a	5.7	4.1	16.0	12.3	5.5	-0.9	-0.07	0.36	
b	21.7	9.6	19.7	23.5	16.4	1.03	1.50	1.23	
c	-2.2	-5.4	-5.6	-0.5	-2.2	0.24	1.11	-0.06	
d	-8.5	-3.0	-9.7	-10.4	-13.5	-0.34	0.06	-0.49	
e	-4.4	-4.0	-12.3	-6.2	16.4	-0.89	-1.54	1.19	
s	24.0	16.5	29.5	29.8	22.6	1.73	2.12	2.59	

[1.1] ...	T9	T10	T11	T12	T13	T14	T15
a	-0.16	-0.38	1.57	0.27	0.59	0.52	0.22
b	-0.23	1.30	1.97	0.89	1.94	0.05	-0.25
c	-0.68	1.28	-0.53	-0.03	.42	0.16	0.11
d	-0.38	0.99	-0.94	0.06	-0.40	-0.01	0.33
e	-0.18	-3.03	-0.78	-0.78	-1.06	-0.78	-0.83
s	1.58	3.63	2.66	1.58	2.64	1.76	1.39

In [1.2] each column is the corresponding column of [1.1] divided by its s, to express the results in standard units. This allows direct comparison of one T with another (columns) or of one classification with another (rows).

[1.2]	T1	T2	T3	T4	T5	T6	T7	T8	...
a	.24	.25	.54	.41	.24	-.05	-.035	.139	
b	.90	.58	.67	.79	.72	.60	.708	.475	
c	-.09	-.33	-.19	-.02	-.10	.14	.524	-.023	
d	-.35	-.18	-.33	-.35	-.60	-.20	.028	-.189	
e	-.18	-.24	-.42	-.21	.72	-.51	-.727	-.459	

[1.2] ...	T9	T10	T11	T12	T13	T14	T15
a	-.101	-.105	.590	.171	.224	.295	.158
b	-.146	.359	.741	.565	.735	.028	-.180
c	-.450	.353	-.199	-.019	.159	.091	.079
d	-.241	.273	-.353	.038	-.152	-.006	.237
e	-.114	-.836	-.293	-.494	-.402	-.445	-.597

We next calculate the value $\sqrt{p/q}$ for each class, where p is the class proportion and q its complement. Thus for class a the ratio p/q is 10/26, since class a has 10 members. For class b we have 12/24, and so on.

	p/q	$\sqrt{p/q}$
a	10/26	.620
b	12/24	.707
c	16/20	.894
d	11/25	.663
e	9/27	.577

In [1.3] each column is the corresponding column in [1.2] multiplied by $\sqrt{p/q}$, giving the point-biserial correlations.

[1.3]	T1	T2	T3	T4	T5	T6	T7	T8 ...
a	.15	.16	.54	.25	.15	-.03	-.02	.09
b	.64	.41	.47	.56	.51	.42	.50	.34
c	-.08	-.30	-.17	-.02	-.09	.12	.47	-.02
d	-.23	-.12	-.22	-.23	-.40	-.13	.02	-.12
e	-.10	-.14	-.24	-.12	.42	-.29	-.42	-.26

[1.3] ...	T9	T10	T11	T12	T13	T14	T15
a	-.063	-.065	.366	.106	.139	.183	.098
b	-.103	.254	.524	.398	.520	.020	-.127
c	-.384	.316	-.178	-.016	.142	.081	.071
d	-.160	.181	-.234	.025	-.101	-.004	.157
e	-.066	-.482	-.169	-.285	-.232	-.256	-.344

[2.1] is the classification matrix, showing the number of respondents in each class (a, b, ...) and in each intersection of two classes (ab, ac, ... de).

[2.1]	n	a	b	c	d	e
n	36	10	12	16	11	8
a	10	10	4	6	2	2
b	12	4	12	6	3	2
c	16	4	6	16	8	3
d	11	2	3	8	11	0
e	8	2	2	3	0	8

From [2.1] we obtain [2.2] by pivoting on the northwest member (36). South and east of the lines in [2.2] we have the covariance matrix.

[2.2]	n	a	b	c	d	e
n	$^1/_{36}$	.2778	.3333	.4444	.3056	.2222
a	-.2778	7.222	.666	-.444	-1.056	-.222
b	-.3333	.666	8.000	.666	-.667	-.666
c	-.4444	-.444	.666	8.888	3.110	-.555
d	-.3056	-1.056	-.667	3.110	7.638	-2.444
e	-.2222	-.222	-.666	-.555	-2.444	6.222

Dividing each row and column of [2.2] by the square root of the diagonal element gives us the correlation matrix, [2.3].

[2.3]	a	b	c	d	e
a	1.000	.088	-.055	-.142	-.033
b	.088	1.000	.079	-.085	-.094
c	-.055	.079	1.000	.377	-.075
d	-.142	-.085	.377	1.000	-.355
e	-.033	-.094	-.075	-.355	1.000

Successive pivotal condensations, not shown here, yield [2.4], which is the inverse of [2.3].

[2.4]	a	b	c	d	e
a	1.034	-.069	.004	.170	.089
b	-.069	1.048	-.147	.188	.152
c	.004	-.147	1.190	-.495	-.100
d	.170	.188	-.495	1.398	.483
e	.089	.152	-.100	.483	1.181

The remaining step is to pre-multiply each column of [1.3] by the inverse correlation matrix [2.4] to obtain [3.1], the regression coefficient matrix, and to calculate the squared multiple correlation, R^2, as the inner product of

corresponding columns of [1.5] and [3.1]. The variance ratio, F, is obtained as $\frac{R^2}{1-R^2} \cdot \frac{30}{5}$; only where asterisked is it below the 5 percent level of significance.

[3.1]	T1	T2	T3	T4	T5	T6	T7	T8 ...
a	.65	.10	.25	.17	.09	-.11	-.09	.02
b	.61	.42	.42	.51	.52	.56	.40	.29
c	-.06	-.34	-.14	.02	-.02	.18	.52	.01
d	-.19	.02	-.19	-.23	-.19	-.32	-.32	-.22
e	-.12	-.12	-.27	-.15	.40	-.36	-.46	-.31
R^2	.46	.30	.42	.40	.52	.33	.63	.21
F	5.11	2.57	4.33	4.01	6.49	2.99	10.21	1.60*

[3.1] ...	T9	T10	T11	T12	T13	T14	T15	$\bar{x}_T$
a	-.109	-.061	.287	.061	.071	.165	.106	.156
b	-.087	.185	.480	.374	.474	-.043	-.173	.356
c	-.356	.297	-.155	-.061	.166	.122	.060	.176
d	-.452	-.099	-.160	-.002	-.202	-.154	.011	.183
e	-.138	-.481	-.183	-.253	-.246	-.293	-.348	.275
R^2	.23	.36	.45	.23	.36	.12	.16	
F	1.79*	3.36	4.95	1.78*	3.33	0.78*	1.13*	

The value of R^2 for a given T tells us what proportion of the variation in scores is attributable to the classification used to divide up the respondents. Thus classification by sex, occupation, age on arrival, date of arrival, and parish of origin

accounts for 46 percent of the variation in scores on T1 (θ), 30 percent of the variation on T2 (ð), and so on. It will be seen that particularly high values are obtained for T7, which tests r1, and T5, which tests h; particularly low values are obtained for T14 and T15, which test e: and o: respectively. In fact, arranging R^2 values in rank order reveals that the score which was most satisfactorily accounted for by the classification used was the only one, T7, which depended upon a combination of phonological and phonetic factors (namely r1, the vowel in words like bird and church). Next in order were the phonologically based scores (in descending rank order, h, θ, a, t, d, r5, ɔ, j/w, ð, r2, r3/4, a:), and lastly the two purely phonetically based scores, e: and o:. This suggests that whereas readiness or ability to make phonological adaptations is at least partly linked to a speaker's classification in terms of sex, occupation, age on arrival, date of arrival, and parish of origin, the readiness or ability to effect purely phonetic (realizational) adaptations depends largely upon other factors at present unknown, or at least unrevealed by the present study.

Table [3.1] is completed by a column headed $\bar{x}_T$, obtained by averaging along rows, ignoring the sign. It shows that (b), i.e. occupational class, accounts for more variation that any other classification; (e), parish of origin, is second in order; (d), date of arrival, (c), age on arrival, and (a), sex, account for progressively less and less of the variation in scores.

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