Contributory factors in accent change in adolescents
(original title: Is TV a contributory factor in accent change in adolescents?)

Background
Motivation
This project is the first to tackle a key area of sociolinguistic theory – the impact of television on variation and change on a core system of language, pronunciation. The introduction of broadcast media was accompanied by an assumption that dialectal diversity would diminish, but this does not appear to have happened (Chambers 2004). Partly because of this, and because linguistic variation is thought to be primarily affected by changes taking place during face-to-face interaction (Trudgill 1986), linguists have resisted a causal role for television in language change.

Recent changes in urban British dialects, and in particular the spread of apparently Southern English features, such as [f] for /th/ in e.g. *think*, into the speech of relatively non-mobile speakers, as in Glasgow, have led to more speculation about a role for television. In particular, soaps/dramas set in London have been identified as an alternative source, especially by the media themselves. But linguists are still uncertain, either speculating that: '[the] sheer speed [of the changes] may be due to a 'softening-up' process produced by the engendering of favourable attitudes through TV programmes' (Trudgill, 1988: 44), or wondering about a more important – yet unspecified – role for television (e.g. Williams and Kerswill 1999). Television has also been argued to increase awareness of such linguistic innovations rather than necessarily lead to their adoption (Milroy and Milroy 1985), which is more likely through interpersonal channels (Rogers 1995).

Such discussion of television and accent change lacks systematic evidence in either direction. This is difficult to justify given both the prevalence of television as a social phenomenon (e.g. Strasburger 1996), and the existence of media effects research which has established that the broadcast media do affect social behaviours, even if the nature, intensity, duration, and even description and investigation of these effects is disputed (e.g. McQuail 2005). Media effects research has developed quantitative models which attempt to assess potential effects within differing, sometimes mediated versions, of a transmission model, using both experiments and correlational studies (Gunter 2000), whilst qualitative research emphasizes an alternative view of the viewer as actively interpreting media texts, though not always resisting. Thus media effects research offers a range of methodologies for considering TV and language.

There may be also be a role for the individual in responding to media effects, since diffusion research also observes that individuals may be persuaded to innovate differently according to their 'adopter category'. Most people fall into adopter categories for whom interpersonal channels are most effective, but a small percentage of 'early adopters' and 'innovators' may be influenced by media channels (Rogers 1995: 197).

<u>Research Questions</u>
The main research question is: *Are the media a contributory factor in systemic language change under certain circumstances for certain individuals?* Since answering this question is beyond the scope of any single project, we begin to tackle it through a specific question:

- Do the media play a role in the appearance of 'Southern English' accent features in Glaswegian?

Here we considered evidence for a restricted set of factors. We took a single medium (television) and considered the possible impact of one linguistic continuum ('media-Cockney': a loose label for a few programmes set in London including *EastEnders, The Bill, Only Fools and Horses*) on another selected linguistic continuum (Glaswegian vernacular), with respect to pronunciation, in the speech of one stratified age group (working-class adolescents) within their overall social context. We provide initial answers to this question by answering 14 specific research questions during the presentation of the results.

Objectives
We have achieved the following objectives:
1. We have successfully developed methods for investigating the links between television and accent change by drawing on existing methodologies from both sociolinguistics and mass communications research.
2. We have provided the first systematically-collected quantitative and qualitative evidence which directly relates to television and accent, and which has allowed the first links between television and accent variation to be identified.
3. We have investigated the possibility of short-term effects of television on accent by developing and implementing an innovative TV/language experiment.
4. By considering the potential impact of one (media)linguistic variety on another within its social context, we have contributed to the broader theoretical understanding of language change, by providing evidence which suggests that television should be included in accounts of accent change even if the precise nature of such effects are still unclear.

Methods
The methodology was driven by the need first to establish profiles of our informants (linguistic, social, television), and second to investigate 1) the claimed impact of television (on attitudes and awareness) and 2) the evidence for a) potential short-term effects of television and b) possible links between media-Cockney and linguistic innovation.

<u>Informants</u>
We worked with 48 working-class Glaswegian informants (see Table 1; Stuart-Smith 1999).

Age Group	chronological age	no. of informants	gender	School
1	10-11 years	12	6 M 6 F	Primary school
1* [= 1 from 1st year]	11-12 years	12	6 M 6 F	Secondary school
2	12-13 years	12	6 M 6 F	Secondary school
2* [= 2 from 1st year]	13-14 years	11	6 M 5 F	Secondary school
3	14-15 years	12	6 M 6 F	Secondary school
4	40+ years	12	6 M 6 F	Adults from same area

Table 1. Profile of informants.

We stratified the adolescent sample according to age both by selecting three groups in the first year of data collection (phase 1), and then by returning to the two youngest groups a year later in phase 2 of the data collection.

Linguistic variables
We identified the following variables for analysis:
- (th): the realization of /th/ and in particular, TH-fronting, [f] for /th/ in e.g. *think*.
- (dh): the realization of /dh/ and in particular, DH-fronting, [v] for /dh/ in e.g. *brother*.
- (l): or L-vocalization, vowel for syllable-final /l/ in e.g. *milk, well*.
- CAT ~ English TRAP/BATH/PALM
- OUT ~ English MOUTH
- MATE ~ English FACE
- BOAT ~ English GOAT
- BOOT ~ English FOOT/GOOSE
- BIT ~ English KIT

Data collection
Media-Cockney analysis
Samples representing a week of each, were collected during the early spring of 2003, during the first data collection phase, from three popular TV shows set in London: *The Bill; Only Fools and Horses; EastEnders.*

Speech recordings
Digital recordings were made of each informant reading a wordlist (Annexe 2), and of informants chatting alone in same-sex pairs.

Questionnaire
A structured questionnaire elicited information including: demographic details of family and friends, mobility and dialect contact, social connections with friends and social activities, contact by telephone/mobile, interaction with computers/internet, film/video/music preferences, involvement and preferences for sport, and, exposure and engagement with the TV (Annexe 3). The questionnaire began with a brief attitudinal survey using tape-recorded extracts of British urban accents (Torrance 2002). The questionnaire and informal interview replaced the intended 'informal interview' following advice from Barrie Gunter and our statistician.

Informal interview
The fieldworker also recorded an informal interview with each informant, covering similar subjects to the questionnaire (Annexe 4). This also contained the first imitation task, during which informants were shown a set of pictures and asked first to say the words in their own accent, and secondly in the accent of a leading actor from *EastEnders*.

TV/language experiment
A core aspect of the project was a professionally-filmed TV quiz show (cf *A Question of Sport*), in which informants played four rounds against each other in teams of three, girls against boys in each age group, facilitated by a compere. Rounds 1 and 3 were distracter rounds, the first a 'warm-up' round, the third a 'sing the next line' round. Our tasks were disguised as rounds 2 and 4:

> short-term effects experiment: informants were shown TV clips and speech samples were elicited using a narrative task (what should happen next?). Half of the informants were shown media-Cockney stimuli (experiment) and half media-Glaswegian stimuli (control). Accent features were analysed and compared with those from the speech recordings (cf media effects experiments such as Bandura *et al* 1963).
> audio-visual imitation task: informants performed an imitation task in which they acted out a scene which they had just been shown. This enabled further investigation of the claim that TV may create knowledge/raise awareness about language variation.

Participant observation
During the data collections the fieldworker was able to engage in participant observation with the informants. (Our original intention of observing informants watching television was abandoned, since the quiz show allowed us to do the same but without imposing further on our informants.)

Follow-up interviews
Small group interviews were held at the end of the project to assess informants' own opinions about the research (Annexe 5).

Project embargo
A press embargo for the duration of the entire data collection period successfully prevented contamination of our data by press coverage of the project.

Ethics
Informed written consent was gained from all parents/guardians of under-age informants (Annexe 6), and from adults (Annexe 7). We took advice from our Data Protection Officer on the appropriate processing of the data.

Data analysis
Linguistic
Speech data were digitized using a Kay CSL. Consonant variables were transcribed using narrow auditory transcription, and then variants were grouped into categories,

labeled with square brackets. So, for example, [th] represents a range of dental fricatives varying in degrees of approximation and place of articulation. All vowels bar OUT were analysed acoustically, taking first and second formant measures at the visual midpoint of stressed vowels. Multispeech was used to analyse phase 1 data, Praat/Akustyk phase 2 data. All data were normalized in Praat/Akustyk using the Lobanov method.

Qualitative
The conversations, informal interviews and selected rounds of the TV/language experiment were transcribed. Information gained from the informal interviews, conversations, and participant observation, were coded to create quantitative variables.

Quantitative
The correlational study was devised in conjunction with our statistician. Using logistic multiple regression, we followed a 'general-to-specific' model of analysis, which enabled us to work systematically from a large initial pool of independent variables, representing eight thematic categories (film, music, computing, sport, attitudes, social practices/identities, dialect contact, TV) through to successively smaller within-category sets, until we reached a theoretically-balanced, optimally low (multi)collinear, overall shortlist containing variables which had shown significance in earlier within-category regressions and theoretically-interesting variables, such as 'watching *EastEnders*' or 'having relatives in the South of England', which might not have reached significance.

Since regression analysis assumes that variables are independent, we pruned each regression list after checking for:
- colinearity via pairwise correlations
- multicolinearity for each regression list using the diagnostic Variance Inflation Factor (VIF) values
- theoretical balance: we attempted to ensure that overall shortlists contained representative variables for each thematic category

Variable lists were tested (Enter method), dropping out non-significant variables until only significant variables remained.

This stringent method of analysis was carried out for the following reasons:
1. Since we had no a priori expectations for either sign or significance for input variables, and multicolinearity can lead to instability in both, we needed to restrict multicolinearity as far as possible.
2. Multicolinearity is particularly likely in datasets such as ours, where the number of informants is relatively small and the likelihood of relationships between variables capturing closely-related facets of their social lives is very high
3. Whilst it is possible to solve problems of multicolinearity by using statistical techniques to combine independent variables into larger factors, this option was strongly rejected by our statistician on the grounds that larger factors would decrease our ability to interpret the results (cf Greene 1993: 273).

Results

Linguistic results

Q1: What is the linguistic evidence for the diffusion of innovative variants in Glaswegian adolescents?

There is clear evidence of TH-fronting, DH-fronting and L-vocalization in Glaswegian adolescents with respect to adults (Figure 1), and to earlier data (Stuart-Smith and Timmins forthcoming 2006).
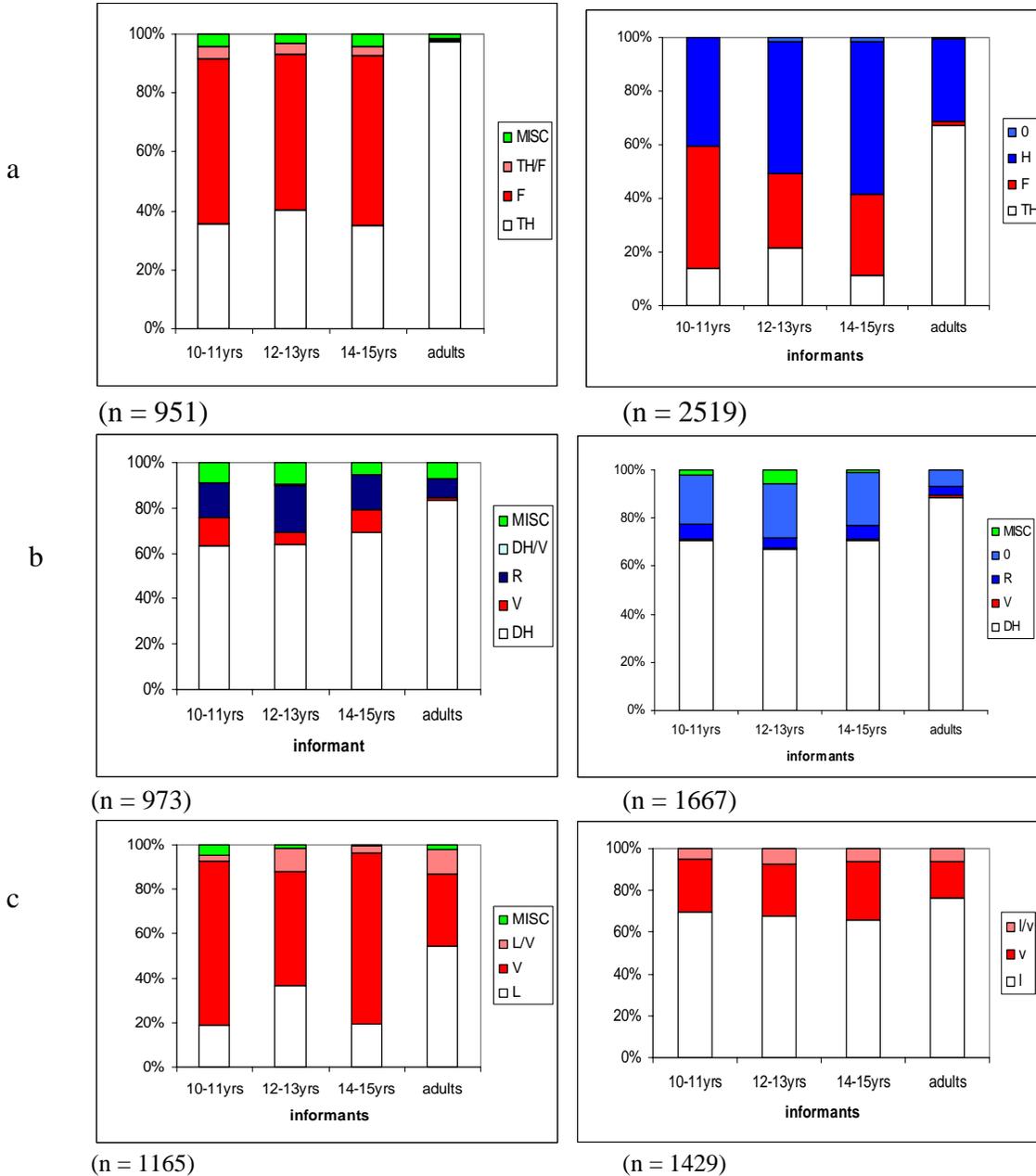
a

(n = 951)   (n = 2519)

b

(n = 973)   (n = 1667)

c

(n = 1165)   (n = 1429)

Figure 1: Distribution of variation for a) (th), b) (dh) and c) (l), in wordlists (left) and conversations (right).

We found no evidence for any English-English changes in vowels:
- MATE/ BOAT were always monophthongs
- OUT showed high levels of the Scots variant /ʉ/ in conversations
- BOOT showed no evidence for any kind of separation into an English-English system similar to FOOT/GOOSE (Figure 2).
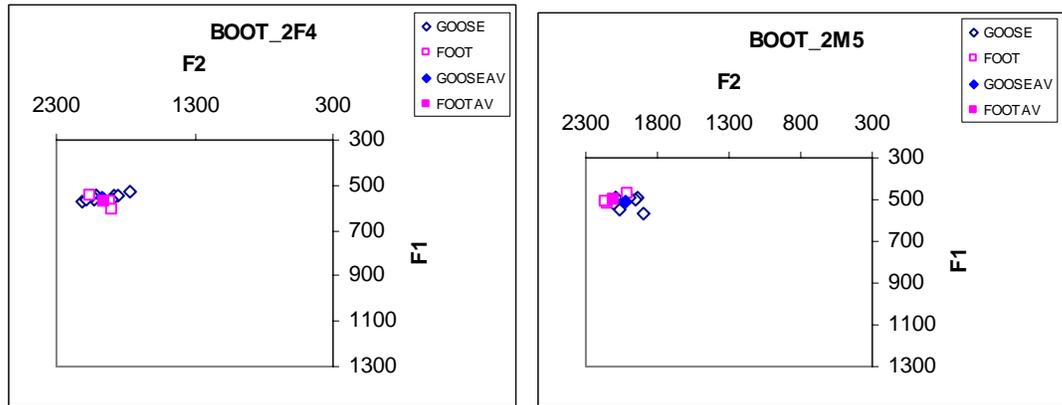
Figure 2. Vowel plots for Glaswegian BOOT vowel in two group 2 informants with variants coded according to the corresponding English-English vowels FOOT and GOOSE.

- CAT seems to show an alignment of realizations similar to English-English TRAP/PALM, but this arises from phonetic conditioning before /r/ (Figure 3).
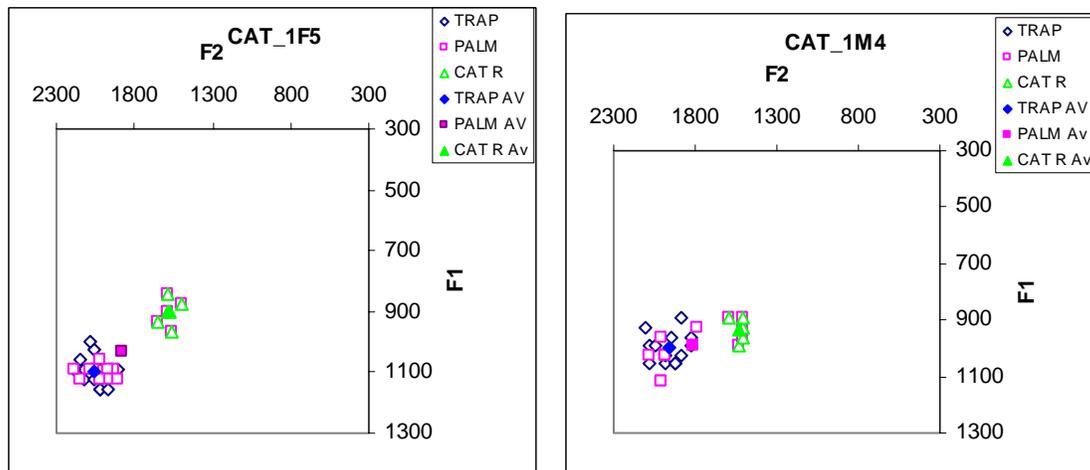
Figure 3. Vowel plots for Glaswegian CAT vowel in two group 1 informants with variants coded according to English-English TRAP and PALM. Green symbols show vowel tokens before /r/.

<u>Media-Cockney as a model</u>
Q2: What is the linguistic content of media-Cockney, and how does this compare to Glaswegian?

Our media-Cockney sample revealed some variation in expected London features (Figure 4). Glaswegian adolescents may show more [f] than several of the characters from *EastEnders* (Figure 5).
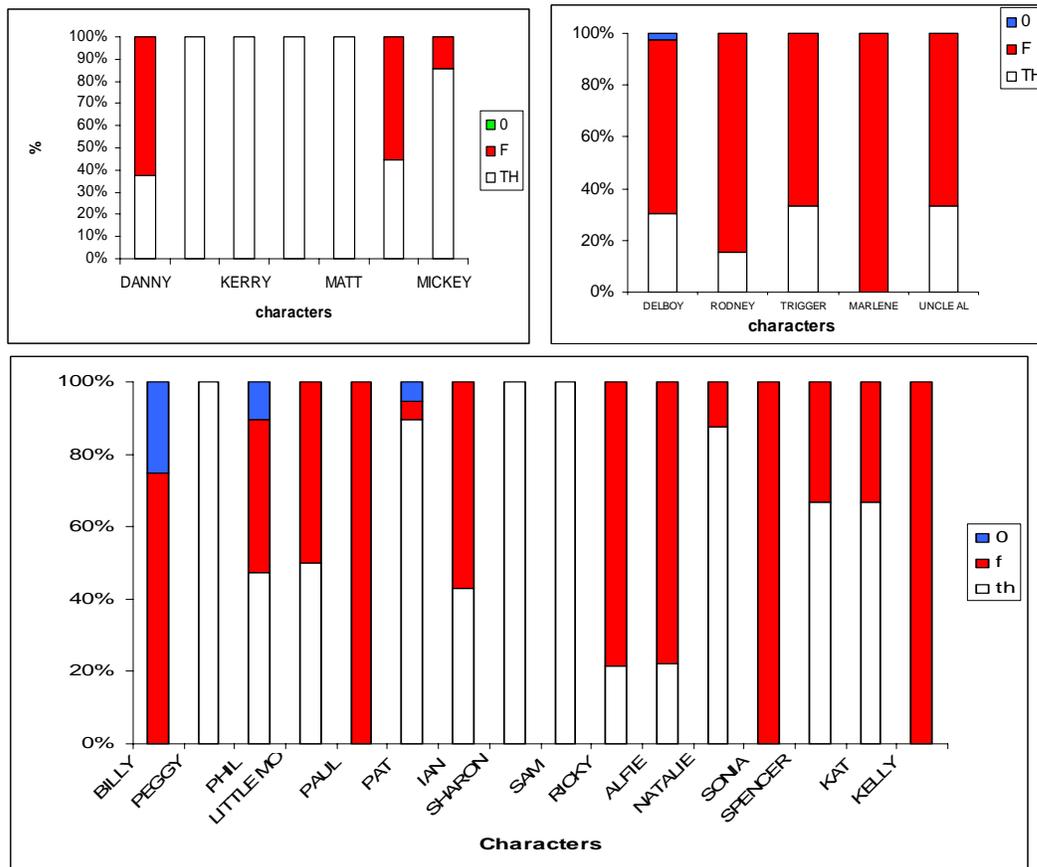

Figure 4: Distribution of variation for (th) in *The Bill* (top left), *Only Fools and Horses* (top right), and *EastEnders* (bottom).
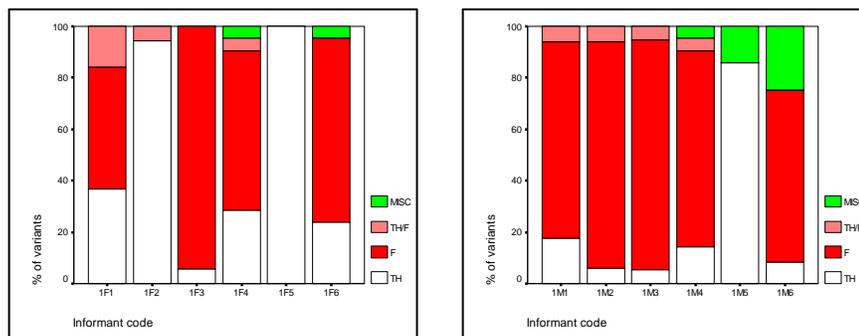

Figure 5: Distribution of variation for (th) in group 1 Glaswegian adolescents from phase 1.

Vowel results again showed variation across the three programmes, with a mixed picture not conforming easily to any one location in London or South East England (Torgesen *et al* 2005). Comparison of equivalent Glaswegian vowels with those of media-Cockney (Figure 6), shows a rather different system; only CAT falls close to the averages for media-Cockney TRAP.
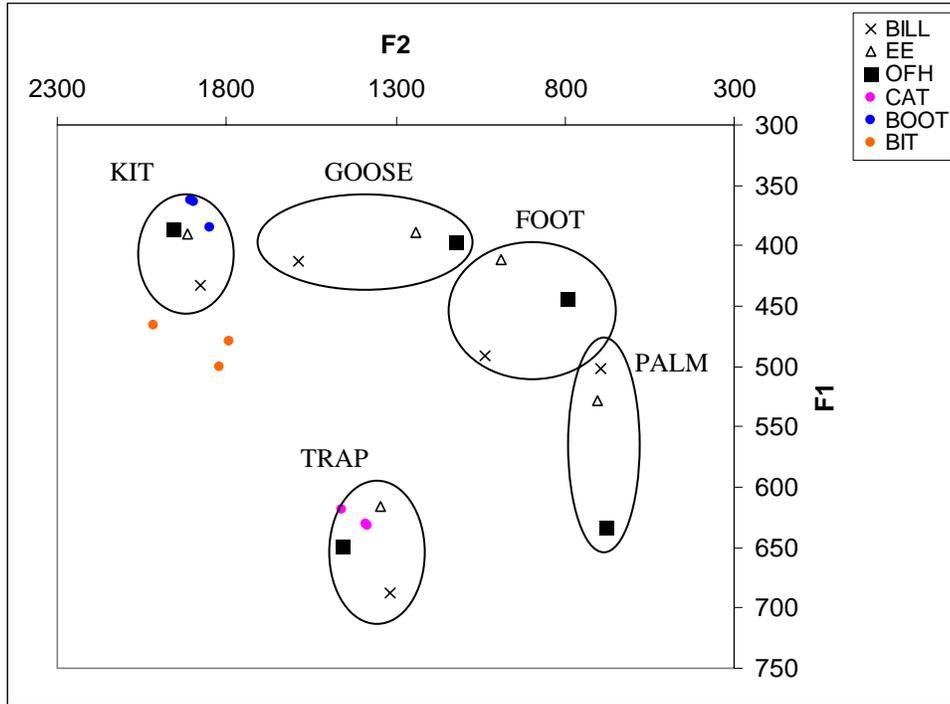

Figure 6: Comparison of averages for media-Cockney vowels (encircled) and their Glaswegian equivalents (all normalized) for CAT, BOOT and BIT in age groups 1–3.

exposure/engagement with TV and media-Cockney
Q3: How much exposure do Glasgow adolescents have to television and to media-Cockney?

Our informants self-report watching TV every day (average 3 hours/day). The London-based programmes, *The Bill, Only Fools and Horses* and *EastEnders,* ranked highest for both watching and liking programmes for their genre, reflecting popular audience ratings during the data collection (*EastEnders* had 18,000,000 viewers a week). Figure 7 shows the average media-Cockney exposure/engagement profiles for individuals. *EastEnders* was most often named as 'favourite' programme, and media-Cockney also dominated the top five programmes rated for liking the accent of a programme.
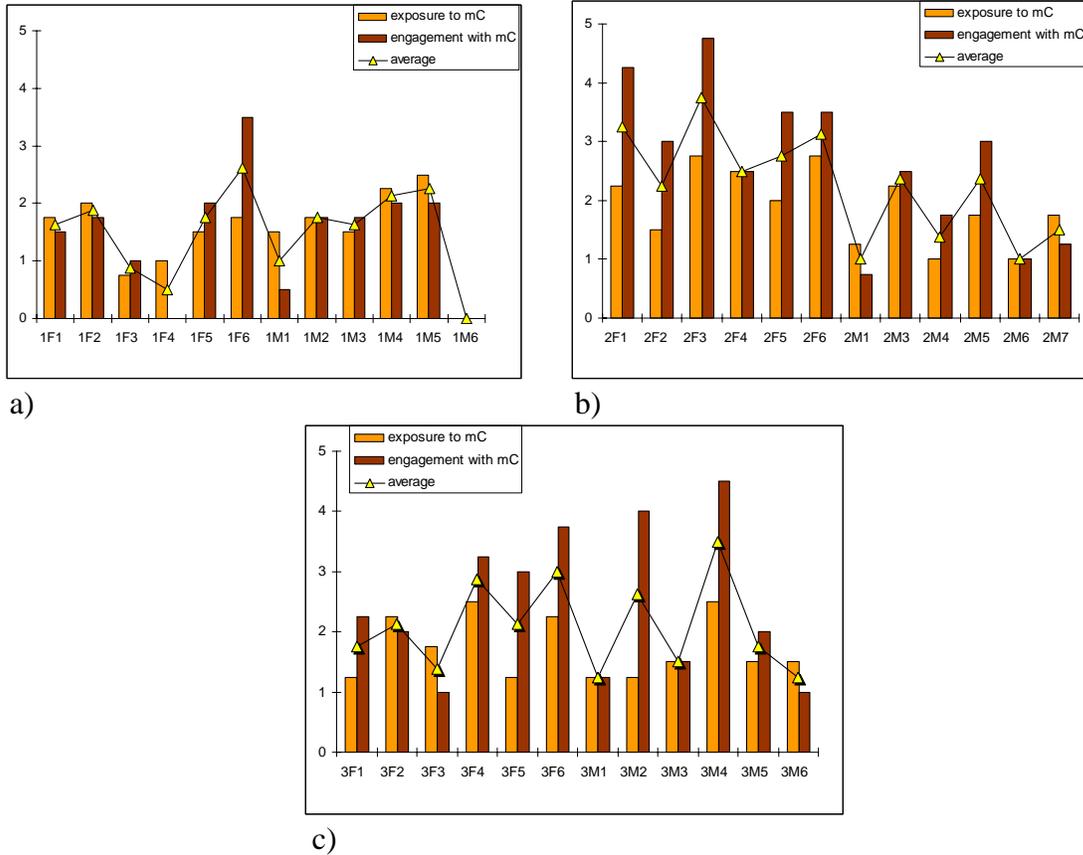
a)

b)

c)

Figure 7: Media-Cockney profiles for individual informants. Exposure to and engagement with media-Cockney are represented by averaging responses to *EastEnders, The Bill, Only Fools and Horses,* and *Grange Hill*, and for engagement, including *EastEnders* as favourite programme and source of favourite characters.

Q4: What role does television play within the overall social life of Glasgow adolescents, and do television figures speaking media-Cockney figure as role models for Glasgow adolescents?

Our informants report that watching TV is a core activity, but so too are hanging out, listening to music and using the computers. Characters from *EastEnders* were most often given as favourites, with Kat and Alfie as the most popular. There was no evidence that characters from this programme, or any other London-based show, acted as role models for our informants.

Analysis of talk about TV during conversations shows surprisingly little mention of television programmes (Figure 8). Talk about TV is more common than talk about music, film or computing, but with the highest average at only 7%, it is still very low. *EastEnders* is the only London-based programme to be mentioned.
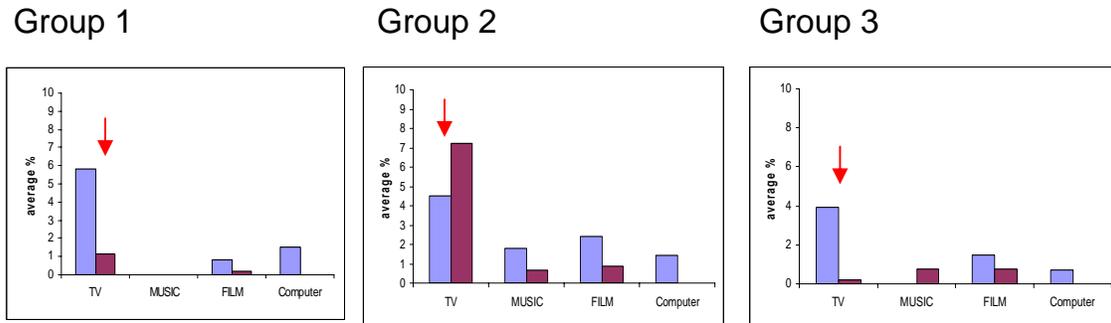
Figure 8: Average percentages of words expressing the amount of talk about TV (red arrow), music, film and computers during the conversations in phase 1. Blue bars indicate boys, maroon bars, girls.

Social profile
Q5: What is the social life of Glasgow adolescents like?

Quantitative analysis reveals a few key social variables, which within-category regression analysis suggests may be related to linguistic innovation, for example, frequency of going out at night at the weekend, how much they dislike going to school, and deviation from school uniform policy.[1]

Glasgow adolescents, like those in many cities, are also sensitive to social labeling. We found that our informants on the whole regarded themselves as 'normal', though they were happy to label each other as 'goths' or 'geeks' but mainly as 'neds', a pejorative (Scottish) term for destructive inner-city kids. Qualitative analysis of linguistic variation and social labels showed a coincidence of higher use of the innovative variants in informants labeled as 'neds'.

Dialect contact
Q6: What is their social contact (if any) with people outside their immediate area/Glasgow?

We developed a set of combined variables to collate the responses to dialect contact questions. These proved useful for considering the contact profile of our informants, but less so for statistical analysis. Figure 9 shows family and friends beyond Glasgow, and direct and mediated contact with them. In fact, our informants appears to be relatively non-mobile themselves, experiencing mainly the effects of passive mobility as family return to Glasgow on visits. Visiting other cities was also unusual (Figure 10), though most had visited Edinburgh once.

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[1] We do not present regression results for this or any other within-category regressions on the grounds that these are necessarily weak findings from only a small proportion of the data, reflected in the amount of variance explained generally being below 5%.
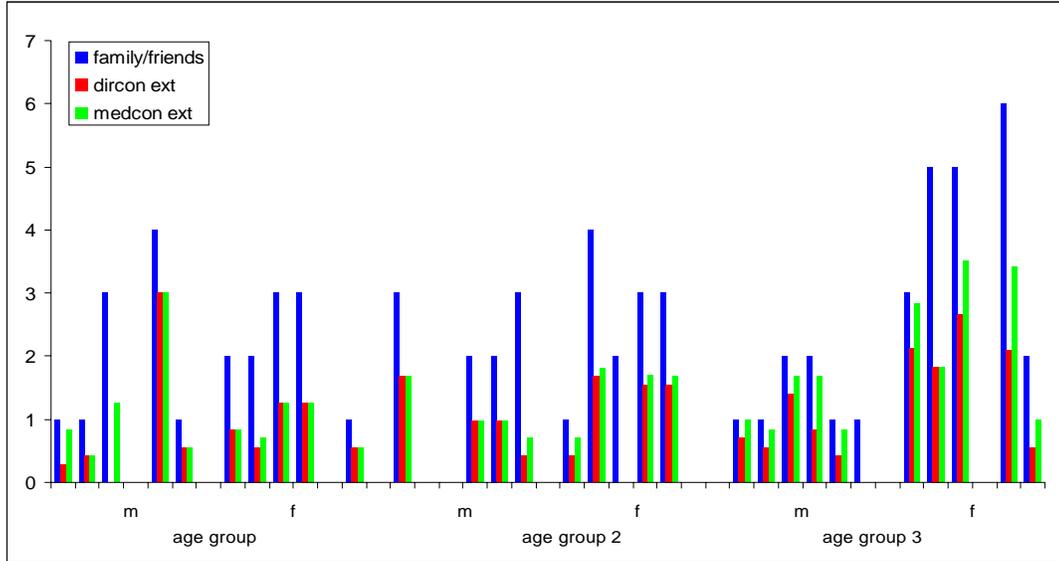
Figure 9: Indices representing (in blue) the number of family/close friends living outwith Glasgow, (in red) face-to-face contact and (in green), mediated contact with them, as reported in phase 1.
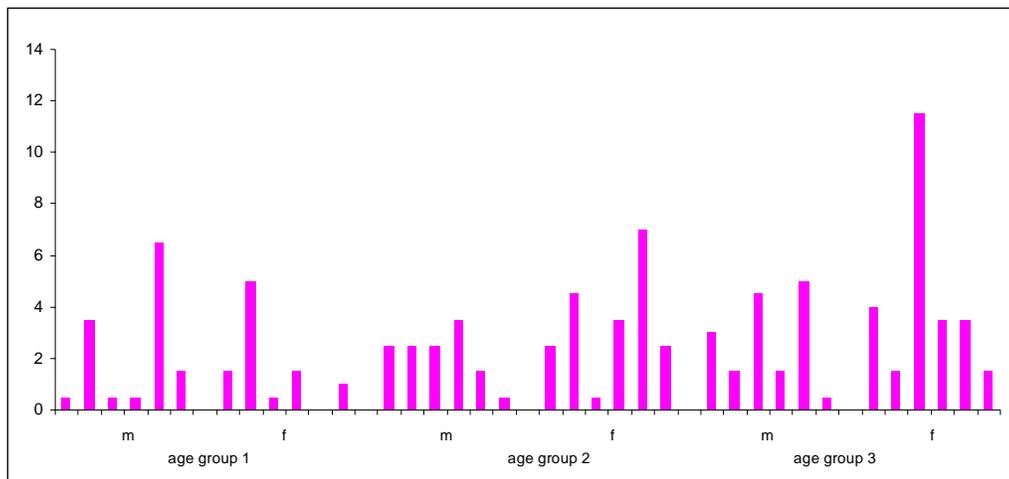

Figure 10: Index showing the degree of active mobility experienced by our informants in visiting cities.

The amount of variance explained by within-category regressions for dialect contact was very low, around 5%, so these results are summarized informally: contact with relatives in Southern England was linked with TH-fronting and L-vocalization in wordlists, and visiting London with TH-fronting in conversations.

TV as a 'softening-up' agent

Q7: Do those who have high exposure to media-Cockney have positive attitudes towards actual Cockney (and Londoners)?

Results for attitudes elicited towards recordings of urban accents and the associated 'mental image' (cf Preston 1999), showed that London accents were not popular (Figure 11).

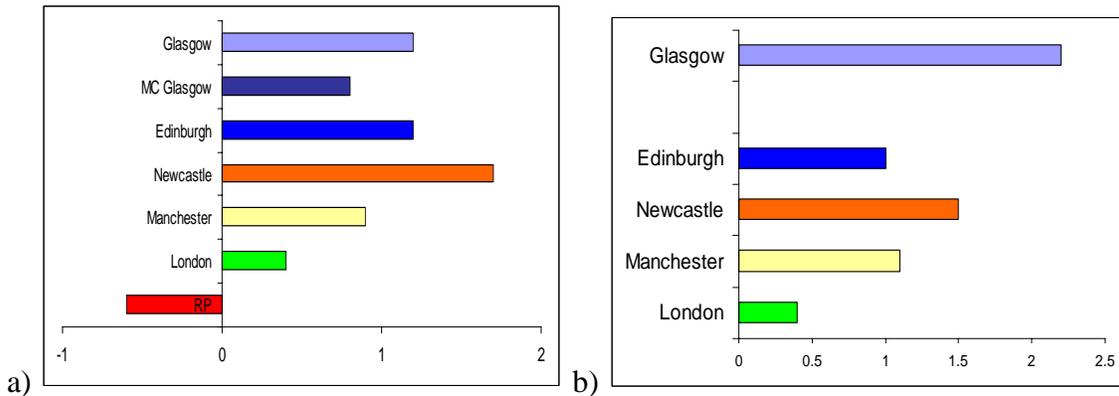a)   b)

Figure 11: Attitudes towards a) recordings and b) the mental image of a selection of urban accents.

Within-category regression analysis suggests a number of links with linguistic variation, with positive attitudes towards Cockney and Manchester associated with TH-fronting and L-vocalization, and only London-based attitudes linked with DH-fronting.

	B	Std. Error	t	Sig.
(Constant)	2.61	0.91	2.85	0.01
place identification (London)	0.01	0.15	0.05	0.96
relatives in south England	0.89	0.54	1.66	0.11
favourite TV programme is EastEnders	-0.08	0.56	-0.15	0.88
How often do you watch EastEnders?	-1.04	0.33	-3.21	0.00
How often have you been to London?	0.12	0.26	0.45	0.65

Table 2: Results of linear regression for dependent variable (attitude towards London recording). N = 35; r^2 = .201; F = 2.756, p = .037.

Linear regression was used to test whether high exposure to/engagement with *EastEnders* is linked with positive attitudes towards London accents and the city itself. The only dependent variable to yield results was the attitudinal response towards the London recording (Table 2), with a significant negative link with watching *EastEnders*. Most of the children watch *EastEnders*, but the majority did not like the London accent. For these speakers at least, we do not have evidence that watching or engaging with *EastEnders* promotes positive attitudes towards London/a London accent.

Awareness of media Cockney accent features

Q8: Are those who have high exposure to media-Cockney aware of the linguistic features of media-Cockney (and that they are similar/different to Glaswegian)?

We assessed our informants' overt awareness of the linguistic features of media-Cockney by asking them to comment on the accent of a leading actor from *EastEnders*. All informants thought the accent was different from their own. Some thought he was from England but only one located him in London. Specific comments on aspects of pitch and voice quality were appropriate for the actor's whispery voice quality, but little was said about segments, with only 'he changes the letters, if it was "f" he'd use "v"' (inaccurate but close).

Q9: How successfully can Glasgow adolescents imitate accent features presented by television (and media-Cockney)?

Imitation Task 1: picture elicitation task
Narrow auditory transcription and acoustic analysis of imitated and usual speech revealed that most made at least some alterations in the imitation (Figure 12), but it was difficult to identify any obvious linguistic target, so we refer to the output as 'phonetic alteration'.
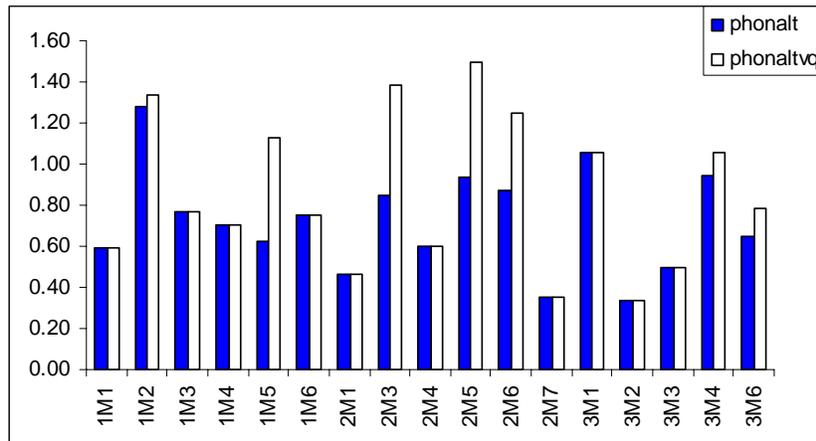

Figure 12. Indices of phonetic alteration derived from narrow auditory transcription. Blue bars indicate the total number of observed differences between own accent elicitation and character accent imitation, normalized according to the number of pairs elicited per speaker. White bars show the same, but include scores for alteration to voice quality.

Changes to voice quality, pitch and length, were striking, but segments were less successful. For example, consonants were as likely to be realised with a standard pronunciation, so [th] for /th/, as non-standard (target) [f] or as Scottish [h], with a high degree of variability within and across speakers. Nevertheless alterations were clearly being made, and certainly to their vowels as was evidenced by comparison of acoustic measures from the pairs of monophthongs using Weber's fractions to assess whether the difference in Hertz would be perceptible (Figure 13). Despite this, our auditory

impression of a successful attempt at imitating even an English accent seemed to come from the use of diphthongs for FACE/GOAT (only two boys managed more than 2).
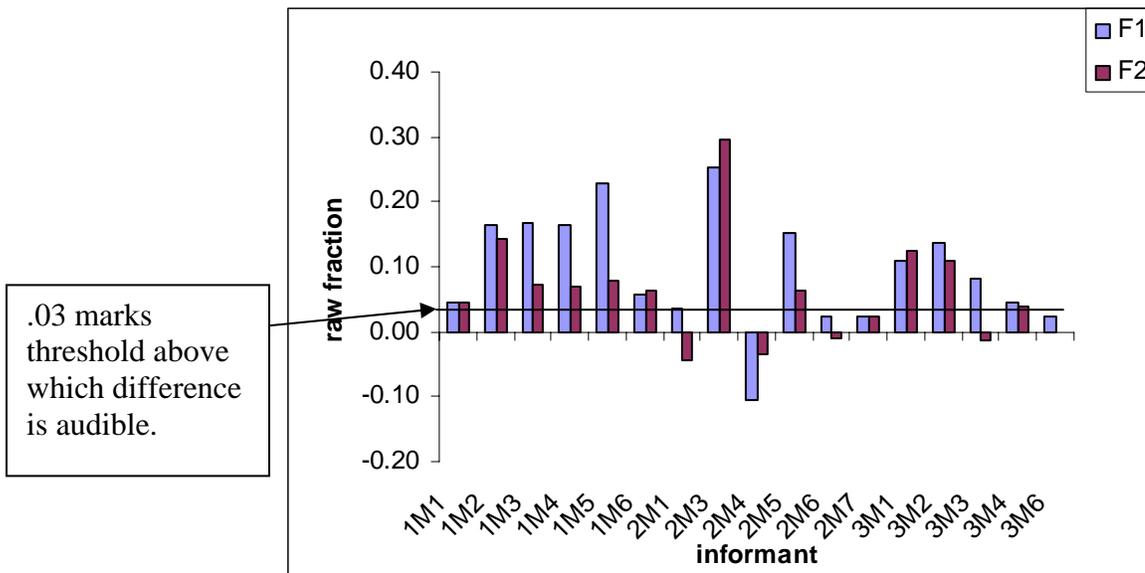

Figure 13: Raw Weber's fractions presented as averages for the first and second formants for pairs of monophthongs produced by each boy during the picture elicitation task.

There does not seem to be an automatic relationship between phonetic alteration and the media-Cockney profile. For example, 2M3 produces the most audibly altered vowels, and has a high media-Cockney profile, whilst 1M2 is auditorily the best imitator (in terms of media-Cockney target), but only shows a middling media-Cockney profile.

Imitation Task 2: audio-visual imitation task
Informants acting out scenes from London-based programmes during round 4 of the quiz show always used Scots vocabulary and grammar, but narrow auditory transcription revealed that all speakers made a few changes to their speech, at least at the beginning of the task. As for the first task, the main changes were to suprasegmental features. Consonant features were as expected for the informants' own accents, with only slight divergence. Vowels were usually Scottish qualities, again, with only a handful of alterations.

One age group 2 girl emerged as special. In comparison to the others, she made substantial segmental changes, though not always clearly towards the target (two female characters from *The Bill*). The result sounded altered as opposed to an imitation of a London accent. This informant also shows the highest media-Cockney profile.

Assessing potential short-term effects of TV on accent

Q10: What type of phonetic/phonological variation occurs (if any) in front of the television?

The short-term effects experiment allowed us to assess whether watching particular types of TV programme may lead to immediate changes in accent. The majority of consonantal features appeared to be unchanged in both conditions. After media-Cockney stimuli, more vocalization of /r/ was observed in a third of the 'experimental' informants, whilst one informant showed more vocalization after media-Glaswegian. After media-Cockney, more L-vocalization was observed in 3 informants, but after media-Glaswegian less L-vocalization was observed in the three group 2 girls.

Analysis of the vowels was restricted to CAT, which alone sounded variable. Acoustic analysis of the realizations of this vowel in comparison to the same vowel in read/spontaneous speech, reveals subtle but clear differences in the spread/location of vowel variants in the two conditions for certain speakers, with more focusing after media-Glaswegian, and tendency for more scattered distributions (certainly for 5 speakers) after media-Cockney (Figure 14).

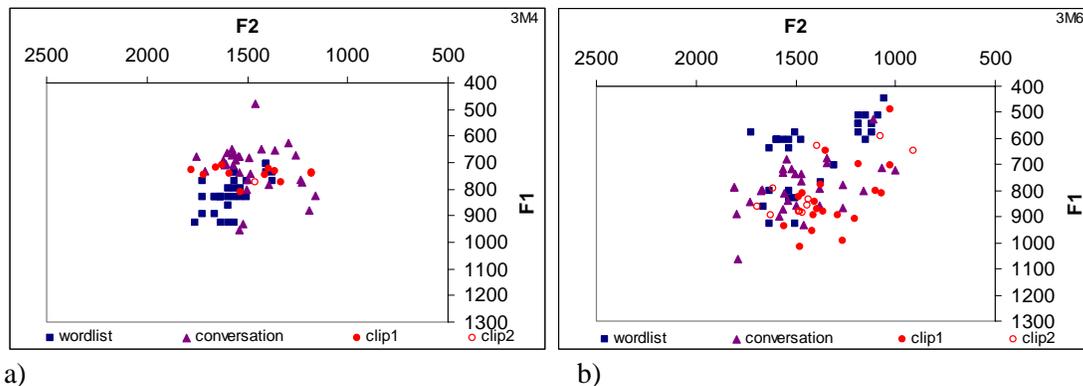a)   b)

Figure 14: Acoustic vowel plots showing comparison of the realization of the CAT vowel in speech recordings (blue/purple) and experimental speech (red), for two age group 3 boys, after watching a) media-Glaswegian and b) media-Cockney.

Two speakers altered both consonants and vowels:
- 1M1: his low average media-Cockney profile is pulled down by lack of interest in *EastEnders*, but he likes *Only Fools and Horses*, giving David Jason as his favourite actor.
- 1F5: also does not have a high average media-Cockney profile, but she is shows high engagement with *EastEnders*, giving 'Sam' as her favourite actress. She is special in that she shows a couple of very fine adjustments to her consonantal production which suggest attempts to access stored phonological representations complete with London accent features (and different from her own).

Links between media-Cockney and accent

Q11: Do speakers who have high exposure to media-Cockney also use diffusing Southern English features?

Exposure to media-Cockney, represented by an interactive variable including the four programmes (*EastEnders, The Bill, Only Fools and Horses, Grange Hill*) showed significant positive correlations with TH/DH-fronting in read speech, though only when dialect contact variables were relatively weak. Otherwise no relationships were found.

We also tested for exposure to media-Cockney by taking each programme separately for each variable (see Annexes 9-11). TH-fronting in wordlists was linked with watching *Grange Hill*, but only in conjunction with the weakest dialect contact variables. Only DH-fronting showed significant positive links with exposure, with watching *EastEnders*, which persisted even with the strongest dialect contact variables.

Q12: Are positive attitudes towards media-Cockney linked to the use of diffusing Southern English features?

Combining engagement with all four programmes (*EastEnders, The Bill, Only Fools and Horses, Grange Hill*) did not show links of any kind with TH-fronting in conversations or DH-fronting in wordlists. TH-fronting in wordlists alone showed a significant (positive) relationship, though this did not persist when the dialect contact variables were strengthened.

Linguistic variable	TV (media-Cockney) variable	dialect (1)	contact (2)	(3)
th:f wdlist	favourite programme is EastEnders	x	x	x
	like EastEnders	x	x	x
	like Grange Hill	x		
	like the accent of EastEnders	x (neg)		
	like the accent of The Bill	x	x	
	watch and/or like Grange Hill	x		
	watch and like Grange Hill	x	x	
	like and/or like accent of The Bill	x	x	
	like and like the accent of The Bill	x	x	
	like EastEnders and/or criticise soap/drama characters	x	x	x
th:f conv.	favourite programme is EastEnders	x		
	favourite two characters from EastEnders	x	x	x
	like EastEnders and criticise soap/drama characters	x	x	x
dh:v wdlist	watch and/or like EastEnders	x	x	x
	watch and like EastEnders	x	x	
	like Grange Hill	x		

Table 3: Significant regression results for engagement with media-Cockney programmes (indicated with x), in conjunction with dialect contact variables: (1) having relatives in South and/or North England; (2) seeing/talking to these relatives, but keeping South/North England separate; and (3) combining seeing/talking relatives in South and North England.

More – and stronger – relationships were found when engagement with media-Cockney programmes were analysed separately according to programme, controlling for dialect contact (Table 3; full tables are given in Annexes 9-11). *EastEnders* alone consistent significant positive relationships with TH/DH-fronting with all dialect contact variables.

Correlational study: summary
Positive correlations with exposure/engagement with particular programmes set in London occur alongside positive links with contact with family and friends in the South of England, and with other social variables such as disliking school. Engagement with TV programmes set either in Northern England or outside the UK, included as 'controls' to the media-Cockney variables, showed either no links or significant negative relationships in these regressions. R-square values indicate relatively good explanation of variance for TH-fronting (around 25% overall) and good explanation for DH-fronting (around 50%).

We interpret these results with caution at this stage as they are only simple correlations and so cannot be taken as evidence of a causal relationship between watching TV and linguistic innovation. It is possible that those who show particular linguistic patterns are also those who choose to watch/engage with London-based programmes. Further work is needed to clarify such relationships.

Our analysis treats variables for particular thematic categories separately. Note:
1. checking for multicolinearity highlights the extent to which these TV variables in particular are strongly related to a number of other social factors.
2. we anticipate further regression analysis which explores the interactions across thematic categories, for example, by taking dialect contact and/or attitudes to accents and/or exposure/engagement to/with TV together.

Age as a factor
Q13: Do any of the above [answers] vary according to age, and, is the shift from primary to secondary school a factor?

Differences between the three age groups in the phase 1 data are slight, and not often significant because of individual variation. When the phase 2 data are included, there is again no significant difference in TH-fronting across the 5 age groups and individual patterns tend to be maintained (Figure 15).
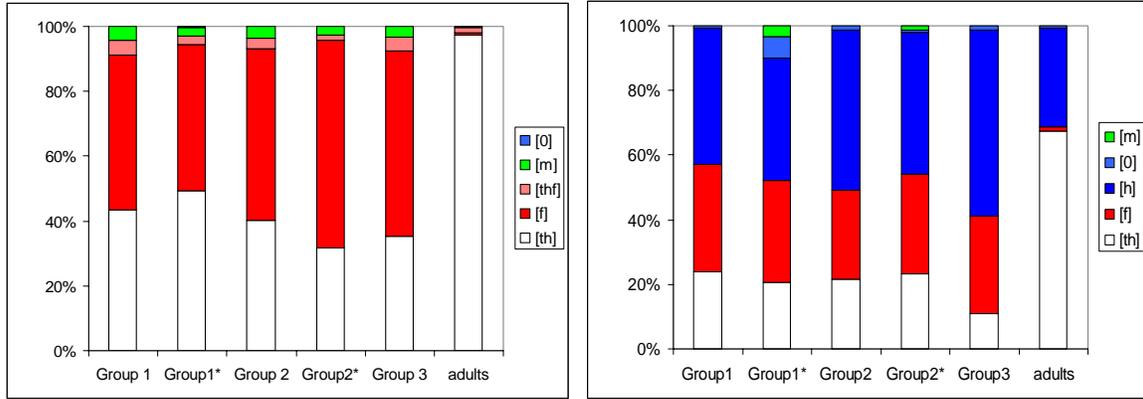
a)   b)

Figure 15: Distribution of variants for (th) in a) wordlists (n = 1373) and b) spontaneous speech (n = 3080) for age groups 1, 2, and 3 in phase 1, and groups 1 and 2 in phase 2 (marked with asterisk), compared with adults.
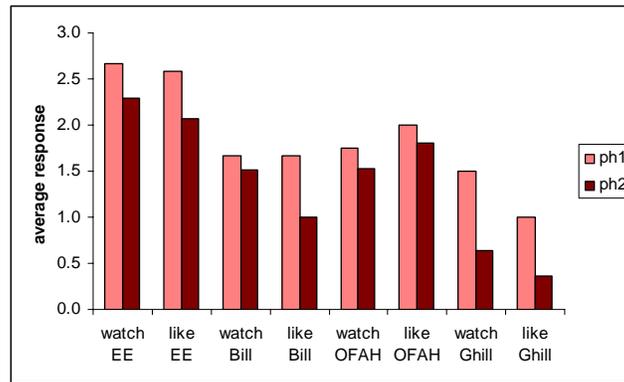

Figure 16: Average response of all informants for London-based programmes for phase 1 and phase 2 of the data collection (n = 23). (3 = most positive response).

The overall patterns of exposure/engagement with media-Cockney look rather similar for informants across the two years (Figure 16), but hide differences in individual preferences (Figure 17). Most variable is the selection of *EastEnders* as a favourite programme and their assessment of whether they engage with soap/drama characters; watching and liking *EastEnders* shows the most consistency.

Not surprisingly, initial regressions for TH-fronting on TV variables alone shows a rather different pattern of significance from the phase 1 data (significant negative links with favourite programme/character is/from *EastEnders*, and positive links only with liking *The Bill* and liking *Only Fools and Horses* (all tables in Annexe 12).
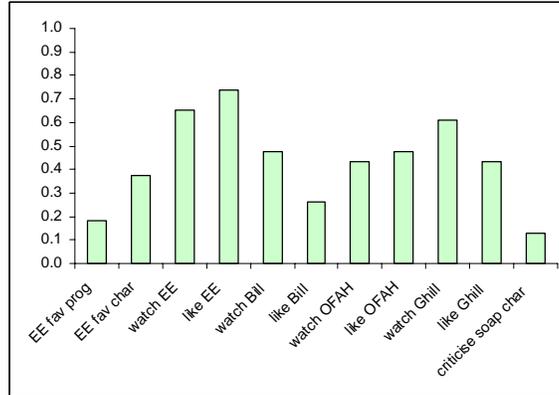
Figure 17: Consistency of responses about media-Cockney across phase 1 and phase 2 of the data collection expressed as a proportion, with 1 as entirely consistent and 0 as not consistent at all (n = 23). The first two bars give EastEnders as favourite programme and favourite characters given from EastEnders.

Individuals, TV and accent change

Q14: What is the role of the individual, if any, in connecting television with accent change?

We make only preliminary comments about the usefulness of Rogers' (1995) adopter category model for analyzing the possible links between television and linguistic variation in our data. Our informants were coded into adopter categories according to general potential innovativeness (Figure 18).
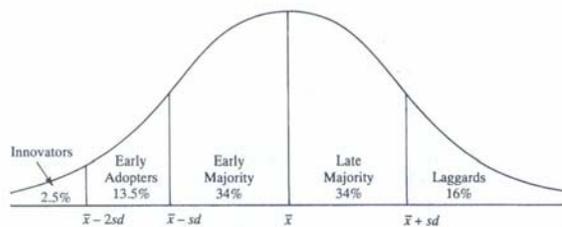
a)   b)
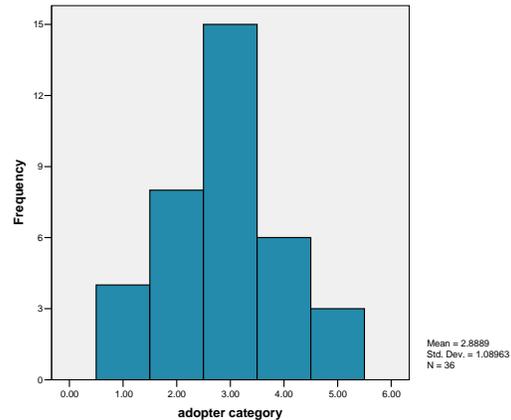
Figure 18: a) theoretical distribution of adopter category from Rogers (1995: 262) and b) actual distribution of informants ranging from 1 = innovator to 5 = laggard.

Two individuals show opposing categorization – and linguistic profiles (neither report any relevant opportunities for dialect contact):

> 1M4 is an 'innovator'. He shows TH-fronting in both wordlists and
> conversations, but he is unusual in his very high (80%) use of [v] for (dh) (beside

an average of around 10% in other speakers). This informant shows high average media-Cockney profile, and even gives 'Walford' (the fictional location of *EastEnders*) as a location in the attitudinal survey, and again, later in the imitation task as the 'real' location for *EastEnders*. In the follow-up interview he answered immediately that the television is primarily responsible for influencing speech.

IF5 is a 'laggard'. She is striking because she produces no instances of TH/DH-fronting at all in read speech. She shows a relatively high average media-Cockney profile, but this obscures a keen interest in *EastEnders*, confirmed during the quiz show, both by her response that Sam from *EastEnders* is her favourite character, and by her enthusiasm for the experimental task, during which she makes subtle adjustments to both vowels and consonants. In the follow-up interview, she over-reports her usage of [f] for (th) in her own name, and is not convinced that television would affect her speech.

Such observations would seem to support the model, but more work is needed before we may be confident.

Is TV a contributory factor in accent change in adolescents?
The regression results show a consistent pattern of significant factors, which include exposure and especially engagement with media-Cockney and *EastEnders*. The experimental results are not entirely clear, but subtle phonetic alterations seem to take place after watching TV. These results, taken together with other indications drawn from the project results, support the inclusion of TV in an account of these changes – alongside dialect contact and other social factors – with the reservations that a) the individual appears to be an important, if complex, set of additional factors and b) the precise nature of TV as a factor still remains to be clarified.

Activities
Collaboration
The project has benefited from collaboration with the following individuals/groups:
- Barrie Gunter (Centre for Mass Communications Research, Leicester) whose feedback on data collection was very useful, and who is now a joint author.
- Jannis Androutsopoulos (Hannover University) whose invitation to discuss project results with his group/students working on 'Medienlinguistik' opened up the substantial research programme of the 'German school' currently working on the impact of television on language, but which is largely publishing in German.
- Paul Kerswill/Eivind Torgesen (*Linguistic Innovators*, ESRC No R000230680), whose invitation to Lancaster provided technical help for phonetic analysis and invaluable feedback on early results and method, particularly with respect to the role of dialect contact.

Outputs

<u>Presentations/publications</u>

Dissemination to academic community to date has been through a set of invited talks and conference presentation, which were then uploaded onto the project website (http://www.arts.gla.ac.uk/SESLL/EngLang/phonetics/). Written publications are now starting to be produced, and we have a full publication plan which is outlined in the questionnaire.

<u>Datasets</u>

The project has resulted in three types of dataset:

1. wordlist recordings – high quality, longitudinal speech data of great use to phoneticians and sociolinguists
2. quantitative data – all linguistic variables/measures, social/TV data, and coded qualitative data
3. qualitative data – a large number of recordings and transcripts of interviews and the TV/language experiment.

The first two datasets have been offered to the Data Archive, and the appropriate lodging of the third dataset, which is not anonymized, is being discussed with them.

Impacts

<u>Participants</u>

The children themselves enjoyed taking part in the project, and in particular, being involved in the filmed TV show. They also enjoyed watching themselves 'on TV' when the TV shows were shown, with permission, to the children and their friends in school at the end of the summer term.

<u>General Public</u>

Once the press embargo was lifted in March 2004, the project was widely covered in the print and broadcast media, including a feature for Channel 4's *Richard and Judy*, interviews for *BBCVoices* and 10 interviews for local BBC Radio stations. We anticipate substantial public interest in the project findings.

Future Research Priorities

1. Further quantitative analysis, specifically:
    a. Full regression analysis of linguistic variables already coded: (l), (r), CAT, BOOT, BIT for phase 1
    b. Exploration of combining variables across thematic categories to investigate possible interactions and their effects on linguistic variation
    c. Longitudinal correlational study for phase 1 and phase 2 data using panel study
2. Further qualitative analysis of links between television and language variation, to be informed by further exposure to existing qualitative work on 'communicative appropriation' being undertaken in Germany by Androustopoulos, Holly and

others, during research leave to be spent at Hannover University during autumn 2006.

3. Understanding better the phonetic mechanisms of these changes, and in particular, /l/ and /r/. Collaboration with Jim Scobbie (Queen Margaret University College) has already resulted in a joint conference presentation, and further submissions for presentations at BAAP and Laboratory Phonology have been made for 2006.

4. Real-time change in Glasgow: The speech data collected during this project, taken in conjunction with the existing 1997 dataset, present an excellent opportunity for the analysis of real-time change both within and across speakers.

[4999 words, excluding figures and tables]