

# THE NATURALNESS OF RECURRENT SOUND CHANGES IN ENGLISH

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## ABSTRACT

In this contribution an attempt is made to account, within the framework of Natural Phonology, for some differences in vocalic systems among three Early Middle English (EME) dialects in relation to ongoing changes in Modern English (ModE) vernaculars. The collected EME and ModE data will be scrutinised according to the fitting observations from, first, the model elaborated by Donegan [2], and second, Dressler's [4] semiotic approach for diachronic process phonology. These will, in turn, serve as a compatible means of explaining the surveyed dissimilarities of the EME vowel systems as well as the modifications in vocalic inventories of ModE dialects. Finally, the assumptions made for diachronic changes will reveal commensurate with those inferred from the ModE data, ascertaining the recurrence of similar sound changes in distant periods.

## 1. INTRODUCTION

Functional models of language change go back to the Prague school (Trubetzkoy [14]) and Jespersen [9]. Some of them postulate a rather limited framework of functionalism, being restricted either to the communicative function or including only one different unit such as structure. Further, their testability is very rare. There are, however, other functional models that distinguish 'functions, operations serving them, and dimensions where functions are served by operations, the levels of universals, typology, and language-specific systems' [6, p.263].

Since one is to understand language as a social institution that is at the disposal of its users, then too functional explanations are required. Dressler draws one's attention to the fact that if 'individuals use an operation [e.g. a phonological change] for communicative functions, then they, and the speech community as a whole, have interest in making this tool more efficient for serving these functions' [6, p.264]. When a given community manages to enhance its communicative means according to its needs by some way or other (be it of phonological, morphological or of any other nature) then its language witnesses a change.

When one assumes that whenever any change in any natural language is attested, it is to be viewed as abiding by the necessities of its users.

Natural Phonology [10, 3, 5], a process-based theory of phonology, is one of the contributions to the functional approach to language. Its standpoint concentrates on the claim that sound systems of all natural languages, their development and realisation in individuals 'are governed by forces implicit in human vocalisation and perception'

[3, p. 126]. The mechanism by which the needs and possibilities of speakers and hearers are expressed acts as a set of natural phonological processes. Since all ordinary speakers are assumed to share the same needs and possibilities, natural phonological processes are universal. Moreover, these natural processes are mental operations [13, p.1] rather than conventional devices agreed upon for the purposes of formalisation of appearing patterns.

Dressler's contribution to the study of Natural Phonology centres round its semiotic background. When the phonological naturalness and its change is derived from semiotic principles, the term 'naturalness,' as will be seen, becomes more precise.

Specifically, the model proposed by Donegan [2] showing the tendencies in vowel changes and Dressler's [4] diachronic process phonology shall reveal their cogent explanatory force in the following considerations.

## 2. MATERIAL

The EME samples have been chosen from [11], where I examined the phonology of three EME manuscripts, namely Kentish, East-Midland and West-Midland. I decided on a 13<sup>th</sup> century translation of five of Maurice de Sully's homilies known as *Kentish Sermons* (KS) (Laud MS. 471), 12<sup>th</sup> century *Poema Morale* (PM) (Trinity College MS B 14 52 ff.2r-9v) and composed about the year 1210 *The Life and Passion of Saint Juliana* (J) (Bodley 34, Oxford B). The texts can be taken as representative for these dialectal areas, which was confirmed by the observed phonological tendencies compatible with earlier acknowledged findings [7, 10]. In that study I investigated the variations in those phonological systems, describing not only discrepancies among vocalic inventories but also handling the problem of consonants.

In this contribution, apart from EME specimens, ModE data collected from the observations made by J.C. Wells [15] have been added to ascertain the recurrence of similar changes in phonology. Here, I selected instances from the vernaculars of the southern parts of Britain: RP, RP-like speech, London English, Cockney and West Country.

In the case of the EME data, the problems concerning potential dialectal borrowings, scribal errors and other non-linguistic factors (e.g. possible errors resulting from wrong deciphering of faded copies of the manuscripts) were disregarded and only general phonological developments were taken into account. Thus the study became more explicit and the tendencies in sound change more conspicuous.

### 3. METHOD

#### 3.1. Donegan's model

When describing the distinctions of the vowel quality, one usually comes across the notions of vowel height or that of sonority (i.e. 'the overall loudness of a sound relative to others of the same pitch, stress and duration' [1, p.320] as opposed to the differences of 'colour' (i.e. the properties of localisation of the vowel in the oral cavity) [2, p.49]. These distinctions appear to be crucial to the manner in which natural processes apply in sound change.

Considering sonority, the following preference will appear valuable in our considerations:

- (i) **If a vowel is more sonorous it is more likely to serve as the nucleus in the syllable.**

Most commonly, the feature 'colour' is referred to such phenomena as palatality and labiality – the 'location of constriction in the vocal tract' [2, p.65]. Palatal vowels are perceived as 'bright' and labial vowels as 'dark'. The following are the preferences that affect the application of natural processes as far as the 'colour' of sounds is concerned:

- (ii) **More sonorous vowels are more prone to lowerings and less sonorant ones are more susceptible to raisings.**
- (iii) **Lower vowels are especially susceptible to raisings.**
- (iv) **Tense vowels are more susceptible to increasing colour than their lax counterparts.**

The implicational hierarchy of the above processes (based on the 'rich-get-richer' principle [2, 3, 13]) may, for example, work as follows:

- (v) **If a more sonorous vowel is coloured, the less sonorous one must be coloured also, but not vice versa.**
- (vi) **If a higher coloured vowel is raised, the corresponding lower must be raised also, but not vice versa.**
- (vii) **If the lax vowels raise, their tense counterparts must raise also.**
- (viii) **If a tense vowel lowers, its lax counterpart must lower also.**

#### 3.2. Dressler's model

The importance of semiotics in linguistics has already been noticed by Jakobson [8]. He considered phonemes as signs (for language is a system of signs where each sign consists of a signans and a signatum) whose function is to differentiate morphemes and words. 'The signans of a phoneme is represented in distinctive features of the underlying representation' [4, p.47].

Dressler considers Peirce's [12] model of semiotics as best suited to explain naturalness in phonology, and by the same token in other linguistic domains. In phonology, the underlying representation of a phoneme serves as the signatum for its surface representation realised in the form of a phone or an allophone that is the signans.

Of crucial importance here is the Peirce's tripartition of signs into icons, indices and symbols. The superiority of icons over indexes and these over symbols can well be justified on natural grounds where an icon has the least

distance between the signatum and the signans, contrary to a symbol that has this distance the biggest.

In phonology 'iconicity is best implemented by an intrinsic allophone, i.e. a sound which is the nearest possible realisation of a phoneme according to exceptionless universal conditions, and to the articulatory base of the language' [4, p.49], which may receive a diagrammatic expression where, for instance, an input chain of phonemes /A, B, ..., N/ has its output representation in a chain /a, b, ..., n/.

An index exhibits a direct connection between a signans and its signatum. The signans, however, does not describe the signatum (as is in the case of icons where one can actually forget about the signans) but only indicates it. In phonology, an index can be realised as either expressing a specific speech situation (e.g. age, social group and drunkenness) or an indication of a neighbouring phoneme or morpheme [4, p.50]. Therefore, context-dependent sound modifications (e.g. palatalisations) or even sound changes (e.g. English velar softening) are good examples of indices.

The least natural of all the signs are the symbols, where the connection between a signans and its signatum is only arbitrary but depends on a conventional relationship.

Since most language systems are conventionalised, it is significant to emphasise the fact that actually all linguistic signs depend to some extent on conventionality. Thus one is bound to talk rather about the degrees of iconicity and indexicality in these systems.

'An optimal sign should be unambiguous and therefore biunique, i.e. there should be relational invariance between signans and the signatum' [4, p.50]. If a phonological change progresses from a biunique relation through unique to a neither unique nor biunique one, then, usually, such a change enters morphonology and further morphology of a given language. From a semiotically phonological viewpoint, however, biunique relations are better than unique ones let alone unique or biunique. 'Biuniqueness then is a desirable goal of phonological change' [4, p.52].

### 4. DATA

The following are the specimens chosen from a range of data [11, 15] that conform to the universal preferences in qualitative sound change as predicted by Donegan [2] for both the EME and ModE periods.

#### 4.1. EME data

- OE /æ/ in KS:
  - Short /æ/:  
OE *hæfde* (had) as *heddde, hedden*; OE *þæt* (that) as *þet*;  
OE *æfter* (after) as *efter*;
  - Long /æ/:  
OE *þær* (there) as *þer*; OE *sæ* (sea) as *see*; OE *hæt* (heat) as *hete*; OE *flæsc* (flesh) as *flesce, fles*.

- OE /æ/ in PM:
  - Short /æ/:  
OE *wæs* (was) as *was*; OE *æce* (ache) as *aches*; OE *ælmesse* (alms) as *almesse*.

- Long /æ/:

OE *ræd* (advice) as *rade*; OE *dæd* (deed) as *dade*; OE *stræt* (street) as *strate*.

• OE /e/ and /o/ in Open Syllable Lengthening:

OE *specan* (speak) in KS: *spekeþ*, *speken*, in PM: *speken*, in J: *spec*; OE *hopa* (hope) in J: *hope*; OE *hopian* (hope) in PM: *hopie*; OE *bod* (message) in PM: *bode*; OE *bona* (slayer) in J: *bone*; OE *biforan* (before) in KS: *bifore*, in PM: *before*, in J: *biuoren*.

• OE /a:/

OE *hlaford* (lord) in KS: *lordes*; OE *swa* (so) in KS: *swō*, *so*, in PM: *swō*; OE *gan* (go) in KS: *gon*; OE *twa* (two) in PM: *two*.

#### 4.2. ModE data

• ModE /æ/

In RP older speakers /æ/ has an opening diphthong realisation [ɛæ] or even [eæ] already a bit outmoded.

In RP younger speakers rather opt for [a] quality of the vowel in TRAP.

RP-like speech has /æ/ realised as [a] hence the pun ‘uctors and utcesses’.

West Country speakers have /træp/ realised as [trap].

• ModE /a:/

In West Country speakers the vowel of BATH /ba:θ/ is realised as [bæ:θ].

• ModE /aʊ/

The vowel of MOUTH /maʊθ/ in London English is realised as [mæʊθ] and in Cockney as [mæ:θ].

• ModE /ei/

In London English the vowel of FACE /feis/ is realised as [feis] or [fais].

• ModE /ai/

RP speakers have /praɪs/; in London English one can hear [praɪs] and in Cockney even with lip-rounding [prɔɪs].

• Lowerings of ModE /i/, /e/ and /æ/

Young generations of RP speakers have ‘relatively open and central qualities’ of those vowels [14, pp.291-292].

### 5. DISCUSSION

#### 5.1. Findings according to Donegan’s model

The puzzle created by the development of OE /æ/ may be explained along the following lines. In KS one notices the /e/ forms in these positions. Here, Donegan’s [2] observation (iii) is confirmed and plausibly explains the /æ/ > /e/ change. It is noteworthy to add that here, under certain conditions, a consistent change from OE /e/ > /i/ was observed [11], proving thus the (vi) implication. If one

assumes that lower vowels are especially prone to raisings then raising of more chromatic ones in a given system requires (along the ‘richer-get-richer principle’) the same change to appear in less chromatic vowels.

Further, as noted above, OE /æ:/ shifted to /a:/ in East-Midland (PM) (together with OE /æ/ that changed to /a/ here) and in Kent it underwent a change to /e:/. Donegan’s study of a number of languages led her to the assumption represented by (iv), which also sheds some light on our problem. Her conclusions suggest that raising of tense vowels does not imply raising of the corresponding lax ones. If, however, lax vowels raise, the corresponding tense ones must raise also (vii). On the other hand, lax vowels are more sonorous and thus more capable of lowering (ii) than their tense counterparts. If, then, a lax vowel lowers, its tense counterpart does not have to. But if a tense vowel is lowered, the corresponding lax one is to lower also (viii). Although the tense/lax distinction is usually avoided in the description of OE vowels, a closer look at the EME patterns reveals strikingly similar to Donegan’s findings. Our EME data concerning their OE /æ/ and /æ:/ distribution receives, in this manner, a plausible explanation in this functional model.

The instances of ModE /æ/ depict a somewhat similar development. In older RP speakers, there is (or was) a tendency to raise the vowel of TRAP to [ɛæ] or even [eæ]. On the contrary, RP-like, West Country and (non-) surprisingly young RP speakers tend to pronounce the vowel of TRAP as [a].

Further, the 13<sup>th</sup> c. phenomenon known as Open Syllable Lengthening did not only bring a change in the quantity of the OE instances of /e/ and /o/ but also affected their quality. In the southern dialects OE /e/ and /o/ were lengthened in the open syllables and simultaneously lowered to /ɛ:/ and /ɔ:/ respectively. In this case two factors are to be taken into consideration. First, the already quoted (ii) observation is borne out by the fact that it was actually OE /e/ and /o/ rather than /i/ and /u/ that underwent the process first. Second, in accordance with the principle that when height decreases, lowering increases sonority, these changes reflect a natural tendency specified in (i).

ModE instances of /i/, /e/ and /æ/ in young generations of RP speakers are also realised as open and centralised, conforming thus to the (i) pattern. Moreover, London speakers realise the vowel of FACE /feis/ as [feis] or even [fais]. Further, while RP speakers realise PRICE as /praɪs/, London English users tend to pronounce it as [praɪs] – a backed and more open quality.

There is, however, somewhat contrary evidence from West Country speakers who realise the vowel of BATH /ba:θ/ as [bæ:θ] and in London speech the vowel of MOUTH /maʊθ/ as [mæʊθ], or in Cockney even as [mæ:θ]. The latter case matches the (iii) observation abiding thus by global tendencies. The former one will get its phonetically explicable plausibility in the light of the OE change /a:/ > /o:/ pursued next.

Donegan [2, p.88] underlines the fact that the “merger of long and short /a/ where vowel distinctions are being recoded as tense and lax is avoided in many cases of

palatalisation or labialisation of one or both of the achromatic pair.” Her example comes from the West Scandinavian vocalic inventory, where /a:/ became /o:/ and /a/ remained unchanged (a parallel change in Old English). Here the lax/tense distinction could not be imposed on the pair and came to be differentiated on the labial/non-labial basis. If one is to assume, though cautiously, such a scenario, ModE MOUTH /maʊθ/ realised as [mæʊθ] in London English and in Cockney as [mæ:θ] may be perceived as palatalisation, and the Cockney vowel of PRICE realised, with lip-rounding, as [prɔɪs] as labialisation.

## 5.2. Findings according to Dressler’s model

Since an icon is the most direct and basic way of signalling, the degree of iconicity of a phonological process (‘rule’ in Dressler’s terms) can be a measure of its phonological naturalness. However, phonological processes start to deiconise due to such factors as: imitating the speech of others (foreign accent) or distributing allophones in allophonic space (push-chain, drag-chain). Although deiconisation seems to be an inevitable process in phonological change, there exists a possibility for reiconisation. Dressler claims that the only way of stopping deiconisation is by restructuring the phonological representation (i.e. its input). The danger, however, with such an interpretation is that this does not have to mean regaining thorough phonological naturalness. Iconism is restored, biuniqueness and recoverability are not, though. Dressler alleges that these last two can only be renewed when the deiconised phonological rule is thoroughly lost, i.e. it becomes morphologised or lexicalised. He, however, rather discusses instances of varied phonological changes and not whole systems. When one considers inventories such as EME vernaculars one is bound to notice that the restructuring usually involves their larger parts. Further, he states that reiconisation by sign substitution is not the case of a diachronic (re)iconisation of a phonological rule, but a synchronic one in the developing course. It appears, nonetheless, hardly plausible that EME speakers still had, e.g., OE /hæfde/ as their representation for [hedde], OE /hlaford/ for [lordes] in Kent, OE /æce/ for [aches], or OE /twa/ for [two] in East Midland. Rather, the change was so advanced that recoverability and biuniqueness were by then restored. In any case, one cannot, it seems to me, consider every noticeable change as the process of deiconisation without any possibility to reiconise. I can find two reasons for this view. First, somewhat contained in Peirce’s theory. If total (re)iconisation was not possible a number of phenomena would lose their plausible recoverability (note that it is not to claim that we live in a purely iconic world), for existence of which iconisation is crucial, and could not be retrieved any more undeviatingly from their origin. Second, phonologically speaking, it would imply that only the first uttered sounds-words were purely iconic and even today’s ‘cuckoo,’ ‘hiss’ or ‘splash’ would be perceived as most unnatural. Therefore, it seems to me quite ‘natural’ to talk about the total reiconisation of phonological processes, where the restructuring of input can be considered as not

only regaining iconisation but also recoverability and biuniqueness. It appears very obvious that, e.g., the EME phonological representations must have mutated from their OE antecedents and had to reacquire both biuniqueness and recoverability with them.

A seemingly problematic situation may appear in the case of our ModE data, where the changes do not affect the whole systems and where one may have difficulties in specifying the semiotic nature of such variations. The possible puzzle seems to lie in the fact that these changes are relatively recent. Nevertheless, on the basis of the discussed similar modifications in distant periods, I believe, they can be seen as conforming to the presented pattern.

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