

THE GLOTTAL STOP IN ENGLISH AS VIEWED AGAINST ITS GERMANIC BACKGROUND

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A most stimulating discussion of the glottal stop in English RP by Paul Christophersen¹ and J. D. O'Connor² threw into relief so many important facts that a student of English phonetics can now try to compare the stop with analogous phenomena in kindred languages. This article is an attempt to revise the data supplied by phoneticians and to offer an accentual hypothesis of the nature and origin of the glottal stop in English. It will be seen that my conclusions do not pretend to be original: in my analysis I shall rely mostly on the Scandinavian data, and it is common knowledge that Danish linguists have long since brought out the affinity between the glottal stop in English and the *stød* in literary Danish (*ringsdansk*) and Danish dialects.

a) Phonetic realization of the glottal stop

'Glottal stop' is a convenient term. But it is well known that two distinct phenomena are brought under this denomination, for the glottal stop is not necessarily a *stop*. Phonetically, we deal with two different sounds, one of them being occlusive, the other constrictive. In the first case the vocal cords are brought into contact, and an actual stop is produced; after a short period of silence, the pressure is released, and the cords are separated. In the case of the constrictive sound there is no total closure of the vocal cords³. The peculiar acoustic effect of the constrictive sound well justifies the terms 'glottal roll' (as contrary to 'glottal stop' or 'glottal catch') and 'creaky voice', both of which are often used to characterize it.

¹ P. Christophersen, *The Glottal Stop in English*. "English Studies", 1952, vol. XXIII, pp. 156—163.

² J. D. O'Connor, *RP and the Reinforcing Glottal Stop*. "English Studies", 1952, vol. XXIII, pp. 214—218.

³ A. C. Gimson, *An Introduction to the Pronunciation of English*. London 1962, p. 162.

'Creaky voice' is associated with weaker intensity than the stop⁴. According to Gimson, the stop is often followed by a strong aspiration⁵.

b) Distribution

The moment we touch on the distribution of the glottal stop in English RP we find ourselves on shaky ground, and mainly for two reasons.

Firstly, there does not exist a comprehensive description of phonetic positions in which the glottal stop occurs or, at least, may occur. Secondly, when these positions are discussed, no distinction is usually made between the glottal stop and the glottal roll. As a rule, only the glottal stop is mentioned, so that when we are told that in some words there occurs the stop, it may be the stop, the roll, or both. This is, for example, what Christophersen says, "I do not by my remarks mean to imply anything as to the precise nature of the glottal stop or 'catch', or even whether the stop or catch is produced at the glottis itself or perhaps at the false vocal chords. What I do mean is that in certain well-defined cases it is possible to hear a distinct crack in the voice, a ceasing of the vowel sound before the consonant sets in"⁶. A possible confusion of the glottal stop and the glottal roll seems quite harmless, but, as we shall see, it is no longer so innocuous when we leave the domain of English and set foot on the Germanic ground.

The glottal stop in English is used in the following positions: before (or instead of) the plosives /p t k/ (as in *leap, up, not, cake*, etc), before the affricate /tʃ/ (or instead of its plosive phase), before the fricatives /f s θ/, before the resonants /l n/ followed by /p t k tʃ f s θ/ (as in *help, silk, plant, golf, else, filth*, etc). It is very common before /t/ and is of rare occurrence before /f s θ/ (especially before /θ/). It sometimes replaces the plosive it precedes, but /t/ is probably the only sound which regularly falls victim to the reinforcing influence of the glottal stop⁷.

The rules for the distribution of the glottal stop in English can be culled from several sources, but the authors concerning themselves with the occurrence of the stop are far from being unanimous in their views. Thus, Daniel Jones, as late in 1948, wrote that /t/, when word-final, can be often

⁴ Ibidem.

⁵ Ibidem.

⁶ P. Christophersen, op. cit., p. 156.— Cp. K. Ringgaard, *Vestjysk Stød*. Aarhus 1960, p. 112, where the author quotes Christophersen's private letter to him.

⁷ Cp. D. Jones, *An Outline of English Phonetics*. 6th ed. Cambridge 1948, § 555. Note 16; Y. Lebrun, *Phonemics and Lexicon*. "Proceedings of the Fifth International Congress of Phonetic Sciences". Münster 1964. p. 384.

replaced by the glottal stop, but in educated speech this happens only if /t/ is followed by /m n r j w/. MacCarthy adds /l/ to this list but does not mention /j/. Ida Ward, who was among the first to give a rather detailed description of the English glottal stop, heard many London speakers inserting it in the words *popular* and *reckless*¹⁰, i. e. not only before /t/.

The rules formulated for the distribution of the glottal stop usually take into account only the consonant that follows the stop, but a perusal of Christophersen's and O'Connor's papers reveals the existence of several other important factors which may or may not be equally important for the majority of RP speakers but which are definitely felt to exist. I shall deal separately with each of these factors, following mainly Christophersen's discussion.

A. Stress. It seems to be taken for granted that the glottal stop occurs only in stressed syllables. I have never come across a transcription of an English word having glottal stop in an unstressed syllable. O'Connor writes that Danish students could not pronounce unstressed syllables containing the glottal stop¹¹, but it is not clear to me when it may be necessary to pronounce such syllables.

B. Intonation. Christophersen posits that the stop is only possible with level or falling intonation. But O'Connor could not detect any link between the glottal stop and speech melody¹² (but see below!).

C. Vowel quantity. Christophersen claims that the glottal stop is more regular after long vowels and closing diphthongs than after short vowels. But O'Connor's use of the glottal stop is in no way influenced by vowel-length¹³.

D. Relative position in the word. Consonants are never reinforced when word-initial. Perhaps the glottal stop is especially common when word-final.

E. Syllable structure. Syllable structure seems to be of great importance for the glottal stop. O'Connor thinks¹⁴ that the glottal stop before /tʃ/ marks the syllable boundary: if /tʃ/ belongs to a preceding vowel, the stop always

⁸ D. Jones, loc. cit.

⁹ P. A. D. MacCarthy, *English Pronunciation*. Cambridge 1944, p. 115.

¹⁰ I. C. Ward, *The Phonetics of English*. Cambridge 1929, p. 119.—For a summary of views on the glottal stop in English see K. Ringgaard, op. cit., pp. 111—113.

¹¹ J. D. O'Connor, op. cit., p. 218.

¹² P. Christophersen, op. cit., § 1. J. D. O'Connor, op. cit., p. 215.

¹³ P. Christophersen, op. cit., § 21. J. D. O'Connor, op. cit., p. 215.

¹⁴ J. D. O'Connor, op. cit., p. 217.

occurs, whilst in other cases it is absent. The rules for /p t k/ are more complex, but O'Connor believes that they will not be quite dissimilar to those governing the use of the stop before /tʃ/. Furthermore, we observe a regularity in the occurrence of the glottal stop before /p t k/ followed by /l n/: the glottal stop is never used before /pl tl kl/, if the /l/ is syllabic (as in *people, mortal, cycle*) and very seldom before /n/ in similar conditions, but if /pl tl kl/ are heterosyllabic, the glottal stop is often used (as in *Faulkner, fortnight*, and the like)¹⁵.

F. The glottal stop in compounds and derivatives¹⁶. The occurrence and non-occurrence of the glottal stop is in some vague way connected with whether a word is a derivative (resp. a compound) or not. Broadly speaking, the problem consists in whether a word having a glottal stop, when used separately, retains its stop when it forms part of a derivative or a compound. These are the tentative rules as they are set out by Christophersen.

I After a long vowel: 1) when the element under consideration is the last syllable of a compound or a derivative and has primary or secondary stress, it always retains the glottal stop (as in *bypath, landmark, incomplete*); 2) when the element under consideration is the first syllable of a compound and has primary or secondary stress, it usually retains the glottal stop as well (cp. *leap-frog, peat-bog, porthole*, etc.), but when the word entering into a compound ends in a fricative, it often loses its glottal stop (as in *bathroom* and the like); 3) if a word has a glottal stop, it retains its reinforcement when it forms part of a derivative (cp. *cheaply, shapeless, reproachful*, etc), but when the derivative ending begins with a vowel or consists of a syllabic consonant, there is normally no stop before /p t k/ (cp. *streaky, sharper, artist, weaken, fatal*); before /tʃ/ there is some vacillation: in *peachy, preacher, departure* "the stop is probably used more often than not"; as well as in compounds, the stop is not used in derivatives whose root ends in a fricative (cp. *pathless, fourthly*, etc.).

II After a short vowel. The rules for the occurrence of the glottal stop after a short vowel are outlined very briefly by Christophersen. He maintains that the glottal stop is in general comparatively rare after a short vowel. There seems to be only one serious point of difference between de-

¹⁵ P. Christophersen, op. cit., §§ 14—16. B. S. André sen, The Glottal Stop in the Received Pronunciation of English. An attempt at an acoustic analysis of the sequences *-tl-*, *-tr-*, *-tn-*, *-tj-*, and *-tw-*. "Universitetet i Bergen. Arbok 1958. Historisk-antikvarisk rekke", N 5.

¹⁶ P. Christophersen, op. cit., §§ 8—11, 23—24. Cp. J. D. O'Connor, op. cit., p. 215.

rivatives and compounds according as their basic element contains a short or a long vowel. Christophersen writes, "In the first element of compounds, derivatives and other polysyllabic words the glottal stop is seldom if ever heard after a short vowel. Many people who use the stop more or less regularly in *hot* and *attach* would not use it in *hotly* and *attachment*" But this view is found unacceptable by O'Connor who believes that RP speakers using glottal stop in *partly* and *beachwood* will use it in *hotly* and *hitch-hike* too (for references see Note 16).

Before I go on to the phonemic and historical interpretation of the glottal stop, I should like to dwell shortly on its use in Cockney. In all probability, the glottal stop is realized in a similar way in whichever part of the country it occurs. At least, in Cockney it does not seem to differ much from the reinforcing stop in RP. I shall confine myself to quoting J. Franklyn's unprofessional but quite disarming description, "In the cockney dialect this closure of the glottis falls on the final *t*, and much more heavily on the internal *t* which it both distorts and mutes. It affects other letters [sic! — *A. L.*] as well, but with far less annihilating efficiency. The stop can be either single or duplicated. "Bri'ish" for "British" is a simple glottal stop, but the word "butter" is pronounced by the Cockney with two glottal stops. [...] Infants seem to apply the glottal stop technique to the termination of some of the more penetrating sounds they emit before they can speak; hence, the contortion, though indescribable, must be simple in execution — natural. All Cockney sometimes, and some Cockney always, when coming alongside the glottal stop cast fenders over the side, and by reducing the impact convert the *t* to a *d*. "Droppa warder, bidda budder, sloisa mudden" (drop of water, bit of butter, slice of mutton)"¹⁷.

A most careful study by E. Sivertsen¹⁸ gives us a very good idea of the distribution of the glottal stop in Cockney. By and large, Sivertsen points out the familiar positions, laying special emphasis on words ending in /t/. She adds only one unexpected detail: the glottal stop in Cockney, though used mostly before (or instead) of /p t k/ can also occur before voiced sounds (in *big, could, did, need, should, would, garden, bread* and

¹⁷ J. Franklyn, *The Cockney. A Survey of London Life and Language*. Worcester and London, 1953, pp. 242—243.

¹⁸ E. Sivertsen, *Cocney Phonology*. "Oslo Studies in English", No. VIII, 1960, pp. 112 ff, 207—208.

even in *give*). I believe that the position before voiced consonants, singled out by Siversten, is, in a way, unique for the occurrence of the glottal stop in English.

c) The phonological function of the glottal stop

However difficult it might be to give a correct estimate of the function performed by the glottal stop in English, one thing seems quite obvious: neither in RP, nor in the dialects can the glottal stop ever differentiate meaning and is everywhere an irrelevant element of the sound system. This conclusion must be borne in mind in our further discussion of the glottal stop.

As stated above, O'Connor regards the glottal stop preceding /tʃ/ as a phonetic marker of syllable structure on the phonological level (glottal reinforcement marks /tʃ/ as adhering syllabically to a preceding vowel, and the lack of reinforcement, in cases of phonological indeterminacy of syllable boundaries, marks /tʃ/ as adhering syllabically to a following vowel). O'Connor's observation is very important, but even if we admit that syllable structure is part of the phonological system of expression, the glottal stop will still remain only an ancillary means of marking the syllable boundary. The syllable boundary in the word *Richard* will go across (or after) the affricate independently of whether the word is pronounced [ˈrɪtʃəd] or [ˈrɪʔtʃəd]. Similarly, the syllable boundary in *reaching* (according to O'Connor, reach-ing) does not in any way depend on the glottal stop.

Another phonological interpretation of the glottal stop has been put forward by Sivertsen, who based her conclusions on Cockney pronunciation. She analyses the medial glottal stop as an allophone of /t/, because [ʔ] and [t] alternate especially often. But since this is not the only possible alternation, she discusses the question whether one could not consider [ʔ] an allophone of several consonants (of /t/, of /p/, of /k/, of /d/, etc). She is naturally averse to assigning [ʔ] to several phonemes *in the same type of phonetic context* and prefers to deal with /t/ alone. This is of course an arbitrary solution, and Sivertsen realizes it quite well. She says that [ˈbʌtʃ] and [ˈbʌʔtʃ] can be easily represented as two allomorphs of *but-ton*, but /pɛjtə/ will be hardly taken for an allomorph of *paper*.

A comparison of the views advanced by O'Connor and Sivertsen brings out a curious detail: not only is there a diversity of opinion on the nature of the glottal stop (this would be a normal thing indeed), but the two scholars differ as to *what level* the glottal stop ought to be assigned to: if it is a marker of syllable structure, it is obviously a prosodic ("supra-

segmental") feature, but if it is an allophone of /t/ (or of any other consonant), it belongs to the lower level, that of phonemes. We are confronted here by a typical difficulty. Glottal stops and aspirations, especially if they are positionally bound and occur only between a vowel (V) and a consonant (C), allow almost a dozen interpretations. In the combination [V'C] the glottal stop (or aspiration) may be:

I 1) a distinctive feature of /V/, 2) a distinctive feature of /C/ (the level of distinctive features), II 3) an allophone of some phoneme (the subphonemic level), III 4) a special phoneme (a vowel or a consonant), 5) a glide of the monophonemic "diphthong" /V', 6) the first phase of the monophonemic "affricate" /Cj (the phonemic level), IV 7) a sort of medial juncture, 8) a dynamic accent, 9) a prosodic syllable-lengthener, 10) a tone-marker (the prosodic level). But a phonologist seldom realizes how numerous the variants are he must choose from. As a rule he discusses some simple alternative: a phoneme or a distinctive feature? a phoneme or a dynamic accent? etc. But the solutions enumerated above presuppose *the phonological relevancy* of the unit transcribed as ['], and none of them can be applied to the English phenomenon by definition. The glottal stop in English is functionally redundant and is part of usage, not of the system.

The real difficulty lies in the phonological history of the glottal stop, not in its present-day status. Since it is a redundant element, we must trace whether the glottal stop has not yet achieved relevancy or already lost it. But even a preliminary answer to such questions requires a comparison of the glottal stop in English with similar phenomena in related languages.

d) The Germanic background of the glottal stop

The well-known Scandinavian analogue of the English glottal stop is the Danish stød. The word stød (Germ. Stoß) means 'push', but English phoneticians have not developed an adequate translation for this term and render it as 'glottal stop'. Contrary to the much-neglected glottal stop in English, the numerous varieties of the Danish stød have been examined high and low and roundabout. The stød in its full form is a three-phase accent (reinforcement) containing even movement of the amplitude, braking, and rebound (release)¹⁹.

¹⁹ S v. S m i t h, Bidrag til løsning af problemer vedrørende stødet i dansk rigssprog. En eksperimentalfonetisk studie. København 1944.

Sometimes the *stød* only has two phases: the first and the second. The *stød* may be either occlusive or constrictive; the latter is associated with 'creaky voice'. Auditively the Danish *stød* is very much like the glottal stop in English RP and in English dialects²⁰. But the *stød* is a relevant element of the Danish sound system (which, of course, is the reason why it has been at all times accorded such a very prominent place in Danish phonetics).

The *stød* is a full-fledged syllable accent: there may be a syllable with a *stød* (e. g. *hund* [hun'] 'dog') and an identical *stød*less syllable (e. g. *hun* [hun] 'she'). The rules for the distribution of the *stød* are very complex and vary considerably from dialect to dialect (if not indeed from village to village), and I shall mention only the few basic ones.

1) In literary Danish the *stød* occurs on a long vowel, a diphthong, or on a combination of a short vowel with a resonant (cp. *by* [by'] 'town', *vej* [vai] 'way', *fuld* [ful'] 'full'). The *stød* is, on the whole, an accent of monosyllabic words. Words containing more than one syllable, as a very general rule, have no *stød* (cp. *hus* [hu:s] 'house' — *huse* ['hu:sə] 'houses'; NB! in transcription vowel-length in words having *stød* is not marked: [by'], [hu:s] instead of [by:], [hu:s:]. The most conspicuous exception to the afore-mentioned rule is the words ending in resonants: *skriver* '(he)writes' and *hunden* 'the dog', for example, are disyllabic but have *stød*. Other exceptions won't concern us here.

(2) In a small area of Jutland the *stød* occurs in monosyllabic words just as in literary Danish, though it is not used in *hjørt* 'deer, hart', *hals* 'neck' and the like, where the resonant is followed by a voiceless plosive. But it also occurs in disyllabics and in apocopated words (i. e. in words which go back to disyllabics), if the root vowel is short and is followed by a voiceless consonant or a resonant+ a voiceless consonant. Practically, in West Jutland there are two distributional varieties of the *stød*: a long-vocalic *stød* before voiced consonants in monosyllabic words and a short-vocalic *stød* before voiceless consonants in disyllabic or apocopated words. Danish dialectologists refer to the first variety of the *stød* as the Common Danish (CD) *stød* and to the second as the West Jutland (WJ) *stød*. The question arises

²⁰ Assertions to this effect are numerous. Cp. O. Jespersen, *Mødermålets Fonetik*. København 1897—1899, p. 615; Ringgaard, op. cit., p. 111; H. A. Koefoed, *Teach Yourself Danish*. London 1961, § 31, Note.

whether the two støds are actually two different accents or whether in West Jutland the usual stød has simply a much wider distribution than elsewhere.

It has been mentioned that in literary Danish the stød may have either three or two phases. S. D. Katsnelson calls the two varieties two-peaked and one-peaked respectively²¹. He also maintains that in West Jutland the long-vocalic (i. e. CD) stød is one-peaked, whilst the peculiar short-vocalic (i. e. WJ) stød is two-peaked²². K. Ringgaard, the greatest authority in the field, found that the CD stød in West Jutland is pronounced just as in literary Danish, and so it is presumably constrictive in most of the cases. The WJ stød in West Jutland is occlusive²³. Now, O'Connor says that there is a "common English habit of ending a falling tone in creaky voice (glottal roll) particularly with long vowels and diphthongs"²⁴. It turns out that we find the glottal roll on long vowels both in the West Jutland dialect and in English. But in West Jutland short vowels followed by /p t k/ are the locus of a constrictive stød. In English, reinforcement before /p t k/ is possible both on historically long and on historically short vowels. It is not clear whether this reinforcement is always occlusive. Perhaps O'Connor intimates that creaky voice is only possible as the final phase of long vowels and diphthongs. If it is really so, there is some similarity in the WJ and the English occurrence not only of the occlusive reinforcement, but of its constrictive counterpart too (as regards the type of consonant following the constrictive stød).

The two varieties of the stød in West Jutland are distinguished by Katsnelson as one-peaked (CD) and two-peaked (WJ). Does it follow that the English glottal stop and glottal roll may be also differentiated in a similar way? The answer to this question will naturally come as a result of instrumental investigations, but we should not be too hopeful of very definite results. As a matter of fact, the reasons claiming a clear-cut *phonetic* differentiation between the two støds even in West Jutland are rather tenuous.

In Katsnelson's assumption, apocope was historically caused by a two-peaked accent. The view advocated by Katsnelson was first advanced

²¹ С. Д. Кацнельсон, Сравнительная акцентуация германских языков. М. Л. 1966, p. 118. (See our retelling of Katsnelson's "A Comparative Germanic Accentology" in: Acta Linguistica, vol. XII, 1969, N 1, pp. 121—144).

²² Ibidem, pp. 188—189.

²³ K. Ringgaard, op. cit., pp. 72,78.

²⁴ J. D. O'Connor, op. cit., p. 215, Note 6.

and brilliantly developed by Th. Frings. The WJ *stød* is the accent of apocoped words and there is thus excellent ground to trace it to a two-peaked accent. But the WJ *stød*, as it occurs in present-day Danish vernaculars, does not reveal two distinct peaks; it is usually a very weak accent (even weaker than the CD *stød*), rather unstable in its occurrence²⁵. At best we can say that the WJ *stød* goes back to a two-peaked *stød*, and it is not unlikely that the glottal stop in English has a similar history, even though an analysis of its phonetic realization will not yield quite unambiguous results. But the only purpose of the foregoing discussion was not to offer bold hypotheses but to stress a deeper auditive similarity between the English and the Danish phenomena than it is usually done in English phonetics and to single out some distributional peculiarities of the Danish *stød* (or *støds*) which will allow us to proceed with our investigation.

I am now turning to the Germanic background of the glottal stop in English as regards its distribution. Above, following Christophersen, I mentioned six factors which determine the occurrence of the glottal stop. In my very brief survey of the distribution of Germanic syllable accents I shall again use as a framework the rules offered by Christophersen.

A. Stress. An ideal syllable accent must be able to fall on any syllable, independently of word stress. But none of the Germanic syllable accents satisfies this condition. In all Scandinavian languages and in the Rhein dialects of German, syllable accents (accent 1 and accent 2 in Swedish and Norwegian, *stød* and no-*stød* in Danish, preaspiration and its absence in Icelandic and Faroese, *Schärfung* and extension in the Rhein dialects) are only allowed to contrast in stressed syllables. Presumably, it is a result of a long process of degeneration of the once complicated accentual system.

B. Intonation. This is one of the most difficult questions in Germanic, especially Scandinavian, accentology. The Swedish and Norwegian accent 1 and accent 2 are "tones" as much as "accents", and it is a matter of constant dispute whether the relevant distinction between them is dynamic or musical. The dynamic curve of the Danish *stød* is not quite independent of musical concomitants either, but whether the *stød* usually goes with a falling tone or with a rising tone is not quite clear.

²⁵ See especially: B. J. Nielsen, *Et Bjerreherredsmål*. "Udvalg for Folkemaals Publikationer". Serie A. Nr 23. København 1968, pp. 29—35.

C. Vowel-quantity. As stated above, the occurrence of the Danish *stød* is intimately connected with vowel-length. In the Rhein region the *stød*-like syllable accent known as *Schärfung* (or *correction*) also depends on the duration of the root vowel.

D. Relative position in the word. In none of the Germanic languages reinforcement occurs word-initially. On the other hand, Scandinavian dialects give evidence of how an accent, when losing its functional yield, becomes relegated to some special position. Phrase-final position turns out to be very well suited for this purpose.

E. Syllable structure. The English words in *-l*, *-n* form part of an important group of Germanic words ending in resonants. The presence of a resonant almost always influences the choice of an accent (cp. what is said above about the Danish words *skriver* and *hunden*).

F. Syllable accents in compounds and derivatives. Indo-European accentologists are well aware of the phenomenon usually referred to as *metatony*. *Metatony* means that a word having some accent ("tone") changes it under certain circumstances into the opposite one. Thus, a word having an acute accent (i. e. a *stød*) may acquire a grave accent when becoming part of a compound or a derivative. *Metatony* of this kind is widespread in Scandinavian languages (especially in Danish) and in the Rhine dialects.

To sum up. All the distributional criteria mentioned by Christophersen are those also determining the use of syllable accents in other Germanic languages and dialects. It is certain that in English there are no hard and fast rules for the occurrence of the glottal stop; the very existence of the irrelevant glottal stop as a universal feature of English usage is open to doubt (cp. the characteristic question whether a student ought to take cognizance of it or not). It is a very evasive entity, more evasive than any one of the Scandinavian accents, and it will be a very difficult task to piece together the numerous instances of its use and to detect the main tendency underlying its occurrence. But one thing seems rather obvious. The glottal stop in English is related to the syllable accents of the *stød* type. This conclusion follows from an auditive and distributional comparison of the English phenomena with the acute accents outside English.

e) Hints on the history of the glottal stop

The authors writing on the origin of syllable accents very often believe that the greatest difficulty lies in the physiological aspect of the problem, i. e. in the rise of some glottal sounds. But it is hardly possible to answer just how the closure of vocal cords came to play a part in human

communication or even in a particular language. The real problem lies elsewhere. The glottal stop is a *stød*-like formation and consequently part of at least one opposition (*stød* vs. *no-stød*). In present-day English this opposition does not serve any semantic purposes, but, according to Katsnelson, Germanic syllable accentuation is traceable to a very remote past. Given this reconstruction, the glottal stop and the glottal roll in English turn out to be relics of an ancient prosodic system which can be no longer observed in its integrity²⁶. It will be perhaps better to say that they are ghosts of such relics, because they are devoid of the word-differentiating function.

There are two keys to the lost system of accents: (1) their present-day distribution (if something has come down to us intact) and (2) the traces they left in the system of phonemes. The second point can be well illustrated by W. Matthews' data. Matthews²⁷ believes that such sixteenth- and seventeenth-century spellings as *woostreet*, *Statutes*, *ffleestreete*, *Lighfoots*, etc. instead of *Wood Street*, *Statutes*, *Fleet Street*, *Lightfoots* reflect the loss of dentals under the influence of the glottal stop (cp. such modern pronunciations as *kep'*, *Lor'*, *gen'leman*, *breckjus'* instead of *kept*, *Lord*, *gentleman*, *breakfast*). This is a very probable hypothesis and, incidentally, it shows the way to others of the same kind. But these hypotheses may always degenerate into mere guess-work, if we do not know just where to look for the reliable traces of syllable accents. Germanic accentology gives ample evidence of how vowels changed their quantity and became diphthongs, how resonants got devoiced, how final consonants were lost, and so on, under the influence of different accents. In point of fact, the whole history of English sounds must be examined from the prosodic point of view, and many changes may (not necessarily will!) be found due, or at least partly due, to the rearrangement of syllable accents.

At present we can only reconstruct the state immediately preceding the one found in RP. Syllable accents must have lost their relevance simultaneously in all the vernaculars of the London area: this conclusion follows from a striking similarity between the distribution of the glottal stop in Cockney and in RP. We do not know what factors brought about the

²⁶ Cp. Ringgaard who finds it possible to reconstruct the glottal stop in English as early as the tenth century (K. Ringgaard, *op. cit.*, p. 113). Cp. also: A. C. Gimson, *op. cit.*, pp. 165—166.

²⁷ W. Matthews, *Cockney Past and Present. A Short History of the Dialect of London*. London 1938, p. 173.

dephonologization of the accents but later the glottal roll seems to have been pushed into the background and converted into a concomitant of long vowels and diphthongs in the lowest pitches of intonation whereas the glottal stop acquired the function of an irrelevant medial juncture. And at that stage the social factor came in. The use of the glottal stop, some diphthongs, etc. was so strongly felt to characterize Cockney that the stop was mercilessly banished from RP.

The social status of Cockney stood extremely low: it was almost identified with the underworld's lingo. No wonder that educated Englishmen were no friends of the glottal stop, the more so that many of them were on the look-out lest it should break through in their own speech. More than half a century of linguistic effort has taught the English public that Cockney is the ancestor of the London dialect and thus deserves respect rather than contempt. A general democratization of life worked in the same direction. The glottal stop gradually lost its social and stylistic function and was allowed to return where it had always belonged. All those writing on the changes in present-day English pronunciation note a rapid spread of the glottal stop in RP. But as the glottal stop is irrelevant, it can creep into the forms which had no stop in the past. In Cockney, for example, it can be found in the unetymological position before a voiced consonant.

It is hard to predict the future of the glottal stop. Its expansion in RP is due not to an internal linguistic change, but to the removal of an old social ban. Irrelevant accents are usually lost in course of time. Several generations of schoolmasters who fought the glottal stop had no idea that they were accelerating a historical process. Judging by the results, they were not a great success: probably even the moribund in language must die its natural death. Now that considerations of social prestige play no (or almost no) role in the use of the glottal stop, the historical process just referred to may be expected to take care of itself. But the glottal stop will die hard: historical phonology shows that even a losing battle, that of usage against system, goes on for centuries.

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