EUROPEAN ACADEMIC RESEARCH
Vol. IX, Issue 4/ July 2021

Impact Factor: 3.4546 (UIF)
DRJI Value: 5.9 (B+)

ISSN 2286-4822
www.euacademic.org

T-Glottaling in Cardiff English: A Preliminary Analysis

ABDULKAREEM YASEEN
Al-Yarmok University College, Iraq

Abstract

This paper reports the results of a preliminary analysis of t-glottalling, a key phonological phenomenon that is reported to be taking place in different varieties in British English. It attempts to sketch patterns of sociolinguistic variation of this phenomenon in the English variety spoken in Cardiff. It also seeks to delineate the correlation between linguistic and social factors of hypothised to be influencing the occurrence of this phenomenon. Using data from the IViE corpus (Intonational Variation in English, UK ESRC award R000237145). This paper presents results of a number of speakers of Cardiff English equally divided by gender. Results show that females use a greater proportion of glottalised forms of /t/ as against their male counterparts. It also shows that glottaling is more likely to occur in pre-consonantal conditions. The paper also reports instances of elided forms of /t/, whereby no realisation whatsoever is produced by speakers. These results offer support as well as new insights to previous accounts on this feature in Cardiff English.

Keywords: T-Glottaling, Cardiff English

INTRODUCTION

Various sociolinguistic research has established that the phenomenon of t-glottaling has increasingly been gaining currency in British English varieties. Along with other innovative features such L-vocalisation and TH-fronting, the phenomenon of realising word-final and word-medial /t/ as a glottalised variant, has been spreading from London to nearby localities of England, Wales and beyond largely by

way of what is known as geographical diffusion (Smith & Holmes-Elliott: 2018).

This study investigates the occurrence of t-glottaling in Cardiff, Wales looking at internal and external constraints that may have a role in its spread and occurrence.

The essay is divided into six sections, including this introductory section. The second section gives a brief overview of the history of t-glottalling and previous works that have traced its diffusion across the British Isles. A third section is given that provides a brief account on the setting of this study, Cardiff, and the dialect spoken there. This is followed by a section on the methodology used in carrying out this study and then followed by a section presenting the results of the study. The last section will try to generate a discussion of the phenomenon pulling together the patterns that can be identified in view of the results the study giving a brief summary and critique of the findings. It is generally known that glottalisation of /t/ encompasses both the replacement and the reinforcement of /t/ by glottal stop [ʔ]. This study will focus on the former rather than the latter.

AN OVERVIEW OF T-GLOTTALING

T-glottaling can be defined as the pronunciation of /t/ as a glottal [ʔ]. This feature has figured in many accounts on the English spoken in the British Isles. Wells (1990: 6) summarised the phonetic environments of glottal replacement [ʔ] and claimed that T-glottalling frequently occurs in environments whereby a vowel, alveolar nasal /n/ or lateral /l/ followed by a consonant, mostly a plosive or a fricative . He noted that T-glottaling occurs as well when the following sound is a vowel. It has been widely reported that the occurrence of glottal forms of /t/ is on the increase across parts of the British Isles. As such, this feature has also become an important and complex variable in the study of British English. The earliest studies explored the phenomenon in rural areas. The quest was subsequently extended to a wide variety of urban communities in the British Isles. This quest was embodied by a number of surveys like Trudgill (1974) in Norwich, Romaine (1975) and Reid (1978) in Edinburgh, and Macaulay (1977) in Glasgow, Mees & Collins (1999) in Cardiff, Foulkes & Docherty (1999) in Derby and Newcastle, to name just a few. The bulk of research has considered almost all possible mechanisms behind this feature. Docherty *et al.* (1997: 277)

noted that glottalling has become an increasingly established feature in British English during the twentieth century. Andrésen (1968: 18) musters evidence that glottal replacement of intervocalic /t/ first appeared in the west of Scotland around 1860, spreading to the east of Scotland and the far north of England some years later. By the middle of the 20th century, glottal replacement and glottal reinforcement of intervocalic /t/ was a feature of rural dialects in most of eastern England. The phenomenon seems to have rapidly diffused to urban centres across the British Isles within the last four decades of the Twentieth century (Kerswill 2003: 207).

In recent years, there has been increasing interest in examining the diffusion of such features in urban areas. Foulkes and Docherty (1999) provide thorough descriptions of regional accents in Britain highlighting several linguistic variables including T-glottaling. Featured in this volume is a real-time study on glottalisation in Cardiff carried out by Mees & Collins (1999). Drawing upon data extracted from IViE corpus (Intonational Variation in English, UK ESRC award R000237145), this paper will compare its findings to Mees & Collins (1999) and some other studies carried out on this phenomenon in Cardiff like Mees' (1983), (1987) who discussed the spread of glottalisation to Cardiff, South Wales.

T-glottalling has long been described as a stigmatised feature. Macaulay's (1977) account of t-glottalisation in Glasgow shows that glottalling is highly stigmatised in Glasgow and is associated with working-class speech. Milroy *et al*. (1994) find, however, that this feature, a long stigmatised feature of urban varieties of British English with origins in working-class London speech, is on the increase in middle-class speech in Cardiff. They argue that the frequency of glottal stops in female speech leads to a reversal of the stigma attached to it. They also suggest that it is the fact that women adopt a variant that gives it prestige rather than the fact that females favour prestige forms. To put it differently, women create prestigious norms rather than go after them. Another argument regarding the issue of stigma is presented by Mees and Collins (1999: 201) who note that it is a prestigious feature for speakers of Cardiff English because it is associated with "sophisticated and fashionable speech". They support their claim by mentioning another example of linguistic change that is the change of FACE and GOAT vowels to clear diphthongal glides, which is also seen as a means to move away from their Welsh-accented

speech. Romaine (2003: 103) argues that the notion that women have a tendency to use the more prestigious variants is seen as, in some respects, contradictory when in the majority of societies higher status and power are attached to men.

Armed with the knowledge of the mechanisms of linguistic change, researchers have attempted extensively on explaining that linguistic variation is not random but rather is shaped by social and linguistic factors. One of the goals of any sociolinguistic study is to explore the social trajectories of linguistic change. Of the principal social dimensions researchers have been concerned with (i.e. social class, age, sex/gender, style, and network) gender has been one of the most researched. Gender has also been one of the most widely used forms of social differentiation in linguistic variation and change studies. So, given the importance of gender in shaping this feature, this study intends to shed more light on the role of gender on T-glottaling in Cardiff English.

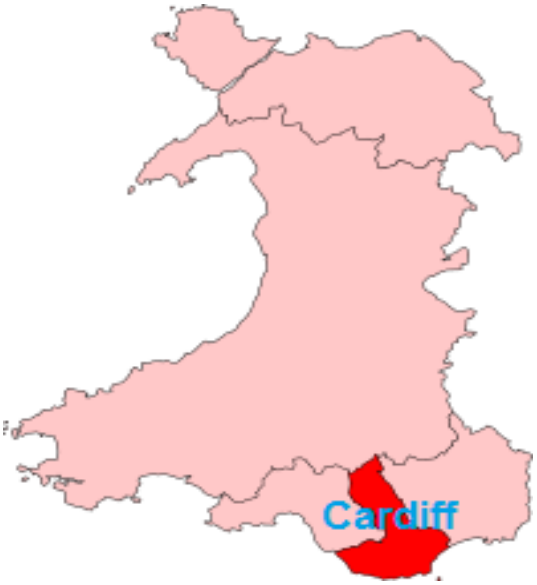
CARDIFF: THE CITY AND THE DIALECT

Cardiff is the capital and largest metropolitan centre in Wales. This city is Wales' main commercial centre, with an estimated population of 366,903 (the 2019 MidYear Estimate – MYE) (Figure 1). Cardiff was first built as a Roman fort in about 55 AD. It became a relatively small town over the succeeding centuries. In the 19th century, Cardiff has seen a visible development in population and infrastructure with the establishment of railway in 1841. This easiness of transport helped shipbuilding and rope making industry to thrive in the city. A number of other industries included iron and steel, brewing, milling and paper making also grew in the area. Cardiff was given the city status in 1905, and was made the capital of Wales in 1955. True of other cities around the UK, the 20th century has witnessed a decline of the old manufacturing industries and were largely replaced by new service industries including tourism.

Cardiff English is a variety of Welsh English spoken in and around the city of Cardiff, and is to some degree has its own distinctiveness compared with other Welsh accents. The development of this dialect paralleled the growth of the city in the nineteenth century. A key phenomenon that influenced Cardiff English is migration, whereby migrants from different parts of Britain,

particularly by those who hailed from the English Midlands, the West Country, other parts of Wales, and Ireland (Collins & Mees: 1990).

Figure 1 Map of Wales showing location of Cardiff (Source www.wikimedia.org/)



METHODOLOGY

The present section focuses on the procedures employed to obtain and analyse the speech data. There have been numerous corpus-based studies of language change. The current discussion is no exception. A number of recordings were used in this study. The recordings were all extracted from IViE corpus (Intonational Variation in English, UK ESRC award R000237145) compiled by Oxford Phonetic Laboratory and Cambridge Speech Centre (Grabe et al. 2001**).** Award/Grant Name**:** A Quantitative Model of Intonational Variation in the British Isles. As its name denotes, this ESRC-funded research project investigates variation in English intonation. In this study, twelve speakers were chosen, six male and six female. According to Grabe (2002: 343), the six male and six female teenagers were recorded in their secondary schools. The speakers are homogeneous in their social class and age. They are all considered as lower middle class speakers of Cardiff English. All speakers were involved in the same set of tasks designed to elicit comparable data in five speaking styles. These styles consisted of two

formal styles (reading list of sentences & reading Cinderella story) and three informal styles (free conversation in pairs about a given topic, map task, and a retold version of the passage of Cinderella). Both speech styles were considered in this study, the formal and informal style.

As an aid to planning this study, a preliminary pilot study along the general lines of the main research was carried out for two speakers to gain some idea of what might be feasible goals. This process involved considering the possibility that the variants and contexts could be easily identified from the chosen dialect. Prior to conducting the analysis, details of stimuli used in the corpus were carefully examined to make sure there are enough tokens available of /t/ that could be measured. Therefore, the speaking tasks such as the word- list that contained no instances of /t/ were ruled out of the analysis. The complete set of speech data, in .wav format, was made available in the department of Language and Linguistic Science at the University of York. Extensive sessions of listening to the files were carried out with PRAAT version 5.1.17 (Boersma & Weenink, 2009). Certain lexical items like *it* were excluded from the analysis as they might have skewed the results emerging from the study.

For statistical consistency, 24 tokens of the variable were measured for each speaker to allow for uncomplicated comparison across speakers. The total number of tokens measured was 288 for both male and female speakers. T-glottalling is well-known as a feature having a set of complex phonological constraints. However, the data analysed for this study comprised tokens with /t/ in word- final pre-consonantal, pre- vocalic and pre-pausal positions in a number of words such as *but, get, hat, out, fat, meet, white, thought, about, midnight, foot, feet, about*. According to Mees and Collins (1999: 196), the majority of word-final /t/s can be realised as [t] or [ʔ ,ʔ t]. A third potential variant is elision (zero realisation) ,which Mees and Collins describe as the realisation where /t/ is elided or can be realised as a weakly produced stop with no audible release. In this study, three variants were examined per speaker per context, [t], [ʔ] and zero realisation. A careful record of analysis was kept in Excel to help perform basic statistical analysis.

RESULTS

The following is an outline of the results emerging from the analysis. As can be seen from the tables 1and 2 below, both male and female speakers favoured the standard [t] with the male speakers realising the released [t] in 85 out of 144 instances, (59%), while the percentage was 53% for females. It seems possible that these results could be attributed the fact that glottalling reduces as one goes down to the socio-economic ladder (Mees & Collins 1999: 195). Given the fact that glottalling is considered as a prestigious feature in Cardiff, these subjects will have produced more glottals by the time they reach higher social status. A chi- square test showed the gender difference to be non-significant: $\chi^2 = 1.56, \mathrm{df} = 2, p = 0.4584.$ It can also be seen from the tables that the use of glottals for female was higher than male counterparts, with 38% for the former and 31% for the latter. The scores for the elided forms were rather lower than the other two variants reaching, for both male and female speakers, 10% and 9% respectively.

Table 1, the use of glottals by males as opposed to other variants.

Variants		%	N. tokens
1	[t]	59%	85
2	[ʔ]	31%	44
3	ɸ	10%	15
			144

Table 2, the use of Glottals by females as opposed to other variants.

Variants		%	N. tokens
1	[t]	53%	76
2	[ʔ]	38%	54
3	ɸ	9%	14
			144

The glottal forms as opposed to other variants occurred in 34% of cases for both male and female speakers in both formal and casual speech while the released forms accounted for 56%. The occurrence of the elided variants was just 10% for all speakers. However, if we look carefully at the results in informal speech, we get another picture. It can be observed that the feature occurs more frequently in the informal speech of all speakers. Figures 2 and 3 below show that glottal variants in female speech reached the high score of 71%, compared to 50% for male speakers.

Fig. 2 Percentage of glottals as opposed to other variants for male speakers in informal speech.

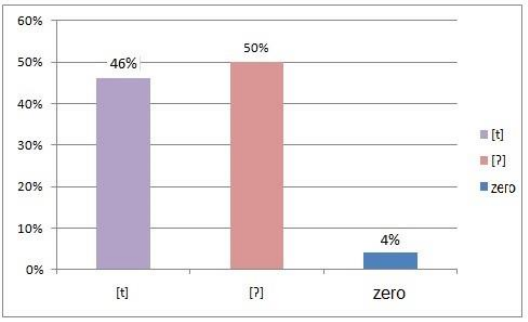
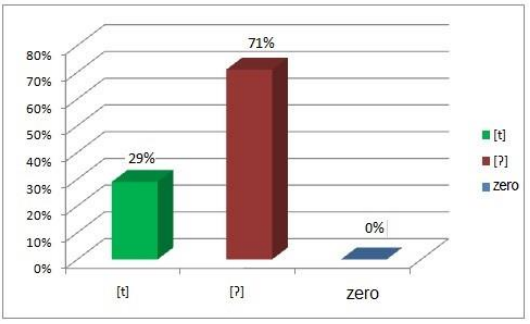


Fig. 3 Percentage of glottals as opposed to other variants for female speakers in informal speech.



Another finding is that all the instances of /t/ in *get ready* were realised as glottals by all speakers. This result provides qualified support for the observation of Foulkes and Docherty (2007: 61) that "it is becoming rare to hear word-final pre-consonantal /t/, as in get ready, articulated as anything other than a glottal".

Let us also look at the results that have been reported on this feature in Cardiff in the literature and compare them to the results presented above. Previous studies by Mees (1983) and (1987) on glottalisation in Cardiff reported in Mees and Collins (1999: 196-7) examined the speech of informants from three social classes, middle middle class, lower middle class, and working class. Since the current study is concerned with lower middle class subjects, I will try to compare the results from my study with those for lower middle class speakers presented in this discussion. It has been reported that female lower middle class speakers showed an increasing frequency in their use of glottalised forms for pre-consonantal /t/, from 30.8% in 1976 to

47.6% in 1981, while the percentage of female speakers' use of glottalised forms for pre-pausal /t/, was 25.8% in 1976 to reach 62.4% in 1981. The speech style that yielded these results was the interview style. To take all results into account, it is clear that the use of glottals is strongly favoured by females in Cardiff and is in on the increase. Not only that but also if we consider the percentage of glottals for male speakers in the casual style, we find that it is higher than [t], at 50% for [ʔ] and 46% for [t]. This also indicates that glottalling is also infiltrating the informal speech of males, though to a lesser degree than that of females. A chi-square analysis was performed to show the gender difference in informal speech. The analysis showed the gender difference, in informal speech, to be non-significant: $\chi^2 = 1.03$, df= 1, $p = 0.3102$.

The scores in tables 3 and 4 show that there is a clear difference between the averages for glottalling in word- final, pre-consonantal environments and those for word-final pre-pausal and pre-vocalic environments. Both male and female speakers have higher averages in pre- consonantal tokens than in the other two environments.

Table 3 percentage and number of tokens of the three variants [t],[ʔ],and [ф] in the three contexts for male speakers.

Context	[t]	[ʔ]	zero	N tokens
–#V	8 (73%)	3 (27%)	0	11
–#	34(81%)	8 (19%)	0	42
–#C	43(48%)	33(36%)	15(16%)	91
Total	85	44	15	144

Table 3 percentage and number of tokens of the three variants [t],[ʔ],and [ф] in the three contexts for female speakers.

Context	[t]	[ʔ]	zero	N tokens
–#V	8 (53%)	7 (47%)	0	15
–#	34(81%)	8 (19%)	0	42
–#C	34(39%)	40(46%)	13(15%)	87
Total	76	55	13	144

DISCUSSION AND CONCLUDING REMARKS

On the basis of these results, a number of observations can be made. The distribution of glottals by gender is more frequent in female than male speech. This clearly indicates that young female speakers are taking the lead in the change in Cardiff. This result is in line with

previous accounts on this feature in Cardiff (Mees 1987, Mees & Collins 1999) and Sandwell, in the West Midlands, (Mathisen 1999) which have shown the frequency of glottalling in the female speech is higher than in male speech in the urban centres they investigated. In Cardiff, Mees (1987) found that glottalisation was most advanced in middle class, rather than working class speech and that it was particularly associated with young, middle class females. With all this in mind, it is clear that this change is what Labov (1990: 215) describes as "change from above"- in which women favour the incoming prestige forms more than men.

As also seen above, results for this feature in Cardiff may dovetail with most previous studies, which have shown that t-glottalling seems to be a form led by young people in general although this data collection did not comprise comparable data from older people. Thus, this interpretation needs to be taken with caution.

The results also suggest that that preceding consonant is, by far, the most prevalent environment for t-glottalling. This is evident in the frequencies of [ʔ] in pre-consonantal positions are higher than the frequencies in both pre-pausal and pre- vocalic positions. This particular result is different from what Mees and Collins (1999: 198) report on glottalised forms in that the glottalised forms in their study for word final /t/ for three contexts at three time points showed higher frequencies in pre-pausal positions than in the other two environments. Another interesting finding is of the elided forms (zero realisation). Cardiff English is characterised by remarkably extensive assimilation and elision (Collins & Mees 1990: 98-9). However, from the results, it can be seen that the elided variant occurred in 10% of both male and female speech. Elision is categorical in *meet prince* where [t] is followed by the voiceless plosive, which is a favourite environment for elision to occur.

To conclude, this paper has given an account of T-glottalling in Cardiff English and in view of the results emerged from the analysis it carried out compared with what described in the literature. Through the analysis, presentation and interpretation of the data, I tried to identify the common distribution pattern of forms of the variable in the speech of 12 speakers of both sexes. The results of this paper have supported other studies that have reported similar observations. It has found that glottalling is, in most respects, associated with female speakers and that it is more evident in informal speech than in formal

speech of the subjects studied. On the other hand, it also provided new insights on this feature as it has also shown that preceding consonant is the favourite environment for t-glottalling to occur, a different finding to what described in the literature. A final word is order here, this paper remains a preliminary analysis of this feature whereby few data were analysed. As such, the interpretations are not conclusive and thus further research is needed to establish more facts on the phenomenon in Cardiff.

REFERENCES

1. Andrésen, B., (1968). *Pre-glottalization in English Standard Pronunciation*. Oslo:Norwegian Universities Press.
2. Boersma, P. and Weenink, D. (2009) *Praat: doing phonetics by computer (Version 5.1.17)*
3. [Computer program] Retrieved October 21, 2009, from http://www.praat.org/.
4. Collins, B. and Mees,I.M. (1990). The phonetics of Cardiff English. In: N. *Coupland*. (ed.)
5. *English* in Wales. Cleveland, Philadelphia: Multilingual Matters, pp. 87–103.
6. Docherty, G. and Foulkes, P. (1999). Derby and Newcastle: instrumental phonetics and variationist studies. In: P. Foulkes, G. Docherty (eds.). *Urban Voices*. London: Arnold, pp. 47-71.
7. Docherty, Gerard J., Foulkes, P., Milroy, J.,Milroy, L., and Walshaw, D. (1997). Descriptive adequacy in phonology: a variationist perspective. Journal of Linguistics 33, pp. 275-310.
8. Fabricius, A. (2000).T-glottalling between stigma and prestige: A sociolinguistic study of modern RP. PhD dissertation. Copenhagen Business School. (information accessed between July-January 04/05)
9. Foulkes, P. and Docherty, G.J. (2007) Phonological variation in England. In Britain, D. (ed.)
10. *Language in the British Isles*. Cambridge: Cambridge University Press, pp. 52-74.
11. Foulkes, P. and Docherty, G. (eds.) (1999). *Urban Voices: Accent Studies in the British Isles*. London: Arnold.
12. Grabe, E. and Post, B. (2002): "Intonational variation in the British isles", In *SP-2002*, 343- 346.
13. Grabe, E., Post, B. & Nolan, F. (2001). *The IViE Corpus*. Department of Linguistics, University of Cambridge (ESRC grant R000237145).
14. Kerswill, P. (2003). Dialect levelling and geographical diffusion in British English. In D. Britain and J. Cheshire (eds.) *Social dialectology. In honour of Peter Trudgill*. Amsterdam: Benjamins, pp. 223-243.
15. Labov, W. (1990). The intersection of sex and social class in the course of linguistic change. *Language variation and change* 2, pp. 205-254.
16. Macaulay, R.K.S. (1977). *Language, Social class and Education: A Glasgow Study*. Edinburgh University Press.

17. Mathisen, A. G. (1999). Sandwell, West Midlands: ambiguous perspectives on gender patterns and models of change. In: P. Foulkes, G. Docherty (eds.). *Urban Voices*. London: Arnold, pp. 107-123.
18. Mees, I.M. & Colllins, B. (1999). Cardiff: a real time study of glottalisation. In: P. Foulkes,
19. G. Docherty (eds.). *Urban Voices*. London: Arnold, pp. 185-202.
20. Mees, I.M. (1987). Glottal stop as a prestigious feature in Cardiff English. English World- Wide, pp. 8.25-39.
21. Mees, I.M. (1983). *The speech of Cardiff schoolchildren. a real time study*. Dissertation, University of Leiden.
22. Milroy, J., Milroy, L. Hartley, S. (1994). Local and supra- local change in British English: the case of glottalisation. English World-Wide, 15.1.1-33.
23. Reid, E. (1978) Social and Stylistic Variation in the Speech of Children: Some Evidence from Edinburgh. In S*ociolinguistic Patterns in British English*, ed. Peter Trudgill. Baltimore, Md.: Univ. Park Press, pp. 158–71
24. Romaine, S. (2003) Variation in language and gender. In Holmes, Janet and Meyerhoff, Miriam eds. *The Handbook of Language and Gender*. Oxford: Blackwell. Chapter 4. pp. 98- 119.
25. Romaine, S., (1975). Linguistic variability in the speech of some Edinburgh school-children. Unpublished M.A. thesis, University of Edinburgh.
26. Smith, J., & Holmes-Elliott, S. (2018). The unstoppable glottal: Tracking rapid change in an iconic British variable. English Language & Linguistics, 22(3), 323-355.
27. Trudgill, P. (1974). *The Social Differentiation of English in Norwich*. Cambridge: Cambridge University Press.
28. Wells, J.C. (1990). A phonetic update on R.P. Moderna Språk. LXXXII.1.3-9.