

The sociolinguistic status of the glottal stop in Northeast Scots

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Abstract. The spread of the glottal stop as a variant of /t/ in British English has been well documented in the recent literature (Macafee 1994, Macaulay and Trevelyan 1973, Stuart-Smith 1999, Kerswill & Williams 2000). The origins of this feature are not easy to pinpoint, and some theories (Macafee 1997, for example) even point to Glasgow, though not without controversy. It is, nevertheless, spreading rapidly throughout Scotland in predictable patterns along the lines of social class, age and sex (Macaulay 1991, Stuart-Smith 1999, Romaine 1982). In a recent study (Marshall 2000), I examined the use of various linguistic variables in a sample population of 64 individuals in a north-east Scottish farming community, located around the town of Huntly. The sample is stratified by age and sex. The variants of the different variables chosen are in a binary 'standard – dialect' relationship. The direction of change is towards the standard, as is characteristic of rural communities. Research in Norway (Røyneland 2000) and in Denmark (Andersen 1989) has suggested that there are two different types of innovation: endocentric (internally generated) and exocentric (contact induced). The former is characteristic of urban centres, while the latter is more common in rural areas. The role of adolescents is crucial in language change (Kerswill and Williams 2000), and Røyneland shows how their role differs in central and peripheral areas. In cities, adolescents use more non-standard forms than older people, and often innovate (hence the endocentric forms). The opposite is true in rural areas, as adolescents tend to adopt exocentric forms originating in urban centres, with the effect that they may be *less* non-standard than their elders. All of the variables in this Scots study show remarkable similarity of patterning across age, except for the glottal stop, which shows one important difference. I argue that the reason for this has to do with its status as an incoming variant which is *not* a Scottish Standard English form, and that the groups which resist it and those which adopt it are predictable from the results of sociolinguistic research elsewhere.

1. Introduction

The use of a glottal stop as a variant of /t/ has received much attention from many quarters, and T-glottalling has been commented on since the 19th century in Glasgow (Stuart-Smith 1999: 183). The feature continues to

* The research for this project was conducted as part of a PhD at the University of Reading, with the aid of a departmental teaching assistantship.

be censured across Great Britain, but studies show that its use is spreading. Since this report covers fieldwork conducted in Huntly, in north-eastern Scotland, a brief discussion focusing on the results of other studies in Scotland will be useful at this point.

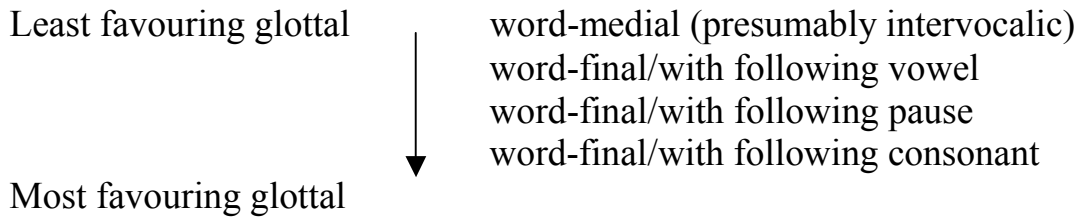
2. Results of other studies in Scotland

Stuart-Smith's (1999) article covers her 1998 study of T-glottalling in Glasgow, the first since Macaulay and Trevelyan's 1973 study. The results show clear sociolinguistic stratification and sharp stylistic variation, as might be expected, and, despite methodological differences between the two studies, Stuart-Smith believes that the data may be comparable with the 1973 study. This would mean that a real-time comparison could be made. Macaulay and Trevelyan's study concentrated on the usual Labovian independent variables, such as age, social class and sex. However, Johnston (1983: 1) points out that

the range of variation in standard and vernacular varieties is not always organised along a linear continuum. Historically, the varieties of the middle and working classes in Glasgow are derived from two distinct, yet related sources. [...] Working class speech continues urban Scots, which has shown T-glottalling for at least a century. Middle class speech, typically Scottish Standard English, has no recorded history of T-glottalling beyond what is assumed for other standard varieties of English. However, given that Glasgow is a traditional dialect area, continuing two once distinct linguistic systems, it is not impossible that while appearing quantitatively continuous, T-glottalling may in fact be qualitatively discrete for speakers of working- and middle-class backgrounds respectively (cited from Stuart-Smith 1999: 185).

By 'qualitatively discrete' I presume the author means that the feature may have originated separately in urban Glasgow Scots and in Standard English. Whether this is the case in Huntly is a point to which I will return below.

Reid's (1978) Edinburgh study was restricted to eleven-year-olds, but shows that the use of a glottal stop as a variant of /t/ varies between 18% and 100%, depending on the individual and the phonetic environment. Reid shows the following ordering on the favouring of glottalisation:



Reid does not consider the *preceding* elements that may also influence the glottal, though this is normal, at least in sociolinguistics. As this variable was only part of a much larger number of variables in the present study, it has only been considered in word-medial position.

3. Background to the Huntly Study

The T-glottalling observed here was part of a larger study, which included twelve phonetic and morphological variables in three different settings, and fifty lexical items. The research questions for the main study were:

1. In a rural dialect, such as that of Huntly, currently undergoing rapid levelling and standardisation, what are the speaker characteristics that seem to be most clearly correlated with those changes? In particular, how important is a speaker's integration into local social networks? Or are more subjective factors, such as a speaker's orientation to/away from the local community of greater importance?
2. What are the linguistic manifestations of this levelling and standardisation?

A pilot study was conducted during the Autumn of 1997, with the aim of recording a small database of local speech, from which observations could be made about which features of the local dialect were still in everyday use. Both children and adults were interviewed. Those linguistic features observed were used to design the elicitation aids for the main study. The data for the main study was collected in much the same way as in the pilot study, with time allocated to picture lists, interview questions, tasks to be completed with a friend or family member and free narratives. The interviews were conducted informally, but as uniformly as possible. The sample is stratified by age and sex. Various sociological scores were arrived at for each informant, including indices for social networks, social class, mental urbanisation, attitudes to the dialect and national pride. The first two linguistic scores were obtained from the data gathered during three separate tasks: a picture list consisting of sixty pictures, a complex

scene description and a treasure hunt. There are 12 phonetic variables in all, and fifty lexical variables. In the picture-list, six of the pictures elicited two of the phonetic variables, meaning that 66 observations were made for each speaker, an average of 5.5 observations per variable for this particular task. The actual total for T-glottalling in this task is 4, and this is the score used for the analysis in this paper.¹ The phonetic environment is word-medial, intervocalic, for example, in words such as ‘gutter’. The number of observations from the other tasks varies between speakers, giving an average of 73. Adding this to 66 brings the average number of observations per speaker to 139. The average number of observations per phonetic variable, of which T-glottalling was one, was therefore 11.58, though the separate scores for T-glottalling in the scene description and treasure hunt tasks cannot be extracted. The third linguistic score was obtained from fifty observations of lexical items. The scores for the picture list are expressed as a percentage, and called PHOVAR (phonetic variable score). The scores for the scene description and treasure hunt are conflated, expressed as a percentage, and called SSSCOR (spontaneous speech score). Large stretches of free speech are available for many of the adults, but this is not the case for the children, most of whom were interviewed at school, with a maximum of an hour allocated to each interview. Therefore, it is not possible to make a comparison between the free speech of the adults and that of the children. Table 1 shows the sample structure and size.

Table 1 Sample structure for the Huntly study

Age Group	Number of Informants
Females over 60	8
Females 25-40	8
Females 14-17	8
Females 8-12	8
Males over 60	8
Males 25-40	8
Males 14-17	8
Males 8-12	8
Total	64

¹ This figure may be considered low; however it is only part of a composite index score PHOVAR, which was used for large-scale comparisons in the main study.

4. Patterns in the Huntly Data

The oldest speakers are, as expected, the strongest speakers of the dialect, as is shown throughout the data. Figure 1 shows scores for another variable (e). In Scots, words like ‘home’ and ‘more’ are pronounced with an [e], as in [hɛm], [mɛr]. The trend shown here is replicated almost exactly by the other eleven phonetic variables. That is to say, this graph represents the normal pattern found in the data.

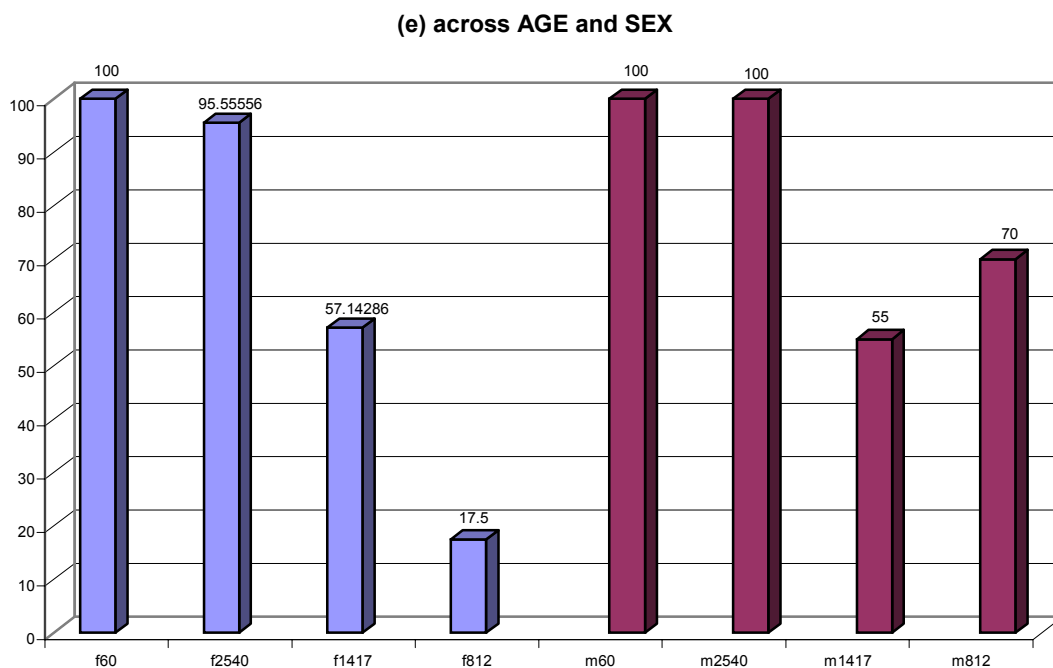


Fig. 1 Mean scores for the variable (e)

As this and the other 11 variables pattern so similarly, it is reasonable to assume that they all measure a similar dimension. Since for each variable we are dealing with the alternation between a local and Scottish Standard English form, this dimension can be seen as the individual’s use of the local dialect of Scots.

5. *T-Glottalling in Huntly compared with other areas*

The situation described for Glasgow is that T-glottalling has been commented on for more than a century, though there is no quantitative data for this:

Strangers hurl at us a sort of shibboleth such sentences as ‘pass the wa’er bo’le, Mr Pa’erson’ (a letter of 1892, in Macafee 1994: 27, cited from Stuart-Smith 1999: 183).

This does not seem to hold for the rural Northeast of Scotland, which is also a traditional dialect area. The scores for this variable in the present study show a *categorical* use of the alveolar variant [t] by the oldest age group, and a near-categorical use by the 25 to 40 group. The two younger groups use the alveolar plosive much less, with the exception of the females aged 8 to 12, as the graph below shows.

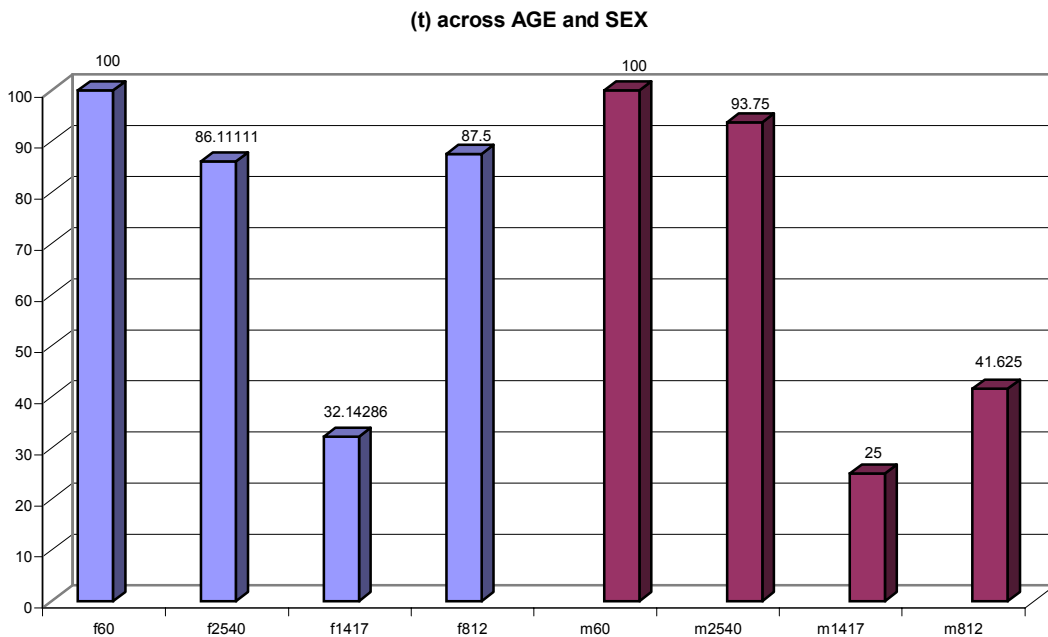


Fig. 2 Use of the alveolar variant of /t/

This pattern can be compared to the normal pattern for dialect variables in the Huntly data, as seen in Figure 1. In order to compare these results with those of other studies, it is helpful to invert the scores, showing them as a percentage use of [ʔ] (Figure 3).

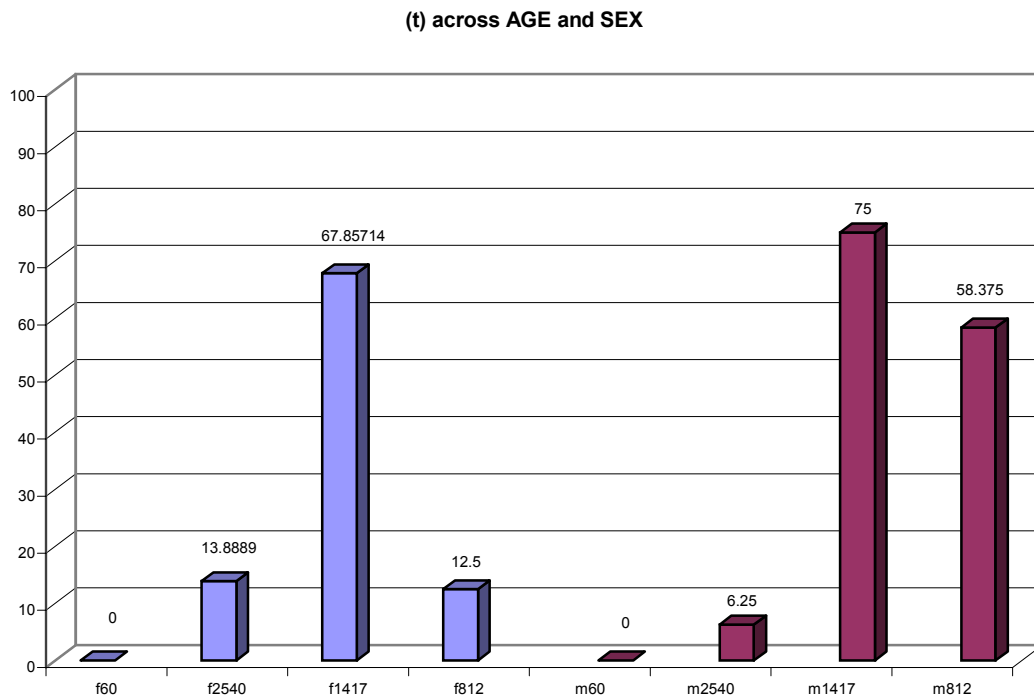


Fig. 3 Use of the glottal variant of /t/

There are two important points which immediately become apparent. First, if T-glottalling had been in use in the area for any length of time, it would presumably show in the speech of the oldest group, as is the case with Stuart-Smith's Glasgow data in Figure 4 (taken from data on conversational speech).

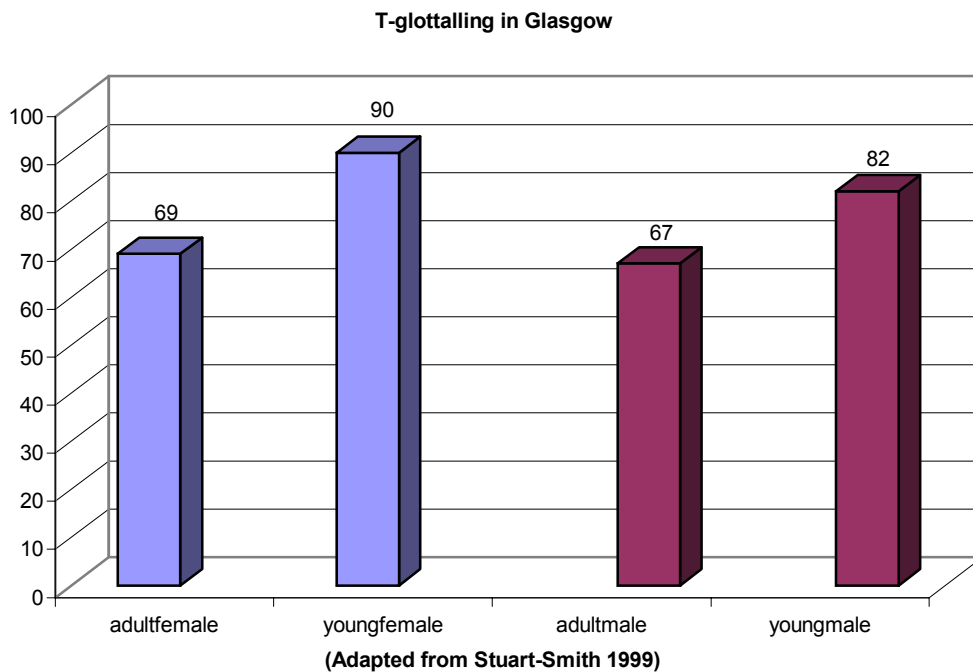


Fig. 4 Use of the glottal variant of (t) in Glasgow

KEY: ADULT = over forty, YOUNG = thirteen to fourteen years old

The age groups in the Glasgow study do not neatly coincide with those in the Huntly study, which reduces the validity of the comparison slightly. The adult group consists of speakers over forty, and shows a considerable use of the glottal stop. The adolescent group consists of speakers aged thirteen and fourteen, placing them between the two younger Huntly groups. What is nevertheless clear from the Glasgow data, is a slight increase in the use of the glottal stop in the younger group over that of the older group. This may indicate age grading due to the life stage of the adolescents, rather than change in progress. The patterning of AGE and (t) in Huntly is clear from Figure 3, and elsewhere in this paper. The value of age as a predictor variable of T-glottalling in Huntly is highly significant ($p < 0.000$)

What we see in Huntly, therefore, is zero use of the glottal stop in the oldest group for both males and females. The rural areas of Buchan and Gordon, the sampling areas for this study, are regarded by most as the heartland of Scots (Hendry 1997), and so we can assume that [t] is, in fact, the rural vernacular form.² By contrast, Glasgow shows its recorded use in this variety of urban Scots from at least 1892 (Stuart-Smith 1999:181).

² A personal communication from Jennifer Smith confirms this.

The second point is that there is an irregularity in the 8 to 12 female scores. Instead of the expected pattern shown in Figure 1, speakers in this group seem to be resisting T-glottalling. Figure 5 shows the individual scores for this variable, confirming this deviation. Except for two individuals, the 8 to 12 females show zero use of the glottal stop.

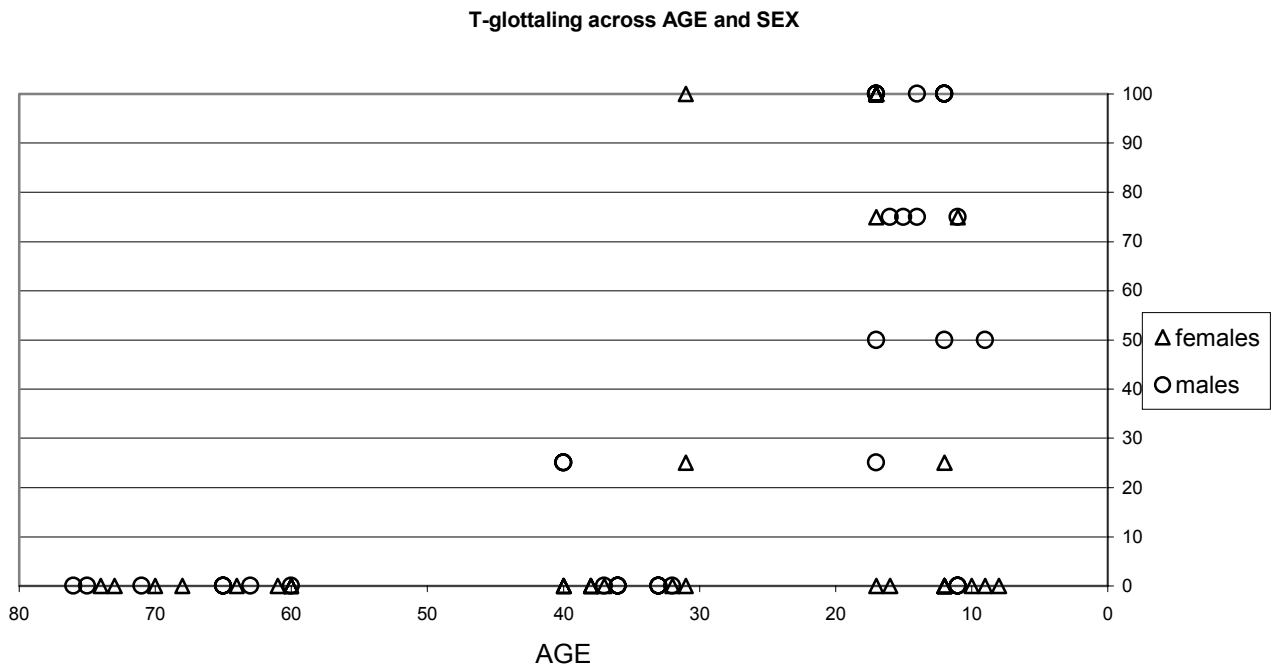


Fig. 5 Use of [ʔ] across age and sex

This is remarkably similar to the results of Kerswill and Williams' (1994) data from Milton Keynes, where glottalling is not thought to be a new feature. We consider first their data from the interviews: note that this speaking style is more informal than the elicitation style on which most of the data for the Doric study is based. Table 1 shows the results of the Milton Keynes interview data, which are not split into sexes, as there were no significant differences. It is clear that a high proportion of glottal stops is in use.

Table 2 Percentage of [ʔ] for intervocalic (t) observed in Milton Keynes, interview data (from Kerswill and Williams (1994))

age 4	82.8%
age 8	79.3
age 12	91.4

Table 2 shows the Milton Keynes data for elicitation tasks, which were similar to those used for the Doric main data. Here, the pattern for the 12-year-olds very closely matches that for the Huntly 8- to 12-year-olds, in that there is a very sharp gender differentiation. Girls in this age group in both studies have a very low frequency for this feature at around 10 per cent, while the boys have considerably more (40-60 per cent). In this style, gender differentiation is also present for the 4- and 8-year-olds in Milton Keynes.

Table 3 Percentage of [ʔ] observed in Milton Keynes in elicitation tasks (From Kerswill and Williams (1994))

	girls	boys
age 4	50.8	83.7
age 8	61.5	79.5
age 12	10.1 (Huntly 12.5)	41.6 (Huntly 58.375)

Comparing Table 2 with Table 1, we can infer that, in elicitation tasks, the girls in all three age groups style-shift away from the use of the glottal stop. This tendency is very much stronger among the 12-year-old girls, at which age they are joined by the boys, who now begin to style shift. By the age of 12, it seems that these children are becoming increasingly sensitive to the stylistic difference between a task which requires relatively monitored speech and the less formal interview. The Milton Keynes data also shows that girls display greater, and earlier, sensitivity. We can probably legitimately apply the same interpretation of the data for the Huntly 8- to 12-year-olds. The girls, and to some extent the boys, interpret the feature as ‘inappropriate’ in this speech style, and avoid it. However, this does not explain the Huntly teenagers’ scores, which are almost uniformly high. We turn to this question now.

The interpretation of the teenagers’ scores is complicated by two factors; first, the lack of comparable elicitation data from other studies, and second, more importantly, the fact that T-glottalling is a recent innovation in the Doric (see Figure 3). In two recent studies from outside the south-east of England, it has been shown that incoming full glottal replacement of /t/ is used more by younger women and by middle-class speakers. Thus, on Tyneside (Watt and Milroy 1999: 29-30) we find middle-class females introducing this variant, replacing the older glottally reinforced variant [t̚]. A comparable situation pertains in Cardiff, where the same social group appears to be replacing the vernacular [t] word-finally (Mees and

Collins 1999:195). The consequences of these findings are complex for the Doric data, for the reason that these relate to urban, not rural communities. First, the rural community in Huntly shows little class stratification, with the majority of the population having a *rural life mode* (Højrup 1983b, Pedersen 1994). The definition of this is that they are mostly in traditional agricultural families, characterised by integration in production³ and a lack of sharp distinction between work and leisure time. Kinship ties often exist with other families in the area, and goods are often exchanged. There is an orientation towards the local community, or a nearby town, participation in local club activities, and people have local friends and acquaintances. The entire family ideology is one of mutual responsibility.

Figure 6, which is a plot of the (t) data against an 8-point social class scale,⁴ shows that there is no class stratification of this feature at all, a situation clearly differentiating it from the same feature in the two urban communities.

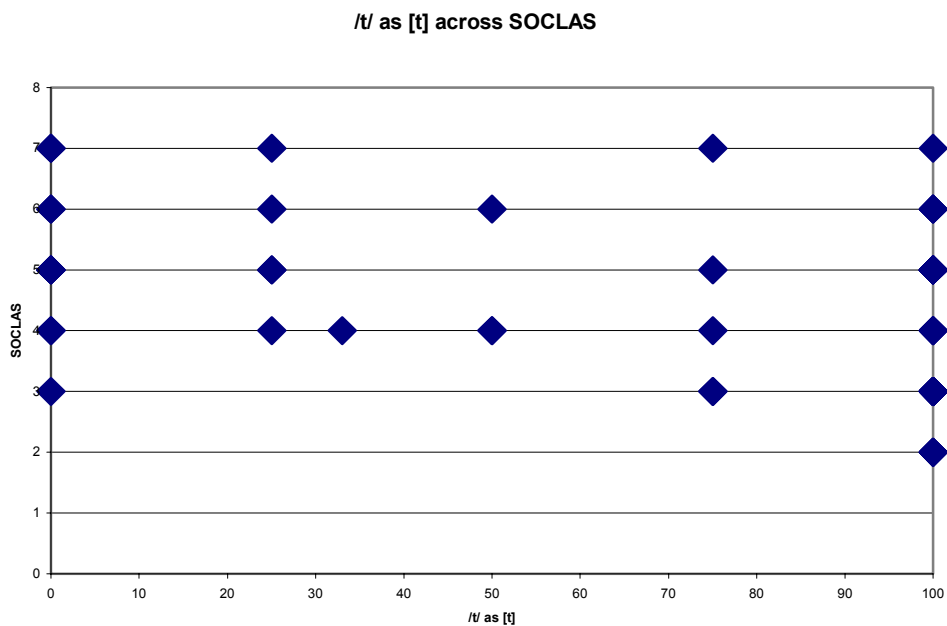


Fig. 6 Correlation of (t) and Social Class Index

In fact, some speakers with the lowest social class indices (2/8) use the alveolar variant categorically, though there is probably an age effect here,

³ By this Pedersen means that the family members all work together to produce whatever commodity they sell.

⁴ This was derived by eliciting details about the individual's occupation, education, aspirations, newspapers read, etc.

too. There are sixty-four data points in the above graph, many laid one on top of the other. There are clearly many speakers who use the glottal variant categorically, and these have social class indices ranging from 3/8 to 7/8. The same is true for those who use the alveolar variant.

Similarly, there is, for almost all the linguistic variables examined, little gender differentiation – and this is also true for (t), except of course for the young child group, as Table 4 shows.

Table 4 Differing use of (t) across sex in Huntly

Age Group	P-value
60+	cannot compute (categorical zero use)
25 to 40	0.486
14 to 17	0.552
8 to 12	0.035 (significant at $p < 0.05$)

Second, we have argued that innovation in the Huntly area is likely to be exocentric, and we have shown that practically all the new features there are indeed those already present in the urban Scots of Glasgow and Edinburgh. Admittedly Tyneside and Cardiff are affected by the diffusion of features from the south-east, particularly consonantal ones (see discussion of this point in relation to Hull in Williams and Kerswill 1999); however, the various vocalic changes reported for Tyneside are clearly endocentric, that is, generated from within the linguistic system than borrowed (see Watt and Milroy 1999 for examples of Tyneside vowel shifts).

We must now try to resolve the complex relationship between the rural character of this community and the sociolinguistic patterns we have uncovered so far for (t). We begin with the observation that the linguistic innovation within a speech community is most likely to be found among adolescents (Aitchison 2001: 209-210; Kerswill 1996). It follows that the exocentricity found in Huntly will be most clearly visible in *their* speech. Our data seems to be consistent with this observation. The incoming, clearly exocentric (arguably pan-British) norm is the use of [ʔ] for intervocalic and final /t/, and this is being enthusiastically taken up by the teenagers. The lack of both gender and class differentiation is likely to be a reflection of the rural life modes of most of the speakers.

In sum then, the feature does pattern with age, the younger speakers generally using it more, though the youngest females greatly prefer the standard variant. This differs from the results of Stuart-Smith's Glasgow

study, where use of the variable patterns with social class and age, but not sex.

Table 5 T-glottalling Patterns with Social Category

Category	Glasgow	Huntly
Age	YES	YES
Social Class	YES	NO
Sex	NO	NO (YES in 8 to 12s)

6. Use of (t) across other social variables

We have argued that the use of the glottal stop as a variant of (t) has not traditionally been a feature of rural Northeast Scots, and its increased use in younger speakers there does not pattern according to the increased use of Scottish Standard English features. The adoption of this incoming variant is not correlated with any of the other sociological scores either. LIFMOD (Life Mode, Højrup 1983b), a measure of ‘local team values’, has consistently proved a reliable predictor of dialect maintenance in the Huntly data. This variable has proved to be the most strongly correlated with PHOVAR (Phonetic Variable Score), the composite index score for all the phonetic variables, as is shown in Figure 7.

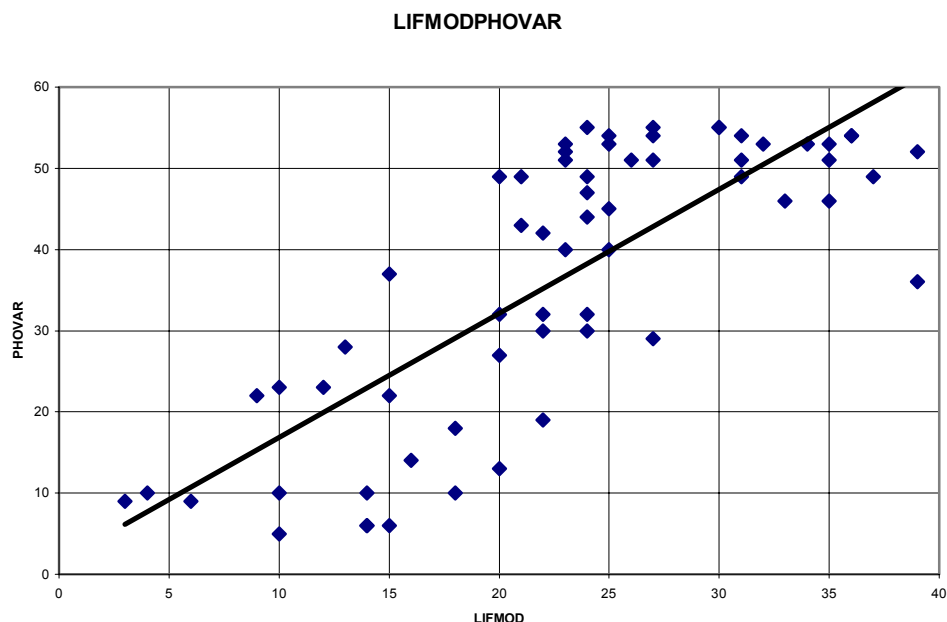


Fig. 7 LIFMOD across PHOVAR. Correlation 0.782

It does not, however, show any correlation with use of the glottal stop:

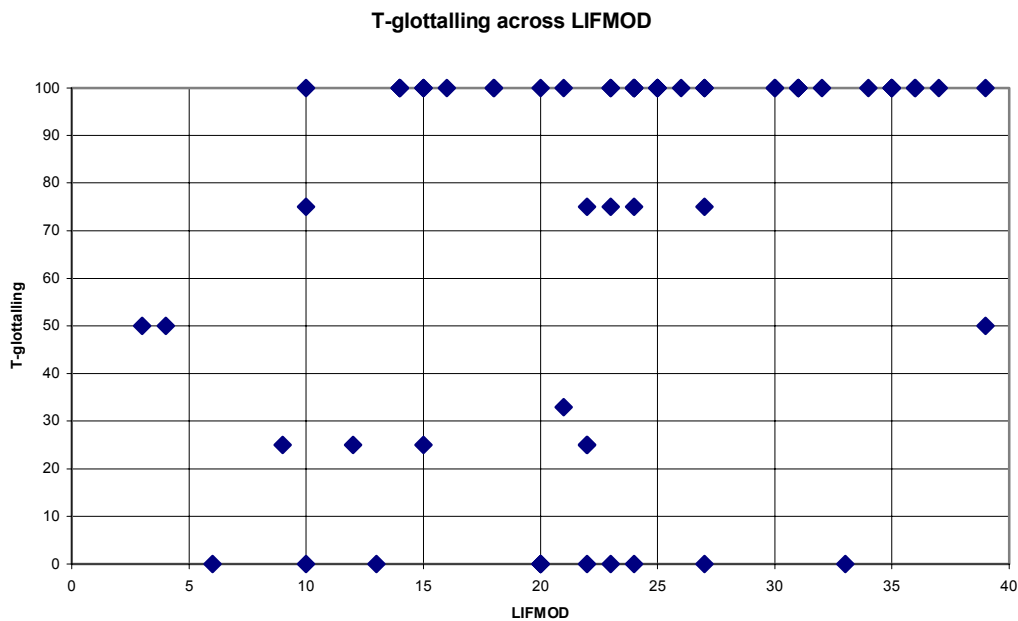


Fig. 8 The variable (t) across LIFMOD in the Huntly data

7. Conclusion

Figure 5 shows not only that the two younger groups use the glottal variant of (t) more than the two older groups, but also that the greatest variation is found in the two youngest groups. The use of [ʔ] is rapidly gaining acceptability among the adolescent speakers, specially the males. The ones who use [t] categorically in the two younger groups are all females, except for one male in the 8 to 12 group. In the youngest group, all except two of the females use the standard form categorically. So far the males in this database have shown that they are far more willing to use non-standard forms than females, as has been found in most studies in Western societies.

The failure to adopt the incoming feature by the 8- to 12-year-old females requires explanation. We argue that the reason for this lies in the fact that the status of this feature is *neither* traditional dialect *nor* incoming standard in the north-eastern area sampled, an important consideration, in the light of the fact that this is an area of exocentric innovation. This is supported by the zero scores for both males and females in the over sixty group. The reason for the failure to adopt this variant on the part of the 8 to 12 females may lie in the fact that young females everywhere usually use prestige forms, a trend which is manifest in the rest of the Huntly data.

The adolescents' adoption of the new variant is striking. As an incoming non-dialect, non-standard feature, it has been taken up by both the female and male adolescents, who have been shown to be more susceptible to peer pressure than normative pressure from education and parents (Kerswill and Williams 1997). This feature has been adopted probably because it is associated with youth culture and city values. The perception of this variant by the adolescent group may therefore differ from that of the 8 to 12 group. This age group is not yet peer-oriented. As a low-prestige variant acquires connotations of being associated with youth and fun, it tends to acquire prestige over time. The group most likely to pick up on this first is the adolescent group, as they are more intensely aware of peer pressure than other groups.

The point made by Johnston (1983: 1) relating to separate geneses of the feature in the traditional dialect of Glasgow and in Scottish Standard English does not appear to hold for Huntly, as the data presented in Figure 5 strongly suggests that the glottal variant of (t) is relatively new in the area. Given the exocentric focus of the area (see section 5), it is highly likely that the feature is filtering in from mainstream Scottish English.

All the other variables in the Huntly study have a dialect-standard dichotomy, whereas with (t) the dialect form [t̥] is the *same* as the SSE prestige form. It does, however, have *covert* prestige, and possibly increasing overt prestige⁵, and as such the adolescents accept it as a symbol, whereas the youngest females resist it longer as a non-standard marker. The adolescent females are also perhaps more susceptible to peer group pressure than the youngest females, and the effect on them of the overt stigmatisation of this variant will be felt less now than when they were younger. Unlike the results of studies in Newcastle and Cardiff, which show that the adoption of the glottal variant of /t/ is being led by young, middle class females, the results presented here show correlations only with age, and not social class or (for the three oldest groups) sex. The youngest females do not use the glottal variant much, perhaps because they are still matching the older vernacular norm of their parents in the 25 to 40 age group. By the time they reach adolescence, they will have caught up with the boys. They are clearly differentiated from the boys in the same age group, a pattern which was exactly matched by 12-year-old girls and boys in Milton Keynes doing elicitation tasks. However, what we see here may be evidence of complex issues of child versus adolescent versus adult life stages, with differing perceptions of the status of the incoming glottal variant of (t). The nearly identical variation exhibited in Glasgow, Milton

⁵ As is suggested is the case in Cardiff by Mees and Collins' (1999) data.

Keynes and Reading is what Labov (2001:417) calls ‘stable variation’. The Doric shows a new, dynamic stage.

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