

The exhalations whizzing in the...er? SQUARE and NURSE in Lancashire English

1 Introduction

This paper contains some preliminary findings from a pilot study carried out in January and February 2006 into the status of the SQUARE/NURSE merger in Lancashire English. In this introduction I briefly discuss the merger in question, and then the practical aims of my fieldwork. Section 2 describes the methodology of my fieldwork. Section 3 discusses issues concerned with transcribing my raw data. Section 4 contains my results and analysis of these results. Section 5 sets out some tentative conclusions, and implications for future fieldwork.

1.1 SQUARE and NURSE in Lancashire English

Traditional sources of dialect data, including Orton & Halliday (1962) (henceforth SED), indicate that in much of central and southern Lancashire, words deriving from Middle English /ɛ:r/, /a:r/ and /a:ɪr/ (the SQUARE lexical set (Wells, 1982)) are realised with a central vowel. This is typically [ɜ:] in the SED data: the same vowel found in words deriving from ME /ir/, /ɛr/ and /ur/ (Wells' NURSE set). Wells comments on this SQUARE-NURSE merger, saying that it is found in "parts of Lancashire and...some at least of Greater Manchester" (1982: 361). Shorrocks claims that in Bolton, which is part of Greater Manchester and the traditional county of Lancashire, "*fare, fair, fir* and *fur* are all pronounced /fθɜ:(ɹ)/ in the dialect" (1998: 166). Although he chooses to label the merged phoneme using a rounded vowel symbol, which is different from Wells' description and the transcriptions found in the SED, all of these sources suggest that the SQUARE and NURSE sets are merged.

1.2 Aim of the fieldwork

The aim of my pilot study is to investigate the pronunciation of SQUARE and NURSE words in one location, Bolton, and to ascertain to what extent the patterns present in the earlier data are reflected in the data I collect. By using two age groups, old age pensioners and teenagers, I intend to investigate whether younger speakers show a different pattern of pronunciation from older speakers. This could suggest whether there is a phonological change in progress in a speech community, although as Labov points out, it is important to avoid "the error of confusing change in apparent time with change in real time" (1994: 73). Any differences between my two sets of speakers could indicate a pattern of age-grading, where differences between age-groups are repeated in each generation. However, I should be able to carry out some

degree of real time comparison by comparing the data from both sets of my informants to the data in earlier sources, specifically the SED and Shorrocks (1998).

2 Method

This section will discuss the selection of the location for the pilot study, the selection of informants, the format of data collection, and issues surrounding transcription of the data collected.

2.1 Selection of Location

In the SED, the data gathered in location La12 Harwood show the most consistent evidence of SQUARE words being pronounced with a central vowel [ɜ:]. Harwood is on the outskirts of Bolton, and Shorrocks (1998) proposes a merged /ə:/ phoneme in his Bolton phonology. Given the proximity of inner Manchester, and the urban spread within the Greater Manchester area, there is likely to be extensive contact between Bolton speakers with a merger and speakers from inner Manchester with a contrast. There is, therefore, a possibility that, for some Bolton speakers, this merged phoneme could be found to be changing under the influence of speakers from inner Manchester. The availability of previous work on Bolton, together with the potential for large-scale dialect contact, led me to select Bolton as the location for the pilot study.

2.2 Selection of informants

In my fieldwork, I settled on a quota or judgment sample (Milroy & Gordon, 2003: 30), using informants in two sorts of institutions: a school and two old people's homes. I decided to follow Shorrocks' choice of criteria for his selection of informants: "(a) the place in which the informant was born, raised and schooled; (b) the social class of the informant, as defined by occupation (of both himself and his parents), income, housing, and extent of education" (1998: 83). By keeping these social factors constant, and by interviewing only female informants, I planned to gain comparable data from five informants in each of my two age groups. In essence I intended to start talking to informants, and keep going until I had five people who fitted my criteria, which following Shorrocks' criteria above, were (a) people who had been born in Bolton and lived all their lives there, and (b) people who were working class. For (b) I used the criteria of having left school at a relatively early age (14 in the case of my informants from old people's homes), and having worked in manual jobs: all of my older informants had worked in cotton mills at one time or another, as well as some periods working in shops. These criteria were clearly more difficult to apply to my younger speakers, but the catchment area of the school suggested that the speakers were comparable. In practice, identifying five speakers in each age group who matched these criteria was a fairly quick process.

2.2.2 Informants

My older set of informants is as follows (pseudonyms are used for all informants): Anne, 73; Beatrice, 93; Cassie, 82; Madge, 88; Rebecca, 89. All of these speakers were “born and bred” in Bolton, and are working class, as discussed in 2.2. My younger set of informants is: Abby, 17; Claire, 16; Davina, 17; Sarah, 17; Rachel, 17. All of these speakers were native to Bolton, and although social class is perhaps more difficult to pin down for these speakers, given that their parents’ occupations were “blue-collar”, it seems reasonable to label them as (perhaps upper) working class. In addition to the five younger speakers listed above, I also interviewed Asha, 18, whose family was from Birmingham, and who spoke Gujarati at home. She acted as a control speaker in my Commutation Test (see 4.1).

2.3 Format of the interviews

Some of the informants were interviewed in pairs: Rebecca and Beatrice; Anne and Doris (who was highly visually impaired, although not completely blind. However, she could not read the passage or word list). The rest of the pensioners were interviewed individually, and the teenagers were interviewed in two groups of three. Each interview began with general conversation. After 30 minutes or so of conversation with each speaker, and about 50 minutes for speakers who were interviewed in pairs, I asked them to read the passage I had prepared, and then to read the word list. Finally, each speaker took my version of a Commutation Test (Labov, 1994:356).

2.3.1 Conversation Style

For the informants who were interviewed in pairs, a 30 minute extract of conversation was taken, from 15 minutes into the interview to 45 minutes. The remaining informants, Cassie and Madge, were spoken to individually. For these speakers, a 15 minute extract of conversation was taken, again from 15 minutes into the conversation to 30 minutes. My younger speakers were interviewed in groups of three: I used the whole of my recording of conversation for these speakers, which was approximately 40 minutes for each group. There is a difficulty in that tokens of the SQUARE and NURSE sets do not occur very frequently in the conversational data. I was aware of this before my data collection, and had prepared topics of conversation in order to try to elicit tokens of SQUARE and NURSE words. This was successful to some extent: talking about the war and air raids was a productive strategy for the older speakers; talking about different areas of Bolton was reasonably successful with both sets of speakers. However, some of my plans did not elicit the desired tokens: I had pictures of Victoria Square and the Municipal Aquarium in Bolton, which most speakers failed to identify.

The conversation section of my interviews also provided an opportunity to elicit biographical information about my informants, which may be relevant in terms of their phonological systems: all of my informants were “born and bred” (the phrase they usually used) in Bolton, and nearly all had parents who were from the area. Rebecca’s father was from Yorkshire and was a music hall entertainer who worked across the North of England. This may explain some of the variation to be discussed in 4.2.3: it appears that Rebecca sometimes produces a SQUARE/NURSE contrast, despite having lived in Bolton all her life.

2.3.2 Reading Passage Style (RPS)

The passage I had prepared (see Appendix 1) contained several SQUARE/NURSE minimal pairs, which I planned to isolate and compare. It was initially written to appeal to the older speakers, and it was successful in this regard. I got comments such as, “That’s a nice little story,” and “That’s true, that’s what happened.” The recordings also contain several instances of happy laughter at various points during the readings of the passage. This seems to suggest that although reading a passage would be expected to produce a more careful speech style, the formality was mitigated by the content of the story. The same passage was used for the younger speakers, and while they did not show the same level of engagement as the older speakers did, they also seemed to be quite taken with the content of the story.

2.3.3 Word List Style (WLS)

After the reading passage, I asked my informants to read a word list (see Appendix 1). This contained the same SQUARE/NURSE minimal pairs that I had included in the reading passage, together with other “distracter” minimal pairs. Despite some complaints that there were three pages of words in my list, all the speakers read it. After one of my younger speakers, Rachel, had read the list, there was an interesting conversation with her friend Davina who was also in the room.

D: Did you really say ‘spur’ that many times?

R: Yeah but it was different ways of spelling it.

D: Well I still say them the same.

This was a spontaneous comment, and it is not clear exactly what Rachel is referring to by “it”. However, the comment suggests that she regards the *spare/spur* minimal pair as being homophones, and being essentially the same word.

In terms of the formality of the speech style, I am not sure that all my speakers regarded the word list task as being a more formal activity. Some of my older speakers seemed to enjoy reading the word list out loud as a kind of performance, and certainly did so with some gusto. This may have implications for any claims about

stylistic variation in the realisation of the SQUARE and NURSE sets. However, following standard practice, I think it is fair to assume that the word list generates a more careful realisation of the tokens than the reading passage, and there should be some basis for stylistic comparison between CS, RPS and WLS.

2.3.4 Perception Test

The final stage of my interviews was a variation of a “Commutation Test” (Labov, 1994: 356). This involved my informants listening back to the word list they had read a few minutes earlier. They had a sheet with minimal pairs arranged in rows: one word in each pair was the one they had read in the word list. The correct words were randomly placed in the left or right column, so that the informants had to decide which word to tick for each word they heard. I had two pairs of headphones, so I was able to pause the recording after each word, to give the informants a few seconds to decide which word they had heard. All of my informants took to this task with surprisingly little explanation needed from me: the older speakers seemed to have done similar tasks before in hearing tests.

2.4 Technical aspects of preparing the recordings for analysis

On returning from my data collection, the first stage of preparing the recordings for analysis was to transfer them into my computer from the minidisc recorder. The audio files were then divided by speaker for the RPS and WLS sections, and by speaker or pair of speakers for the conversation sections. I then isolated each token of SQUARE and NURSE from the RPS and WLS recordings, taking extreme care to refer to my printed texts of my reading passage and word list in order to label correctly SQUARE and NURSE tokens which for some of my informants sound very similar. Many of the RPS tokens are quite reduced because of their context in connected speech. With this in mind, to aid my transcriptions, I produced two files for each token: one of the relevant token in isolation, and one with a few words on either side of the relevant token.

3 Transcription

My initial on-the-spot impressions during my data collection were that some speakers seemed to have a SQUARE/NURSE contrast, while others seemed to pronounce the SQUARE set with what sounded like a central NURSE vowel. Some speakers seemed to vary between the two, but this variation did not seem to correspond consistently to a change in style of the recorded speech from CS to RPS or WLS. On listening to the recordings, finer distinctions became apparent, and my first attempt at transcription picked up variation in several dimensions:

- front to central realisation

- length variation, with some short variants
- no lip-rounding or some degree of lip rounding
- pure monophthong or some ‘r’-colouring or almost a centring diphthong with an off-glide.

Given that these forms of variation could be arranged in a multidimensional matrix, there could potentially be a very large number of variants to identify, and this would in turn make it difficult to spot patterns in the data. Some rationalisation of the variants into categories was necessary.

3.1 Categorisation of variants

It is debatable to what extent a non-local “General Northern British English” (Watt, 2002: 58) can be said to exist. However, in most northern English accents other than those found in Lancashire and Merseyside, and the far north east of England, the phonetic distinction between the vowels in the SQUARE and NURSE sets is along the dimension of front to central. Furthermore, Wells discusses the difference between the phonetic output form of the Lancashire merged phoneme in Liverpool and in southeast Lancashire also in terms of a front to central distinction: “pronunciations such as [nɛːs] are diagnostic for Merseyside... although ... in...other parts of the north, e.g. in Wigan, the quality... is characteristically central, [nɜːs], [skwɜː], etc.” (1982: 372). Shorrocks chooses to label the merged phoneme as /əː/, suggesting that he views rounded variants as typical. He does, though, identify a wide range of phonetic variants (1998: 208-9) including some unrounded variants. Shorrocks’ identification of rounding as the typical feature of variants of the merged SQUARE/NURSE phoneme is a noticeable difference from the data presented in the SED. There is no indication of rounded variants in the SED data: the distinction that marks Lancashire varieties from neighbouring varieties with a contrast is that SQUARE words are transcribed with an unrounded central vowel ([ɜː], [əː], [ɜːʔ], [əːʔ]) in Lancashire localities, but an unrounded low-mid front vowel in other parts of the north of England. Following the advice given by Milroy & Gordon (2003: 143) that narrow transcriptions are useful in pilot studies in order not to miss potentially important information, I began by trying to categorise six variants: front, central and an in-between “fudged” variant, and rounded and unrounded variants for each degree of fronting. However, it soon became apparent that lip rounding was being influenced by the phonetic context: Shorrocks writes that rounded variants occur “especially after bilabials” (1998: 208). Furthermore, in neighbouring varieties of English (Yorkshire, Cheshire, the far north of Lancashire) that have a phonological contrast between the SQUARE and NURSE sets, that contrast is realised in a difference in fronting (Orton *et al.*, 1978). This led me to focus on differences in fronting as the key feature in determining the extent of the merger in my informants’ speech. I decided to use a

scale of four variants ranging from a fully front variant to a fully central variant, with two “fudged” variants in between: a retracted front variant and an advanced central variant. My categories are listed in the table below, which shows my grouping of variants into the four categories.

Figure 1

	Clearly Front Variants	Fudged Front Variants	Fudged Central Variants	Clearly Central Variants
Category Label to include the variants in the column below:	ɛɪ	ɛ̠ɪ	ɜ̠ɪ	ɜɪ
Short variants	ɛ	ɛ̠	ɜ̠	ɜ
With schwa offglide	ɛɪ̯	ɛ̠ɪ̯	ɜ̠ɪ̯	ɜɪ̯
With r-colouring	ɛɪ̯ʳ	ɛ̠ɪ̯ʳ	ɜ̠ɪ̯ʳ	ɜɪ̯ʳ
With some lip rounding	ɛ̠ɪ̯	ɛ̠̠ɪ̯	ɜ̠̠ɪ̯	ɜ̠̠ɪ̯

3.2 Transcription Process

I have ten speakers in my sample, and recordings of speech in conversational style (CS), reading passage style (RPS) and word list style (WLS). I transcribed my recorded tokens of SQUARE and NURSE words auditorily. The data for RPS and WLS was directly comparable across speakers, given that they were reading the same passage and word list. This, together with my presentation of these tokens on a clickable webpage, allowed me to compare the same word across speakers, and the same speaker’s variation across words. Because I was able to cross-refer each transcription in this way, and revise my transcriptions accordingly, I was able to be consistent in my categorisation of each token.

4 Results

In this section I will present the results of each section of my data collection and analysis.

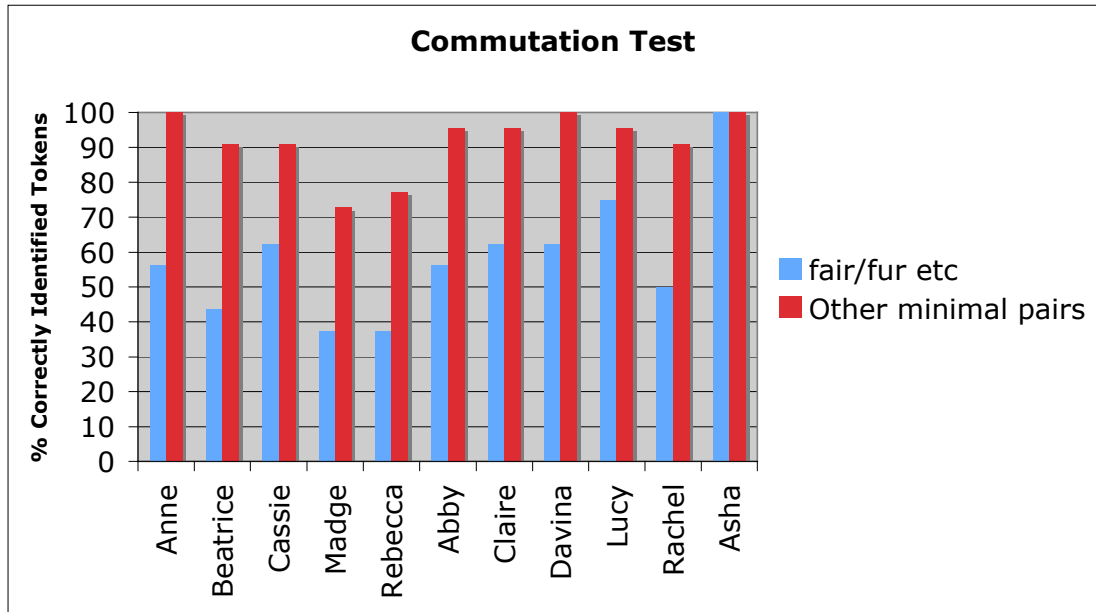
4.1 Commutation Test (test of perception)

Figure 2

	Number of correct responses	% correct for fair/fur etc	Number of correct responses	% correct for other minimal pairs
Anne	9	56.25	22	100.00
Beatrice	7	43.75	20	90.91
Cassie	10	62.50	20	90.91
Madge	6	37.50	16	72.73
Rebecca	6	37.50	17	77.27

Abby	9	56.25	21	95.45
Claire	10	62.50	21	95.45
Davina	10	62.50	22	100.00
Lucy	12	75.00	21	95.45
Rachel	8	50.00	20	90.91
Asha	16	100.00	22	100.00
Total Possible	16		22	

Figure 3



As can be seen in Figure 3, all ten of my speakers were less able to identify one member of SQUARE/NURSE minimal pairs such as *fair/fur* than they were to identify a member of a minimal pair involving other lexical sets. Despite not being one of my main informants, Asha took part in the Commutation Test and proved to be an interesting “control”: she was “born and bred” (her phrase) in Bolton, and had many features associated with Bolton speech, for instance a rounded vowel in words such as *brow* (transcribed as /brv:/ by Shorrocks (1998: 174)). However, she speaks mainly Gujarati at home, and in her acquisition of a Bolton variety of English, seems to have acquired a contrast between SQUARE and NURSE.

Given that the Commutation Test essentially involves a series of two-way choices, analogous to tossing a coin, a binomial sign test is an appropriate test for the statistical significance of these results. My hypothesis, H_1 , is that a speaker achieves her score or higher because she can reliably perceive a contrast between the SQUARE and NURSE sets, and can, therefore, accurately identify the word she hears. The null hypothesis, H_0 , is that the speaker would be likely to achieve her score by chance. Testing H_0 using a binomial sign test, the one-tailed P value for Asha’s score in the identification of members of SQUARE/NURSE minimal pairs is <0.0001 . This means it is statistically very unlikely that she could have achieved that score by chance. This

allows me to reject H_0 , and does not disprove the idea that Asha can perceive a contrast between SQUARE and NURSE. Using the same test, Lucy's score for the SQUARE/NURSE pairs gives a one-tailed P value of 0.0384. This is below the one-in-twenty significance level of 0.05, and again allows me to reject H_0 . This does not disprove the idea that Lucy can perceive a contrast between SQUARE and NURSE, and indeed this matches her results in my analysis of production of vocalic contrasts (see 4.2). In contrast, all the other speakers' scores for the SQUARE/NURSE minimal pairs give one-tailed P values of >0.05 , and I am unable to reject H_0 for these speakers. In other words, their scores are statistically likely to have occurred by chance: the scores do not suggest that the speakers can reliably perceive a contrast between SQUARE and NURSE.

It can be seen that the scores for the distracter minimal pairs also vary from 100% correctly identified by Anne and Davina, to 73% correctly identified by Madge. Madge was one of my older speakers, who used a hearing aid, and extra-linguistic factors such as age and deafness would be expected to play a part in her low score. However, the same binomial sign test gives a one-tailed P value of 0.0262 for her score for the distracter minimal pairs. This is below the 0.05 confidence level, and allows me to reject H_0 . This suggests that it would be unlikely for her to have achieved even her 73% score by chance. This in turn lends weight to the idea that she can reliably perceive a contrast between the members of the distracter pairs, but that, in common with all but one of my informants, her score for the SQUARE/NURSE pairs is statistically likely to have been achieved by chance. (Lucy is the exception, and I am disregarding Asha.)

4.2 Analysis of Production

Having transcribed all the tokens in my sample according to my system of four variants outlined in 3.1 above, I then allocated each variant a numerical score as follows:

ɛɪ	ɛɪ	ɜɪ	ɜɪ
1	2	3	4

This allowed me to calculate mean and median scores for each speaker's realisation of SQUARE and NURSE words: the closer the mean or median score is to 1, the more consistently the speaker uses front variants; the closer the mean or median score is to 4, the more consistently the speaker uses central variants. My discussion of the CS data will be brief, bearing in mind the problems with inconsistency in that data mentioned in 3.2. However, there do seem to be potential patterns corresponding to the style of speech, so I will go on to discuss the results for RPS and WLS, and then suggest points of comparison between the three styles.

4.2.1 CS

Figure 4

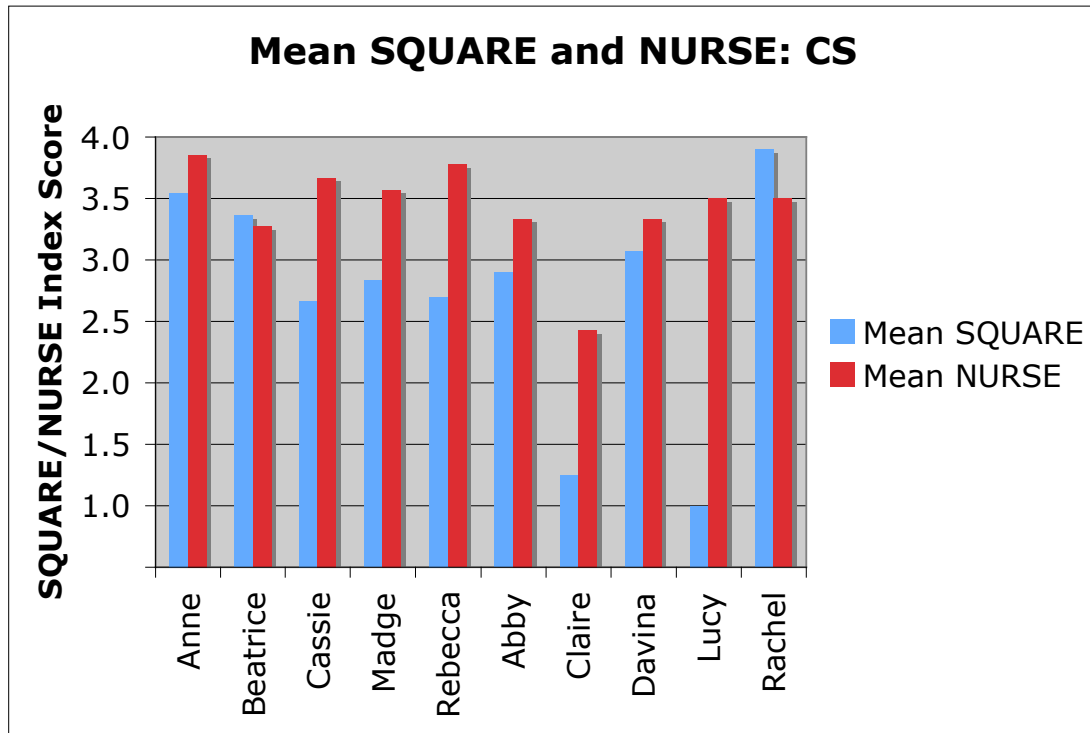
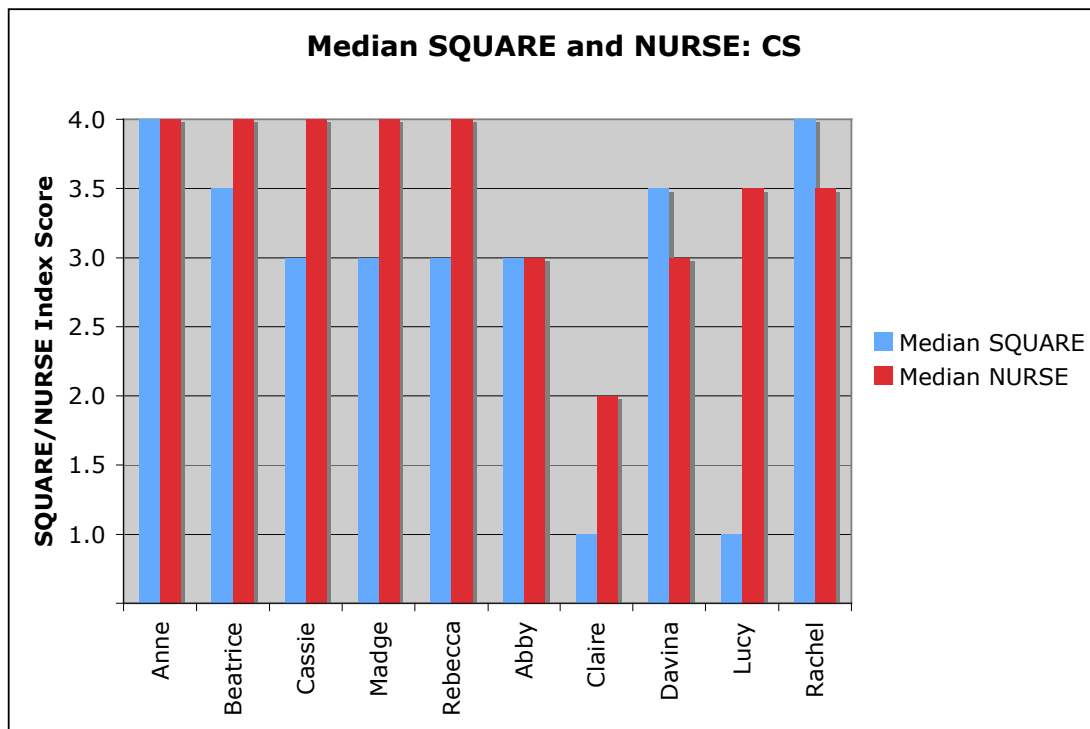


Figure 5



Among my younger informants, Lucy, has the largest difference both in her mean and median scores for SQUARE and NURSE. Claire has a smaller but still noticeable difference in both her mean and median scores for SQUARE and NURSE. Cassie and Rebecca have mean scores for SQUARE and NURSE that are distinct by 1 point on my index scale, and together with Madge have median scores that are distinct by 1 point

on the index scale. All of these speakers, therefore, seem to be producing, to a greater or lesser extent, some form of contrast between the two sets of words. The other speakers seem to be fairly consistent in their use of central variants for SQUARE and NURSE sets: where there are differences in the mean scores, they are less than 1 point on my index scale.

4.2.2 RPS

Calculation of mean and median scores for each speaker for RPS was fairly straightforward. The only issue encountered was that two of my older speakers failed to read two of the intended minimal pairs in the passage. These gaps were factored out of the calculation of the mean and median scores for these speakers.

Figure 4

1=SQUARE 2=NURSE		Anne	Beatrice	Cassie	Madge	Rebecca	Abby	Claire	Davina	Lucy	Rachel
1	blair	4	3	1	2	3	1	1	3	1	1
1	fair	2	3	1	1	3	1	1	4	1	2
1	fair	3	2	2	1	1	1	1	3	1	1
1	fair	1	4	3	1	1	1	1	2	1	2
1	cared	3	4	1	3	4	3	1	3	1	2
1	hared	4	4	1	2	4	2	3	4	1	4
1	stared	4	4	1	1	4	1	1	4	1	2
1	pair	4	4	1	3	2	1	1	4	1	3
1	spare	4	4	3		4	1	1	3	1	4
1	bear	3	4	3	3		2	1	4	1	2
1	stairs	3	4	4	2	4	1	4	2	1	1
2	blur	4	4	2	1	4	4	2	4	3	2
2	fur	2	4	4	4	4	3	1	3	2	4
2	curd	2	3	2	3	3	3	1	4	2	4
2	heard	1	3	3	1	3	3	1	3	2	2
2	stirred	4	4	4	3	4	1	1	4	3	4
2	purr	4	4	1	4	4	3	1	4	2	4
2	spur	4	1	1		3	1	1	2	1	3
2	burr	4	4	3	4		1	1	4	4	4
	Mean SQUARE	3.18	3.64	1.91	1.90	3.00	1.36	1.45	3.27	1.00	2.18
	Mean NURSE	3.13	3.38	2.50	2.86	3.57	2.38	1.13	3.50	2.38	3.38
	Median SQUARE	3	4	1	2	3.5	1	1	3	1	2
	Median NURSE	4	4	2.5	3	4	3	1	4	2	4

Figure 5

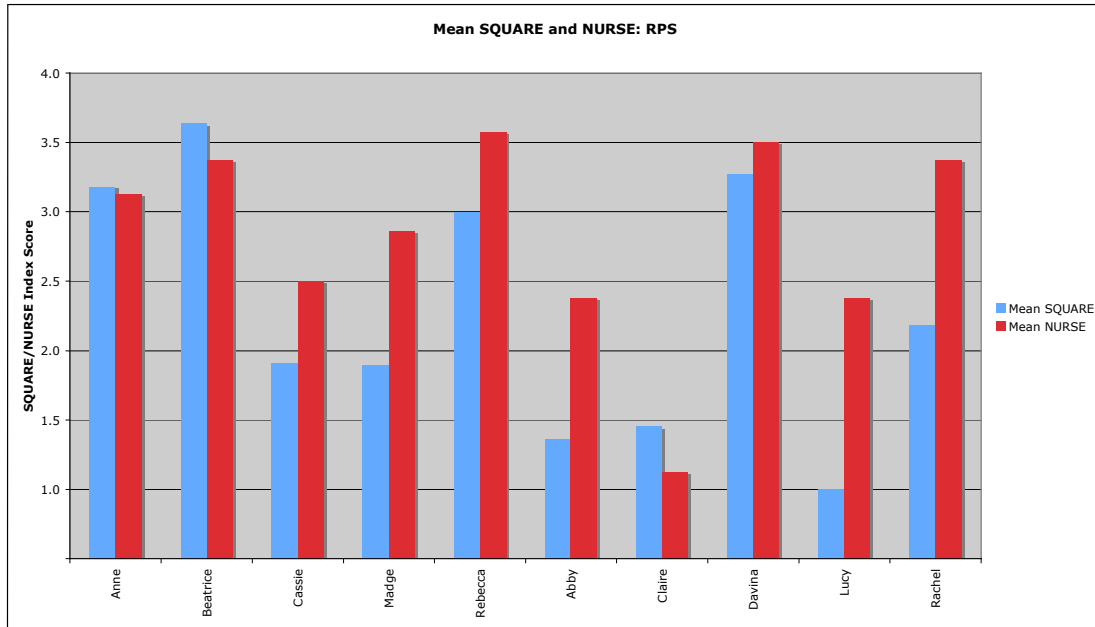


Figure 6

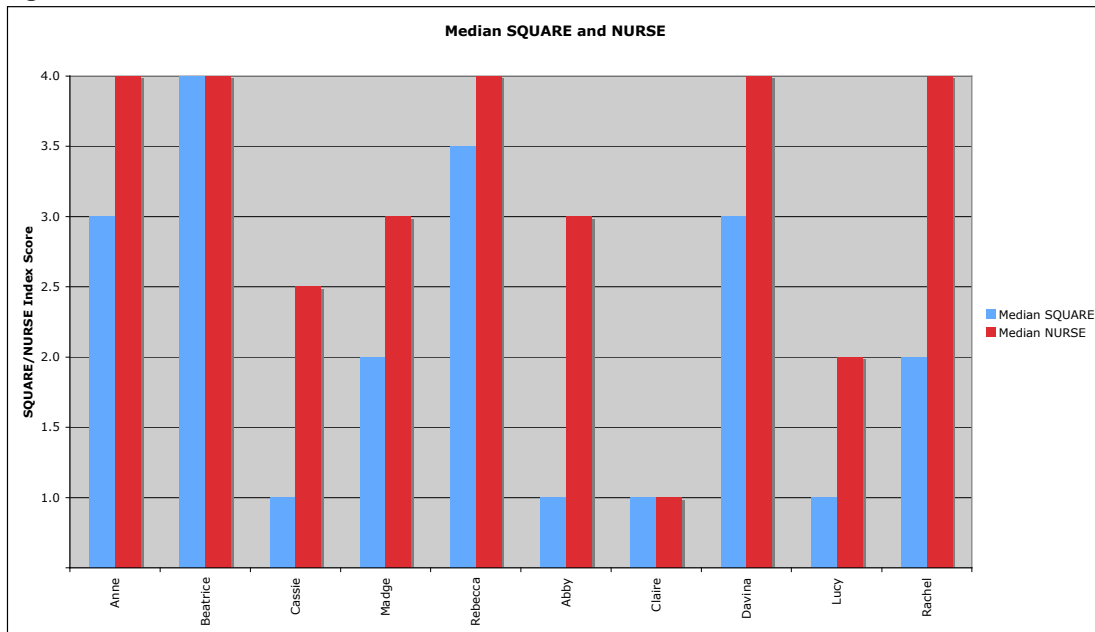


Figure 4 shows the numerical index score for each token, and Figures 5 and 6 are the resulting graphs of mean and median scores for SQUARE and NURSE words for each speaker in RPS. If the difference between the means for a speaker is more than 1, that indicates a pattern of usage of variants that is, overall, different by at least one point along my four point index scale. Three of my teenage speakers match this: Abby, Lucy and Rachel. When considering the median values for my younger informants, Abby and Rachel have differences of greater than one point. Among my older speakers, Madge comes very close to having a difference in mean values of more than one point, and Cassie slightly less so. Looking at the median values, however, Cassie

is the only one of my older informants to have a difference of more than one point for the median values of SQUARE and NURSE. The other speakers appear to have very similar mean index scores for SQUARE and NURSE. It is interesting that Claire’s mean and median scores are low for both SQUARE and NURSE words, indicating that she tends to use front variants for both sets, which Wells claims is typical of Liverpool English (1982: 372). Claire lives four miles outside Bolton, in a rural community in the Darwen Valley. Her parents have lived all their lives in this community, and in her speech there was no evidence of lenition of word-final stops, or other stereotypically Liverpudlian features. It may be that Claire’s scores are the result of hypercorrection of NURSE words, as suggested by Shorrocks: “when [ɛɪ] or [ɛʰə] types are used, the speaker usually fails to distinguish...such pairs as *fur* ≠ *fair*” (1998: 212). This will be discussed in 4.2.4.

4.2.3 WLS

Figure 7

1=SQUARE 2=NURSE		Anne	Beatrice	Cassie	Madge	Rebecca	Abby	Claire	Davina	Lucy	Rachel
1	pair	3	3	1	1	1	3	1	4	1	4
1	blair	4	3	1		1	2	1	2	3	4
1	fair	3	2	1	4	1	3	1	3	1	4
1	cared	4	3	2	2	4	3	1	3	1	4
1	stared	4	4	2	1	1	4	1	4	3	4
1	hared	3	4	2	1	2	4	1	4	4	4
1	bear	4	4	1	1	2	3	1	4	1	4
1	spare	3	4	1	1	1	4	1	4	1	4
2	purr	4	4	3	4	4	2	2	2	3	4
2	blur	4	3	3		4	3	2	3	3	4
2	fur	4	3	3	3	4	3	1	4	4	4
2	curd	4	4	4	3	4	4	2	4	4	3
2	stirred	4	4	3	4	4	4	2	4	4	3
2	heard	4	4	4	2	3	4	1	4	4	4
2	burr	4	4	3	4	4	4	1	4	4	4
2	spur	4	4	2	2	3	4	1	4	4	4
	Mean SQUARE	3.50	3.38	1.38	1.57	1.63	3.25	1.00	3.50	1.88	4.00
	Mean NURSE	4.00	3.75	3.13	3.14	3.75	3.50	1.50	3.63	3.75	3.75
	Median SQUARE	3.5	3.5	1	1	1	3	1	4	1	4
	Median NURSE	4	4	3	3	4	4	1.5	4	4	4

Figure 8

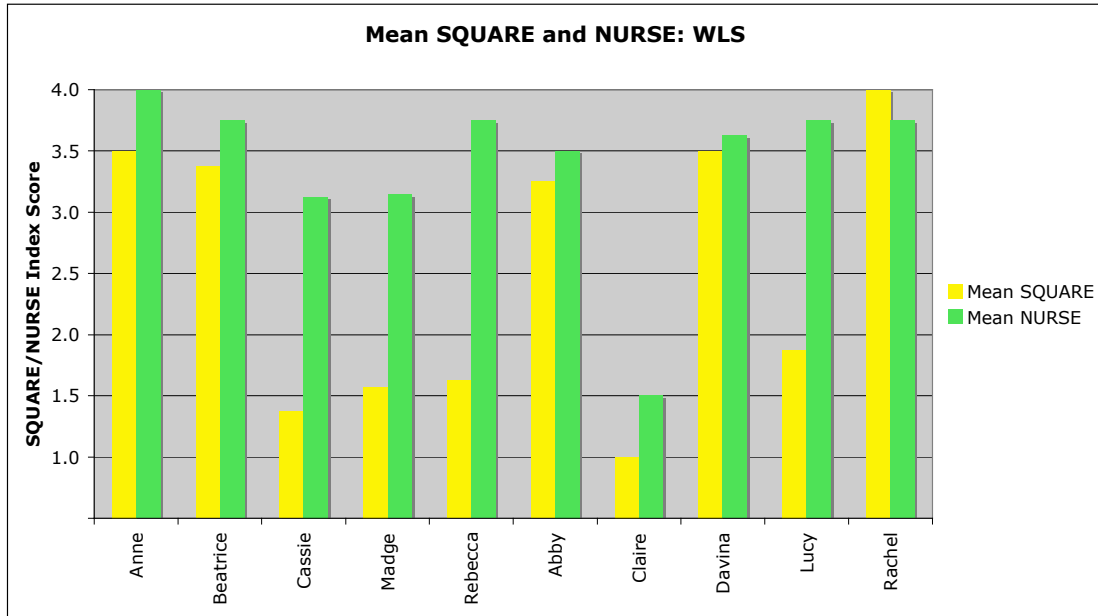


Figure 9

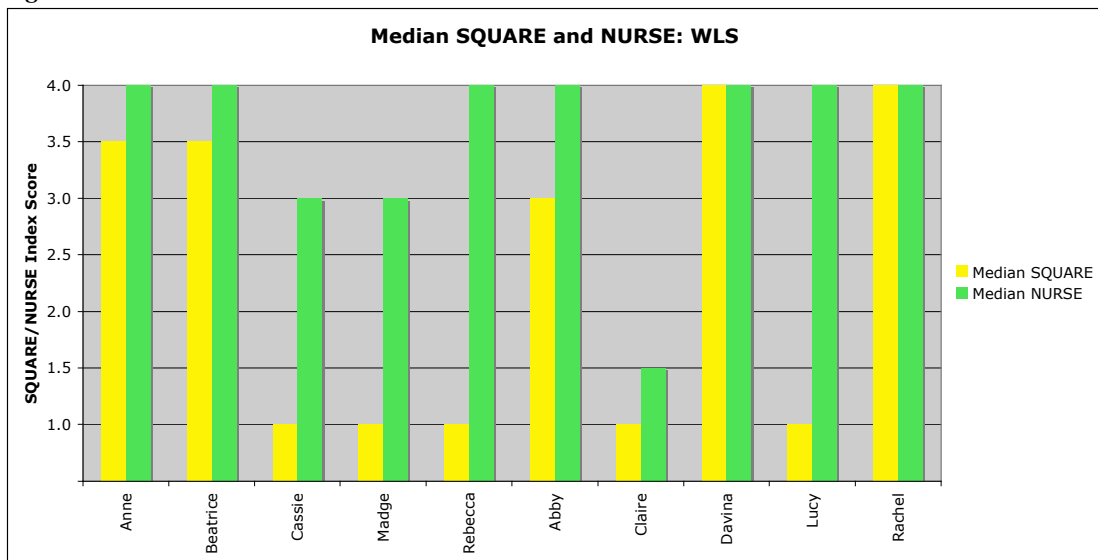


Figure 7 shows the numerical index score for each token, and Figures 8 and 9 are the resulting graphs of mean and median scores for SQUARE and NURSE words for each speaker in WLS. Three of the older speakers, Cassie, Madge and Rebecca, appear to have much more of a distinction in production between SQUARE and NURSE words than was the case in their RPS data: in what I would expect to be a more careful speech style, a contrast between the two lexical sets is made more consistently by three of my older speakers. Of my younger speakers, Lucy seems to be maintaining a distinction in her production across the two speech styles. However, it is interesting that Abby and Rachel have a far smaller difference between their mean and median scores for SQUARE and NURSE in the WLS data than they did in the RPS data. This suggests that in more careful speech, they merge their pronunciations more

consistently. These patterns of variation across speech styles are more clearly visible if CS, RPS and WLS scores are presented on the same graph, as in Figures 10 and 11.

4.2.4 Variation in Production Across Speech Styles

Figure 10

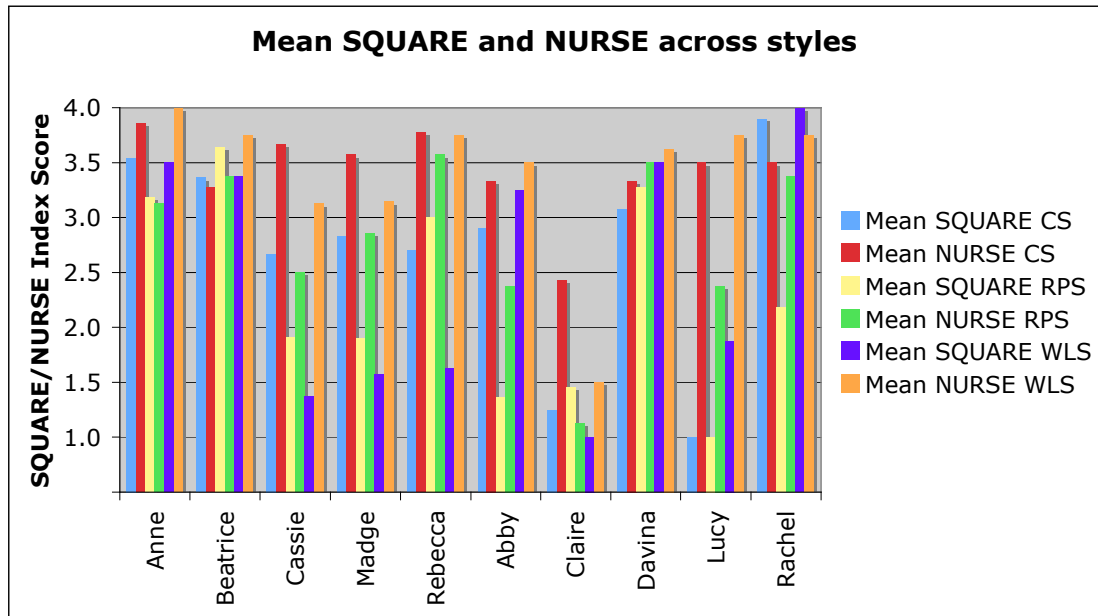
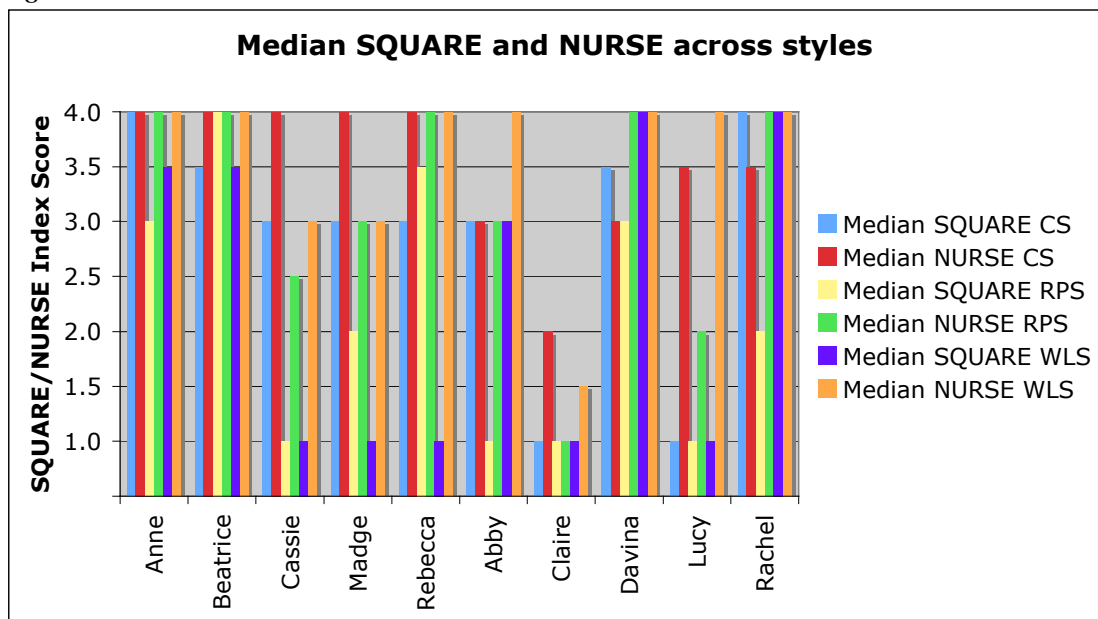


Figure 11



Figures 10 and 11 show that Anne, Beatrice and Davina use central variants fairly consistently for both SQUARE and NURSE words across CS, RPS and WLS, and their resulting mean and median scores are between 3 and 4. This seems compatible with the idea that these speakers have a merged phoneme for SQUARE and NURSE words, and show no significant modification in their realisation of this phoneme across different styles. Claire uses front variants fairly consistently across SQUARE and

NURSE words in RPS and WLS, and her resulting mean and median scores are between 1 and 1.5. However, there is slightly more of a contrast in her production when she speaks in CS: she tends to use retracted front variants rather than clearly front variants for NURSE words. This perhaps suggests that she is modifying her speech in the two reading styles, but that this is hypercorrection. She aims for front variants for SQUARE words, but also fronts her realisation of NURSE words, suggesting that she does have an underlying merger, and is unable to separate the two lexical sets. In any case, the potential unreliability of the CS data means that Claire's variation in CS should not be taken as evidence that Claire has a SQUARE/NURSE contrast. Cassie, Madge and Rebecca, three of my older speakers, produce a more consistent contrast in WLS than they do in RPS, suggesting that they are able to produce the contrast, and do so more consistently the more careful the speech is. In contrast, Rachel and Abby show much less of a contrast in their WLS data than in their RPS data, suggesting that they are more likely to produce merged output forms the more careful the speech is. The implications of this difference between my older and younger speakers are interesting. In their realisation of SQUARE and NURSE, it seems as though my younger speakers are marking their status as Boltonians in careful speech, rather than aiming for a supra-local standard variety.

5 Conclusions and Implications for Future Fieldwork

The first conclusion to be drawn from this pilot study is that nearly all of the working class female teenagers and working class female pensioners in my sample in Bolton seem unable to perceive a contrast between their own realisation of SQUARE and NURSE words. Rachel's spontaneous comment reported in 2.3.3. suggests that she regards the sound of *spare* and *spur* to be the same. However, some of these same speakers do seem to be producing some degree of contrast between their realisation of SQUARE and NURSE words. In his discussion of similar situations, Labov (1994: 359) gives a list of six features that mark near-mergers:

1. The opposing phonemes are differentiated by a smaller than normal phonetic distance.
2. This distance is most often an F2 difference, instead of a combination of F1 and F2.
3. There is considerable individual variation within the community: some individuals show a near-merger, others a complete merger, and still others a distinction.
4. Speakers who make a consistent difference in spontaneous speech often reduce this difference in more monitored styles.
5. Speakers judge the sounds to be the same in minimal pair tests, and fail commutation tests.
6. Phoneticians from other areas are better able to hear the difference than the native speakers.

Point 5 seems to hold for my informants. Likewise point 3 is supported by the variation in production I encountered. Milroy & Gordon explain that “higher F2 frequencies are judged to indicate frontier vowels” (2003:146), and given that the variation I analysed was variation in fronting, point 2 also seems to apply. The pattern in point 4 is supported by some of my data for my younger speakers, Lucy and Claire, but this has to be a tentative claim given the nature of my CS data. Overall then, according to Labov’s list of features, some of my speakers could potentially have a near-merger, although others do seem to have the complete merger suggested in the accounts of Lancashire dialects mentioned in 1.1. The impact of contact with speakers from inner Manchester, who would be expected to have a SQUARE/NURSE contrast, will be the focus of my future work.

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Appendix 1

Reading Passage

This is a story about the old days, a long time before Tony Blair came along. Even before The Beatles. It's about the day the fair came to town. I was excited all day at school. I ate my lemon curd sandwich at dinner time. I heard all about the carousel and the stalls and the candyfloss. My mates were going to the fair that afternoon and I wanted to go too.

When I got home, my mam put on her fur coat and her hat and gloves. She stared at me. "What are you waiting for?" she asked. I didn't want my mam to take me to the fair! I wanted to go on my own. Anyway, she made me put on a pair of mittens against the cold. The air was so cold you could see your breath.

On the spur of the moment I decided what to do. I let go of my mam's hand and hared off after my friends. She would go spare when she caught me, but I never cared about that. On one stall, a man stirred the candyfloss. On another stall there was a giant teddy bear as a prize. There was so much to see. It was all a blur.

My dad was polishing his burr walnut desk. He sent me upstairs with no supper. All I could hear was the loud purr of my cat, Ginger. Never mind. It was worth it. I would go again next year.

Word List

play
purr
blare
might
school
bee
fair
bet
blur
Sam
cot
fur
cough
cared

pull
butt
bite
stared
coy
hared
rye
beat
heard
boy
curd
bait
bear
show
boat

stirred
pair
psalm
pool
spur
shoe
spare
burr
bit

Commutation Test Sheet

ply	play
purr	pair
blur	blare
might	mate
skull	school
bee	bye
fair	fur
bat	bet
blur	blare
psalm	Sam
cot	coat
fur	fair
cuff	cough
cared	curd

pull	pool
but	butt
bite	beat
stared	stirred
Kay	coy
hared	heard
row	rye
bet	beat
heard	hared
boy	buy
cared	curd
bait	Bert
burr	bear
show	shoe
boat	boot

stirred	stared
purr	pair
psalm	Sam
pull	pool
spur	spare
show	shoe
spur	spare
burr	bare
bet	bit