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**DEPARTAMENT DE FILOLOGIA ANGLESA I DE GERMANÍSTICA**

**T-glottalization in North American and British  
English: a Comparative Study**

Treball de Fi de Grau/ BA dissertation

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## **Abstract**

T-glottalization has been reported in many dialects across the globe. This phenomenon is still ongoing, and the path it will follow might vary depending on where it develops. The present dissertation aims at analysing some of the most relevant literature on this feature, in order to answer the questions presented. Its potential sources of origin were reviewed to gain a further understanding of t-glottalization's evolutionary trajectory. Some of the most relevant literature about this phenomenon in Great Britain and North America was presented and analysed. It was concluded that, although a comparison was achievable at a certain extent, in order to fully answer the questions proposed much more research needed to be conducted.

**Keywords:** British English, American English, glottalization, sound change, sociolinguistic variation

## 1. Introduction

Languages are in constant change, and English is not an exception. Relatively recently, taking into account the historical evolution of English, a phonological change has started to occur, affecting the phonological repertoire of native speakers: t-glottalization.

According to Wells (1982: 260), glottalization affects many phonemes in British English, such as /t/, /p/, /k/ and /tʃ/. However, this dissertation is interested only in glottalization in relation with the /t/ phoneme. This phenomenon affects the /t/ by adding an allophone, which is called 'glottal stop', to its range of options. This realization of /t/ is a voiceless plosive articulated at the glottis, where the airstream suddenly stops and then is released after a short period of time, producing a silence while the air does not flow.

However, Roberts (2006) observes a further distinction of this feature affecting the /t/ phoneme that must be regarded: glottal reinforcement and glottal replacement. Glottal reinforcement, also called pre-glottalization, is a phonological process in which a /t/ phoneme is partially pronounced as a glottal stop and partially pronounced as a [t], so two different allophones are involved in the process. On the other hand, glottal replacement, also known as t-glottalization, completely substitutes the /t/ phoneme for its glottal realization. Although the two kinds of glottalization are related to each other, this dissertation is only interested in glottal replacement.

There is not a standard set of rules that determines exactly the behaviour of this feature, so the situations in which t-glottalization occurs are not completely predictable. The speakers in different English speaking regions might produce it differently, depending on social factors and the particular way of talking of a certain speaker, so its

relation with sociolinguistic variation is undeniable. What can be observed, though, at least in the literature analysed in this paper, is the majority of occurrences of t-glottaling being found in coda position, either word-medially or word-finally. However, even if this feature is used differently among English dialects, it can be observed that it is, at least, present in most of them.

One of the questions that this feature arises is when it originated. Further research on this topic must be carried out, as its origins are still not clearly defined. This dissertation tries to provide a more in-depth analysis on this topic in the next section. For the moment, what must be noticed is that this phonological change is still evolving in nowadays' society.

Another question arisen by this phenomenon is why it originated. One of the most plausible explanations for the appearance of t-glottalization was presented by Wells (1982: 94):

The principle of least effort leads us to tend to pronounce words and sentences in a way which involves the minimum of articulatory effort consistent with the need to maintain intelligibility. If a simple articulatory gesture works just as well as a complex one, there is a natural tendency to prefer it, thus rendering the articulatory movements in speech simpler.

Therefore, according to Wells, the appearance of t-glottalization could be explained as a simplification of the task of articulating the /t/ phoneme by “concentrating all the articulatory modifications (switch-off of voicing, plosive occlusion) at the glottis” (Wells, 1982: 94).

T-glottalization has been widely investigated by linguists. The approach taken in the majority of studies is really specific, viz. they do not focus on a general approach to this phenomenon, but rather on a specific phonetic environment and in a specific

geographical region. A possible rationale for linguists to accommodate to this pattern might have to do with financial and time reasons, since it would not be rare for a project of such a large scope to require an enormous investment, both in time and money. Data from thousands of English speakers from different regions would be needed, which would later be analysed and contrasted in order to produce a reliable contrastive study about the state of t-glottalization in English across the globe. It must also be remarked that as it has been mentioned previously, t-glottalization is a phonological change that has not finished yet, i.e., it is currently still evolving. The fact that this feature is still ongoing might affect the development of such study, as investors might not be interested in contributing in a research project that would become outdated soon after it was finished. However, even if most research focuses on one particular geographical variety and context for the glottal stop to occur, there are some studies that analyse data from a wider geographical region, but research analysing t-glottalization in an international context is yet to be carried out.

The lack of a contrastive study involving t-glottaling in different major English dialects arises many questions, such as how this phenomenon evolves in different geographical regions, if social and cultural factors affect the evolution of this phonological change in any way, if the evolution of this phonological process is following the same pattern in different accents or whether different geographical regions, in relation to this feature, are advancing towards the same end or not. So, as such a study has not been carried out, this paper aims at shedding light on these matters. More specifically, this dissertation will try to provide an analysis based on some of the most relevant literature about the production and use of t-glottalization by native speakers of English in both North America and Great Britain. It must be emphasized, to



avoid any possible misunderstandings, that the focus will not be on General American and Received Pronunciation, which are the standard dialects found in both regions respectively. Rather, the focus will be on the different accents found in the two geographical locations mentioned previously and the general tendencies, if any, of both regions.

## **2. Historical background**

The first instances of t-glottalization in English were observed not too long ago. There are different hypotheses, which will be explored in this section, that propose a plausible explanation for the origin of this feature. T-glottalization's diachronic trajectory did not necessarily occur equally everywhere; it might have different origins in different regions. However, the truth is that there is no consensus about the origins of this phenomenon in North America or Great Britain.

Researchers have developed three major hypotheses for the spread of t-glottalization in Great Britain. In her PhD thesis, Badia (2015) provides us with them. One of the hypotheses defends that t-glottalization spread from East Anglia. After analysing the Survey of English Dialects (SED), a survey done in the 50s which collected information about the speech of English people, Trudgill (1974) found that during that decade t-glottaling occurred mostly in East Anglia, in informal and low class contexts. Trudgill (1999: 132) as cited in Badia (2015: 34) states that East Anglia “appears to have been one of the centres from which t-glottaling has diffused geographically in modern English English”, precisely because t-glottaling did not occur in London during that time, contrary to the belief of many researchers who argue that this feature originated in London and spread from there to other regions. Therefore, he

provides a hypothesis of how this feature might have spread from East Anglia to other parts of England.

Another hypothesis states that t-glottaling spread from London. According to Wells (1994), t-glottaling is a persistent feature in RP. He also states that the use of this feature in RP might be attributed to the influence from Cockney English. Przedlacka (2001: 48) also defends this argument, as “London remains the most influential urban centre, not only in the Southeast, but also in England”. She argues that due to the influence of London, t-glottaling spread to other places. Thus, she supports the idea of the influence of Cockney being the reason for this feature to spread.

The last hypothesis argues that t-glottalization has its origins in Glasgow, Scotland. By analysing some of the literature on this topic, Badia (2015: 34) presents some arguments in favour of this idea:

According to Andrézen (in Collins and Mees 1996), glottalisation in southern British accents such as Cockney started as an influence of Scottish accents, and not on the other direction. Stuart-Smith (1999) states that the glottal replacement has been in use in both word-medial and word-final positions in Glasgow since the 19th century.

Kortlandt (1997: 175) also analyses Andrézen's work on this feature:

Andrézen comes to the conclusion that 'there is strong evidence in favour of the view that about 1860 the phenomenon of pre-glottalization existed only in a few dialects in Western Scotland ' (1968:24). However, it is clear from his examples that this statement refers to the glottal stop which replaces [p, t, k], not to the concomitant glottal closure which accompanies these sounds in more widespread varieties of English.

Thus, this hypothesis, mostly argued by Andrézen, provides empirical evidence for t-glottalization being present in some Scottish accents as early as 1860, making Scotland the earliest reported focus of origin of this feature.

Even with the sources of origin presented in this dissertation, it is still not completely clear where and when t-glottaling was acquired by English speakers in Great Britain. What is more, the sources presented might not even be where this phenomenon originated. Instead, they might be where it was most influential and, therefore, from where it spread. In order to clarify the unknown origin of t-glottalization in Great Britain and how it came to be present across the region, more research must be carried out.

As for North America, the lack of research on this topic complicates any possibility of determining the origin of this feature on this continent. It is a fact that much more research related to t-glottalization in Great Britain has been carried out compared to North America. Even if some literature is present, it does not focus on its origins, but rather on the current state of this feature in a certain region within the continent. Thus, even if this phenomenon is found in some North American accents, its origins are yet to be found.

### **3. State of t-glottalization**

Prior to providing a proper analysis about the current state of t-glottalization in both North America and Great Britain, a review of the present literature is required. Most researchers have focused on the occurrence of this feature in Great Britain, whereas the literature on t-glottalization in North America seems to be scarce. Nonetheless, even if t-glottaling has not been studied equally in both regions, there is at least enough literature to observe its behaviour and acknowledge its presence in some of the accents found in the two different locations.

A review of the different ways in which a change might occur is also required, as it might help understand in what way t-glottalization is evolving. Gavalda (2013) provided different ways in which a change such as t-glottalization might occur over time according to variationist sociolinguistics, based on previous literature. Gavalda (2013: 19-20) observed that “Labov (1994) described four possible patterns of how individuals in particular and communities in general may change or not change over time, and how all the possible combinations can be interpreted. Sankoff and Blondeau (2007: 561-562) group these four possible interpretations into two observable synchronic patterns”. These two patterns are *flat* and *regular slope with age*. The former pattern implies that speakers are not experiencing a sound change or, on the other hand, all the speakers are experiencing a sound change at the same time, so it evolves equally with no differences between different speakers. The latter pattern also has two different interpretations: *age-grading*, which implies that “the community remains stable over time, but individuals change as they get older, and all the generations change in the same way” (Gavalda, 2013: 20), and *apparent time*, which implies that speakers do not experience any change throughout their lives, but rather it is the community that changes with every new generation. However, there is another interpretation that should be regarded, provided by Sankoff (2005), called *lifespan change*. (Sankoff 2005: 1011) as cited in Gavalda (2013: 20) states that this interpretation implies that “individual speakers change over their lifespans in the direction of a change in progress in the rest of the community”. This topic will be further discussed in another section, as more information is required to analyse in what way t-glottalization is evolving.

### 3.1 T-glottalization in Great Britain

Many investigators have conducted research on t-glottaling in Great Britain. Some of their most relevant work will be considered in this section. The first piece of work considered in this dissertation that comments on t-glottalization in Great Britain is Trudgill (1988), who carried out a research project in the area of Norwich. In this study, the author compares the new results to the ones from a previous study he carried out (Trudgill, 1974). However, it should be noticed that these studies were not carried out in recent years, which might render their results outdated, but they were considered relevant enough to be included in this dissertation. The results show that t-glottaling, in intervocalic and word-final position, had slightly increased in casual style speech in Norwich, while t-glottalization in formal style speech increased much more. The author's explanation on this situation is the following:

One reason for this must be that very little increase in glottal-stop usage in casual styles was possible simply because younger speakers were already employing close to 100% anyway. But the increase in formal styles tallies very well with a strong casual impression shared by many older people that younger people in many parts of Britain today no longer feel [ʔ] to be a stigmatised feature to be avoided in certain situations, as older people do. (Trudgill, 1988: 44)

Another piece of work to consider, which is more contemporary, is Fabricious' (2000) PhD thesis *T-glottaling Between Stigma and Prestige: a Sociolinguistic Study of Modern RP*. This study focuses on t-glottalization found in RP. More concretely, the focus falls on the production of glottal stops in word-final position by young speakers of RP belonging to the upper middle class, distinguished by sex. The participants in this study came from around the country, but they were categorized into three major groups: London, Home Counties and the rest of England, which included speakers from the South West, Midlands and North West. Other factors, such as parental origin, type of primary school and type of secondary school were also taken into consideration. The

participants were tested in two different speech styles: interview, considered more informal, and reading passage, considered more formal. The phonetic environment following t-glottalization was also analysed in order to consider different instances of its occurrence. The environments taken into consideration were “a word-initial Consonant, a word-initial Vowel, or a Pause” (Fabricious, 2000: 82). The consonants were further subdivided into three different groups: stops, fricatives, and liquids and semivowels.

The results of this study suggest that in interview style, glottal stops were produced in a similar way independently of the speaker's sex. However, t-glottalization occurred more frequently in pre-consonantal environments than in the others. Region played a huge role on the production of t-glottaling. While in pre-consonantal environments all three regions showed approximately the same tendencies, in pre-vocalic environments London showed a greater probability of producing glottal stops, followed by Home Counties and finally the rest of England. Lastly, in pre-pausal environments London and the Home Counties showed the same tendencies, while the rest of England produced far less glottal stops. Parental origin also showed an influence on t-glottalization. Speakers with foreign parents produced more glottal stops in a pre-vocalic and environment than those speakers whose parents were from England. Education showed no influence in the production of glottal stops. As for the reading passage style, it is observed that in pre-consonantal environments t-glottalization occurs at the same frequency as in interview style, but in pre-vocalic and pre-pausal environments t-glottalization is practically non-existent. Fabricious concludes that t-glottaling “may or may not proceed to become a prestige variant in upper-middle class speech; whether it does or not hinges on its acceptance and increased adoption by female speakers” (2000: 148).

Another important study about t-glottalization in RP is Badia's (2015) PhD thesis *A Sociolinguistic Study of T-glottaling in Young RP: Accent, Class and Education*. In her thesis, Badia explores this phenomenon in young speakers of RP belonging to different kinds of school, used to determine social class, while also analysing data from older subjects who studied in those same schools. While the previous study mentioned focused only on t-glottaling in word-final position, this one also considers this feature in word-medial position. The social and linguistic factors taken into consideration when analysing the subjects' data where t-glottalization occurred were “preceding and following phonological environment, style, grammatical category, stress, number of syllables and lexical frequency”, as well as “type of school, age and gender” (Badia, 2015: 12).

Results show that style highly impacted the production of glottal stops. T-glottalization appeared to be much more common in informal contexts than in formal ones. There was a minimal variation in sex, as males produced slightly more glottal stops than females, but it was concluded that this difference was not relevant enough. Age played an important role in the production of glottal stops word-finally, as young speakers of RP were more prone to use this feature than older speakers. Phonological environment also conditioned the production of glottal stops. Word-medially t-glottalization does not appear to make any progress. However, t-glottalization in word-final position appears to be on the increase, especially in pre-pausal and pre-vocalic position. Lastly, social class also impacted this feature, as the speakers “from the school with highest social profile (private boarding) are considerably resisting t-glottaling in both word-medial and word-final contexts” (Badia, 2015: 206). However, the other two

social classes considered in this study “show progression in the rates of t-glottaling, mainly word-finally” (Badia, 2015: 206).

However, there is more than RP in Great Britain. For instance, in Milroy et al. (1994), some research conducted about t-glottalization in the region of Tyneside is found. In this study, Milroy et al. considered findings from an ongoing (at the time) research project, which analysed data from 32 adults from the region of Newcastle, belonging both to working and middle class. People from both social classes were further sub-divided into younger adults and older adults. The data was “taken from peer-interaction sessions” (Milroy et al., 1994: 346). However, only one phonetic environment was taken into consideration: “word-final (t) in intervocalic word-final contexts” (Milroy et al., 1994: 348).

The results provide evidence for younger speakers being more prone to use t-glottalization than older speakers, whose production of t-glottaling is virtually non-existent. Furthermore, in the younger group more contrasting results are found. The working and middle classes show a different tendency in using t-glottalization, the latter being the one using this feature more frequently. Males and females also show different tendencies, again being the latter the group more prone to produce t-glottaling. It is also stated in the study that the most relevant factors influencing the production of t-glottalization are age, class and gender, in that order. Therefore, although t-glottalization might be found in all groups analysed, it is the young, middle-class females who produce it the most.



### 3.2 T-glottalization in North America

It is a fact that literature on American t-glottalization is scarce. The reason behind researchers focusing on this feature in Britain rather than in North America is unknown, but one plausible explanation is not acknowledging it as a relevant feature in American speech. However, even if this phenomenon is not researched as much in North American dialects as in British dialects, its presence in North America is undeniable.

Wells was one of the first researchers to acknowledge this feature in North America: “I know of no systematic investigation of Preglottalization and Glottaling in American speech; but T Glottaling is clearly to be observed in the speech of some Americans” (1982: 261). Wells also identified this feature in some North American dialects, such as New York speech and Southern speech. He observed that glottal realizations of /t/ in New York were much more usual than in General American “in a wider range of syllable-final environments” (Wells, 1982: 515), especially among lower-class New Yorkers. In the South, Wells observed a glottal realization of /t/ “not only between nasals, or before a nasal within a word (as commonly in GenAm) but also before a nasal across a word boundary” (1982: 553). Nonetheless, Wells did not carry an in-depth study in those areas, so the only acknowledgement possible is the presence of t-glottalization, instead of the frequency of use over time and social and linguistic factors influencing its occurrence.

There are more recent studies which take into account some of the factors Wells omitted. One of these studies is the one by Roberts (2006), which focuses on t-glottalization in the region of Vermont, whose inhabitants belong mostly to the working class. In her study, participants ranged from 3 to 80 years old participated in interview sessions in order to gather data. The factors addressed when analysing the data were t-

glottalization found word-medially or word-finally, the position of the glottal realization within the word, the preceding and following segment, and the age and sex of the speakers.

Results showed that the position of the glottal stop within a word (word-medially or word-finally) did not influence the occurrence of t-glottalization, as they occur practically with the same frequency. However, the general feeling towards t-glottalization is that it is much more likely to occur in word-final position. The author provides a plausible explanation for this, by stating that “word-medial /t/ occurs less often than word-final /t/”, so “given that /t/ appears to occur so much more often in the final position, it is not surprising that glottalization seems so much more frequent there” (Roberts, 2006: 238). In addition to that, word-medial t-glottalization in Vermont can occur in a more limited number of environments, unlike in British English. The analysis of the preceding environment provides evidence for t-glottaling being more frequent in a post-vocalic environment. On the other hand, the analysis of the following environment proved that a pre-pausal environment was the most favourable for t-glottalization to occur. Age and sex were also proved to influence the occurrence of glottal stops. Males were more prone to produce glottal stops than females, and the adolescents were the ones who produced it the most. Thus, as it is a quite common feature among teenagers, the author reasonably assumed that this phenomenon is on the increase in Vermont.

Another research project interested in t-glottalization in American English is Eddington and Taylor's work (2009). This study focuses primarily on t-glottaling in pre-vocalic position word-finally, produced by speakers from the United States. Prior to reviewing the study, it is interesting to consider the following authors' statement: “While

many varieties of English, including those spoken in the United States, have glottal stops before other consonants (e.g., *Ba[ʔ]man*, *ou[ʔ] put*), the idea that glottals are nonexistent in American speech may come from the abundance of glottals in British English pre-vocally (e.g., *be[ʔ]er pu[ʔ] a lo[ʔ] of*), where American varieties tend to have a flap” (Eddington & Taylor, 2009: 298), in which the authors provide a possible explanation for the general feeling towards t-glottaling in North America. Now, returning to the study, the participants were aged from 19 to 49 years old, and the proportions between males and females and age difference were balanced. The participants were also separated into Utahns, Westerners and non-Westerners. The test was conducted using a shadowing technique, so it was carried out in a controlled environment, without spontaneous speech influencing the results.

The results show that a front-vowel environment favours more the production of glottal stops than a back-vowel environment. However, the authors state that these results might not be reliable enough, as the samples analysed were really limited and controlled. Another finding is the difference in use of t-glottaling between age groups and sex. Younger people showed a higher tendency to produce glottal stops, as well as females in opposition to males. Lastly, it was discovered that the occurrence of t-glottalization is more frequent in the Western states than in the non-Western ones.

There are other studies such as Byrd (1994), which analyses the frequency in which glottal stops are produced, taking into account the sex and region of origin of the speaker. The data analysed shows that females had a tendency to produce more glottal stops than males, and that people from the North and South had a higher rate of production of glottal stops than people from the North Midland, who produced less. However, what must be considered is that her study does not comment on the phonemes

the glottal stops refer to, or the distinction between pre-glottalization and glottal replacement. So, even if her study provides interesting data, it is not relevant enough to be considered in this dissertation.

#### **4. Discussion of the literature**

Now that some literature has been presented, it will be analysed and compared in an attempt to solve the questions proposed in the introduction of this paper. It would be pointless to focus only on the linguistic factors that influence t-glottalization leaving out the social ones, as they are strongly interrelated. Thus, both factors will be taken into account, if possible, when analysing the data.

The first factor that will be dealt with is *region*. It is important to deal with this factor in the first place, as the main concern of this dissertation is the evolution of t-glottalization in different regions. It is already well known that the production of t-glottalization is highly influenced by sociolinguistic factors, which of course include the region of origin of the speakers. Eddington & Taylor (2009) and Wells (1982) showed evidence for different rates of production in different regions of North America. However, their studies did not focus on *region* in isolation. It is with Fabricious (2000) that it can be observed that this feature is produced differently and with different frequency depending on the region of origin of the speakers, considering that all participants in the study spoke the same dialect, and belonged to the same age range and social class. Therefore, it could be concluded that *region* alone is influential enough to perceive variation in the production of glottal stops.

The next factor to consider is the position of the glottal stop within a word. It is difficult to properly analyse this factor as only two studies of all the research projects

presented considered both word-medial and word-final positions. Badia (2015) proved that in RP, word-medial t-glottaling did not show any progress, but word-final t-glottaling was on the increase. On the other hand, Roberts (2006) showed evidence for t-glottalization occurring with the same frequency independently of the position of the glottal stop within a word in Vermont. It would be too audacious to consider these two studies as solid representations of this factor in their respective continents. Thus, the different results these studies show should be considered, but they do not provide enough evidence to provide a solid conclusion. Therefore, more research should be carried out, especially considering word-medial t-glottalization, in order to properly take into account this factor.

Another important linguistic factor that should be regarded is *phonetic environment*. This factor can be further sub-divided into *preceding environment* and *following environment*. As there is not enough data to consider t-glottalization in word-medial position, the focus here will fall on t-glottalization in word-final position exclusively. Fabricious' (2000) work provides evidence for pre-consonantal environments favouring t-glottalization in RP. Pre-vocalic and pre-pausal environments were less favourable and highly influenced by the region of origin of the speakers. Badia (2015) found that in that same dialect and fifteen years later, in the less favourable environments for t-glottalization, which are pre-pausal and pre-vocalic, the rate of occurrence is increasing. Milroy et al. (1994) suggest that their results indicate an increase in the production of glottal stops in intervocalic, word-final contexts. The same goes for Trudgill (1988), who observes that in Norwich, t-glottaling is on the increase in the same context. Roberts (2006) provided evidence for t-glottalization in Vermont being more prone to occur in post-vocalic and pre-pausal environments. Lastly,

Eddington & Taylor (2009) observe that in a pre-vocalic environment front-vowels might favour more t-glottalization, although there is not enough data to have reliable evidence of this. What is more, this feature seems to be on the increase in this environment in the United States. Thus, it can be observed that t-glottalization is increasing in some phonetic environments, but the studies do not show any decrease in any of the phonetic environments observed. However, the majority of studies focus only on one environment. The only conclusion that the literature allows is that in Vermont t-glottaling is favoured the most by a pre-pausal environment, whereas in RP the most favourable environment is pre-consonantal, but here again, only one study is not enough to represent a whole region such as North America or Great Britain. To be able to compare optimally the phonetic environments observed in both regions, further research needs to be carried out.

Social factors are also important when evaluating the situation of t-glottalization, such as *age* and *sex*. There are contrastive findings about sex. Fabricious (2000) and Badia (2015) findings suggest that sex is not relevant in the production of glottal stops in RP. Milroy et al. (1994), on the other hand, defend that females have more tendency to use t-glottaling. As for North America, Roberts (2006) observes that t-glottalization is favoured by male speakers. Eddington and Taylor (2009), however, found that females are the ones producing more glottal stops. As it can be observed, there is no pattern in either of the two regions, so it could be argued that the influence of sex might vary depending on the region of origin of the speaker. As for age, it is possibly the most influential social factor regarding t-glottalization. All of the studies analysed in this dissertation that considered age concluded that younger speakers produce more glottal stops than older speakers. Thus, it is reasonable to argue that t-glottalization is on the

increase in English, independently of the geographical location. Furthermore, returning to the topic of variationist sociolinguistics, this tendency of younger speakers to produce glottal stops more frequently than older speakers might indicate how this phenomenon evolves over time. As t-glottalization is produced differently among speakers of different age groups, the interpretations that better explain the nature of this feature are *age-grading*, *apparent time* and *lifespan change*. To fully understand which interpretation better explains the evolution of t-glottalization, research that takes into account data from many generations needs to be conducted, to observe in what way this feature truly evolves.

*Social class* should also be regarded when considering the evolution of t-glottalization. There are only two research projects which consider different social classes in their investigations. The first one is Badia (2015), which provides evidence for the upper classes resisting the production of glottal stops, mostly in formal style, contrary to the upper-middle classes which show a progression in the use of t-glottaling. The other one is Milroy et al. (1994), which observes that t-glottalization is more likely to occur among middle class speakers, rather than among people from the working class. These two studies provide data, although scarce, on the influence social classes have in t-glottalization, at least in Great Britain. It can be observed that social class has a tendency to favour t-glottalization the closer the speakers are to the middle classes. On the other hand, there are no valid comparisons about social classes in North America in any of the literature reviewed in this dissertation, so it is impossible to reach any conclusions about social class in this region.

The last factor that will be addressed is *style*. This factor is only analysed in dialects from Great Britain, so there is no information about it in North America.

Therefore, doing a comparison is not an option. Trudgill (1988) acknowledges different patterns of use depending on the style. He argues that glottal stops are abundant informally, but there has been an increase in the rate of use in formal contexts, where it was less common. However, as it has been stated previously, Trudgill's work might be outdated as many years have passed since it was carried out. Fabricious (2000) and Badia (2015) argue that t-glottaling in informal style is much more frequent than t-glottaling in formal style. However, Badia (2015) goes further, observing that there is progression in the use of t-glottalization in formal style. Thus, the tendency observed by Trudgill was confirmed by Badia in her recent work. Nonetheless, as there is a huge time gap between these works, they might not be entirely comparable, as both studies analysed this feature at different points in time.

## **5. Conclusion**

T-glottalization is a phenomenon which is still evolving in many English speaking communities. However, it does not behave equally everywhere. There are still many questions that need to be answered in order to fully comprehend this feature. The origins of t-glottalization in English are still unclear, although there are several options considered by researchers, but empirical evidence to prove its real origin is yet to be found. Some of the most relevant literature about t-glottaling, both in North America and Great Britain, has revealed interesting information about how native speakers of English use glottal stops for the /t/ phoneme. However, as researchers use different approaches when investigating t-glottalization, there is much variation in what is considered from one study to another. Thus, it is not an easy task to draw a conclusion from the literature analysed. With research projects using such a variety of methods, participants prototypes and other factors taken into account, producing a fully reliable



comparison between the studies presented in this dissertation is too challenging. It should also be considered that t-glottalization is still evolving, so the studies, especially the ones which are from the 80s and 90s, might not reflect the current state of this feature in the regions analysed. Additionally, it should be noted that the current situation really hindered the access to most resources, so the data provided could have been more complete if the situation had allowed it.

Finally, this dissertation argues that much more research needs to be conducted in order to answer most of the questions proposed in this dissertation. However, what is clear is that t-glottalization in English will not disappear any time soon. It is a feature on the increase in most of the regions and dialects analysed in this paper, perpetuated by young speakers. Hence, future generations will ensure this phenomenon is kept alive until more research is conducted in order to unveil the enigmas this feature holds.

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