DOCUMENT RESUME

ED 287 305 FL 016 961

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TITLE Fronting, Rule Loss and Abstractness in Old English Phonology.
PUB DATE Oct 84
NOTE 15p.; Paper presented at the Annual Meeting of the Mid-America Linguistics Conference (19th, Columbia, MO, October 12-13, 1984).
PUB TYPE Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Articulation (Speech); *Diachronic Linguistics; Grammar; *Language Patterns; Language Variation; Linguistic Theory; *Morphology (Languages); *Old English; *Phonology; Syllables; Vowels

ABSTRACT

An analysis of Old English phonology examines two traditional sound changes, the First and Second Frontings, that have been analyzed by different linguists with rather abstract theories. These analyses are refuted, and a more concrete and realistic treatment is proposed for each. Examination of Anglo-Frisian Brightening, or First Fronting, raises several questions about the analysis by Lass and Anderson, which are avoided in a theory proposing that the phenomenon was non-existent already in the synchronic grammar of Old English, and therefore was not maintained as a synchronic phonological rule until Middle English times. The analysis of Mercian Second Fronting refutes Dresher's account and posits Second Fronting as a genuine sound change that ran its course in Old English times. It is seen as a variable rule that was applied to surface forms but was inhibited in backing environments. This solution involves non-abstract forms and no rule ordering. (MSE)

FRONTING, RULE LOSS AND ABSTRACTNESS IN OLD ENGLISH PHONOLOGY

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1.Introduction.

The past decade and a half of phonological research has seen a remarkable and pronounced gravitation away from the abstract phonology of Chomsky and Halle's *Sound Pattern of English* (1968) towards more concrete, highly constrained theories of phonological structure. Within such phonological theories as Natural Generative Phonology and its successors, scholars like Vennemann (1974), Bartsch & Vennemann (1982), Hooper (1976), and Linell (1979), for example, have argued that phonological forms and rules should be more oriented toward the actual surface phonetics and that abstract underlying forms and ordered rules should be banned from phonological theory. The present paper concerns itself with two traditional sound changes in Old English phonology, known as the First and Second Frontings respectively, which have been analyzed by different linguists with rather abstract theories. We will refute these analyses and argue instead in each instance for a more concrete and, we would argue, therefore more realistic treatment.

It is of course only fitting that questions of historical phonology should be dealt with at a conference recognizing the important contributions of the late renowned linguist Roman Jakobson to modern linguistics. Indeed it was Jakobson (cf. now especially the discussion in Jakobson and Waugh 1978) who through his pioneering studies written as a member of the Prague Linguistic Circle half a century ago founded the structural approach to historical phonology, refuting the Saussurean dictum of a non-systematic diachrony and stressing the systematic nature of language change as well as synchronic variations. In keeping with Jakobson's respect for the nature of the *signans*, we will be appealing crucially to these notions in our discussion below.

2. The Case of "Anglo-Frisian Brightening" ("First Fronting").

The first example which I would like to discuss concerns so-called "Anglo-Frisian Brightening" or the "First Fronting" in Old English. According to the well-known traditional accounts found in the handbooks (cf. Brunner [1965] and Campbell [1959]), pre-Old English *a* was spontaneously fronted to *æ*, except when followed by *w*, a nasal cluster, or a consonant plus a back vowel. This pre-historic change then led to the synchronic alternations which we observe for example in the nominal paradigms from the standard Old English West Saxon (WS) dialect such as the paradigm for *dæġ* 'day' given in (1). Here the singular forms evince fronting in their stem vowel *æ*, whereas the plural forms with their back vowels have remained unaffected

(1) **West Saxon paradigm for *dæġ* 'day'**

	sing.	pl.
N	dæġ	dagas
G	dæġes	daga
D	dæġe	dagum
A	dæġ	dagas

by the change and hence preserve the original *a*. In addition to the first fronting the singular forms also show the effects of a historical rule of palatalization, which we disregard for present purposes.[1]

In their study *Old English Phonology* (1975), Lass and Anderson address the question of how the First Fronting, which they refer to by its other traditional name Anglo-Frisian Brightening (henceforth: AFB), can be handled in a synchronic grammar of Old English. In general they employ an SPE type of phonological framework with at times extremely abstract underlying forms and ordered rules, but in this case their analysis does not stray too far from the surface. Starting out from the phonological rules for ablaut in the Old English strong verbs, which according to their analysis dictate a derived *a* in certain forms, they claim that surface *æ* must be derived in all instances from an underlying *a* through the synchronic reflex of AFB. Given certain other conventions which do not interest us here, they eventually state the rule as the unconditioned change given in (2).

(2) **Anglo-Frisian Brightening** (Lass and Anderson)

$$\overset{V}{[+low]} \rightarrow [-back]$$

This rule first turns all underlying, as well as some derived, occurrences of *a* into *æ*. A subsequent rule of retraction of *æ* before back vowels, shown in (3) below, then retracts instances of *æ* derived by AFB in precisely the correct environments.[2]

(3) **Retraction of *æ* before back vowels** (Lass and Anderson)

$$\overset{V}{[+low]} \rightarrow [+back] / \_\_ \; [<\alpha[artic]>] \; \left\langle \alpha \overset{C}{[artic]} \right\rangle \; \overset{V}{[+back]}$$

These rules would apply (cf. [4] below) to derive the surface forms for genitive singular and nominative plural in the paradigm shown above under (1). As opposed to the traditional account, according to which AFB was seen as a historical sound change which ran its course in pre-Old English times, Lass and Anderson claim that AFB was not lost as a synchronic phonological rule of Old English, but rather remained active in the grammar of until Middle English times, when even in their analysis the rule

[1] In the Mercian dialect of Old English these forms were also subject to a further Second Fronting, which we will be discussing in the second section of this study; for the time being we are considering the West Saxon forms, which only underwent the so-called First Fronting.

[2] Lass and Anderson apparently use non-standard abbreviatory conventions in formulating this rule in order to handle geminate consonants — that is the reason for the angled brackets and the notation "artic(ulation)" — but this formal question need not concern us here.

(4) **Sample derivation for WS *dæġ* 'day'**

	gen. sg.	nom. pl.
underlying	/dag + es/	/dag + as/
1. AFB	dæges	dægas
2. *æ*-Retraction	——	dagas
surface form	dæġes	dagas

(after application of later palatalization rule)

was finally lost.

At first glance this analysis does not seem unreasonable or even very abstract: the underlying forms are not too distant from the surface; in fact they include an actually occurring surface allomorph, and the rules which are postulated are quite plausible, recapitulating as they do the probable diachronic development involved. However, there are several objections to be raised with this analysis. Notice that the derivational path to the surface for the stem vowel of the plural is strangely circuitous: first it starts out as *a*, then it is fronted to *æ*, only to be retracted back to *a* once more. Pullum (1976) has discussed reversing derivations of the type A → B → A, which he labels "Duke of York derivations". Although Pullum's study (p. 100) "does not reveal any basis for a general constraint that would prohibit the Duke of York gambit," linguists' frequent appeal to the strategy of avoiding such derivations does seem to reflect a widespread skepticism about their validity. This zig-zagging reversal of segments in the course of a derivation is of course not unheard of in such a theory of phonology as the one adopted by Lass and Anderson, but it is questionable whether speakers actually go through such contortions in arriving at their surface output.[3]

In addition, AFB was apparently not an exceptionless phonotactic generalization of Old English, a P-rule in the sense of Hooper (1976), since there were a number of surface exceptions to this purported rule in West Saxon: Lass and Anderson mention for example *stapelian* 'establish' and *macian* 'make'[4] and we can add forms such as *macedon* 'made' (besides *macodon*, which is also found) and *nafela* 'navel' (variant of *nabula*). Here they suggest deriving words such as the two which they cite — and presumably others such as ours — from underlying forms containing a back vowel at the time when *æ*-Retraction applies: /stapulōjan/ and /makōjan/. These reconstructed forms, which presumably represent the diachronic forerunners of the actual Old English words cited, are certainly highly abstract and therefore suspect to anyone who objects to the excesses of abstraction to be found in orthodox generative phonology. It is highly unlikely, for example, that Old English children would have been

[3] One referee of this paper has objected at this point that "such rules were never intended as descriptions of *performance*, only of *competence*." This is true. However, I would counter first of all that the dichotomy between competence and performance should not be overstressed or exaggerated; and, secondly, that a realistic theory of grammar, including phonology, should tie into performance in a direct and clear fashion. Hence, I believe that my objection is well taken after all.

[4] It is not clear that the latter form should actually be considered an exception, since the rule could well be reformulated to handle words like this. However, the other forms cited do not appear as amenable to such treatment.

able to postulate underlying forms so divergent from the actual phonetic shapes which they were exposed to. These are also not the only such forms posited, and most such forms and accompanying rules such as the absolute neutralization of an ad hoc laryngeal in the verbal ablaut series would probably be rejected by all but the most convinced abstractionist today. In addition, one can ask why it is that the vowel *a* found in the plural allomorph is set up as underlying; in fact, it is the "conditioned" variant and hence one should expect it to be derived by rule. Moreover, one would expect ceteris paribus that the singular form would present the basic allomorph and that the plural form, representing the more complex, derived category, would be generated from it, not vice-versa. Lass and Anderson's evidence for postulating underlying *a* and AFB comes from the verbal ablaut series, but if this analysis is rejected, as we have suggested, then the argument for the rule of AFB is removed.

All these objections can be overcome by adopting a simpler and preferable analysis. The obvious solution is to take the singular allomorph with *æ* as underlying and to derive the plural allomorph with *a* from it by *æ*-Retraction alone, without the intervention of a synchronic rule of AFB and its subsequent Duke of York derivation. A sample derivation under this revised analysis is offered under (5).

(5) **Revised sample derivation of WS** *dæġ*

	gen. sing.	nom. pl.
underlying	/dæg + es/	/dæg + as/
æ-Retraction	——	dagas
surface form (after palatalization)	dæġes	dagas

Forms which do not alternate are given phonological representations identical to their surface phonetic forms in keeping with Kiparsky's Alternation Condition (cf. Kiparsky 1973) and no abstract underlying forms such as /staþulōjan/ need to be posited. Furthermore, the highly abstract forms for verbal ablaut together with the associated rules are rejected and replaced by more direct morphophonemic rules which are linked to the processes for forming the various verbal tense forms and which match surface forms directly.

Note that this solution avoids the above-mentioned problems in a straightforward manner. There is no counterintuitive reversal of vowels, abstract underlying forms do not have to be postulated, and the plural allomorph is derived from the basic allomorph of the singular.[5] Therefore, we reject Lass and Anderson's proposed analysis: AFB was not maintained as a synchronic phonological rule of English until Middle

[5] What is involved here seems to be relexicalization together with rule inversion: the former derived vowel is now basic, whereas the former basic (i.e. historically preceding) one is derived in the optimal grammar of Old English.
Actually, I would prefer to view phonology along the lines given in Linell (1979), Vennemann (1974, 1978), Bartsch & Vennemann (1982), where several different types of rules are distinguished and they are held to be redundancy statements over fully specified phonetic representations. Retraction would then be a morphophonemic rule attached to certain morphological formation processes (cf. Linell [1979]). However, as this would lead our discussion too far afield within the confines of the present paper, we will not go into this matter at this time.

English times, as they claim. Rather AFB was non-existent already in the synchronic grammar of Old English, and that is why forms such as *stapelian*, which constituted clear surface violations to any purported synchronic P-rule of AFB, could have arisen in the first place. Synchrony, though by no means divorced from diachrony, does not have to recapitulate it.

2. The Merican Second Fronting and Abstract Phonology.

Now the analysis offered by Lass and Anderson for AFB is, as was pointed out, not really all that abstract, nor is it proposed as offering evidence in favor of more abstract theories of phonology. On the contrary, these scholars add some "afterthoughts on theory" which, if not tantamount to a full repudiation of the abstract framework they adopt, at least express serious doubts as to its validity. However, the second analysis which we will discuss, Dresher's (1980) account of the Mercian Second Fronting, is in fact expressly claimed to provide "support for a version of [phonological] theory which requires extrinsic ordering of rules, and which incorporates generalizations deeper than those which can be stated at the surface" (Dresher 1980: 47). If this claim were true, it would argue against more restricted models as general theories of phonology. We will argue that Dresher's claim does not hold, however, because a much more concrete account without rule ordering can be found. Hence, his proposal does not constitute evidence in favor of abstract phonology.

Let us first consider the facts involved. As opposed to the West Saxon paradigm given above in (1), the paradigm of the word for 'day' in the Mercian dialect of Old English as recorded in the Vespasian Psalter (hereafter: VP) appears as in (6).

(6) **Paradigm of** *dæġ* 'day' **in Mercian (Vespasian Psalter)**

	sing.	pl.
N	dæġ	dægas
G	dæġes	dæga
D	dæġe	dægum
A	dæġ	dæga

Here we find an *e* corresponding to WS *æ* and *æ* corresponding to WS *a*. Traditionally this has been explained as the result of a further historical sound change, limited to the Mercian dialect, by which the *æ* resulting from AFB was raised to *e* and previously unshifted *a* was subsequently fronted to *æ*. This change is often referred to as the Mercian Second Fronting to distinguish it from the earlier, more general First Fronting, which also occurred in West Saxon. Dresher points out that early Mercian glossaries, notably the earlier Epinal glossary (henceforth: EP) as well as the later Corpus Glossary (CP), show evidence that Mercian previously had paradigms like those of West Saxon (cf. [1] above), although this was no longer the case by the time of the later VP. In the early glossaries, spellings with *æ* in the singular and *a* in the plural predominate, although the later *e* and *æ* alternations are also found. This has been interpreted as indicating that the Second Fronting (hereafter: SF) was a sound change in progress at the time of the ealier glossaries.[6]

[6] Competing interpretations for an earlier dating of SF are refuted by Dresher.

In further contradistinction to West Saxon, fronting appears to be blocked in Mercian when an *l* plus consonant follows: VP has the forms *ald* 'old', *all* 'all', *haldan* 'hold', *salm* 'psalm', *hwalas* 'whales (nom. pl.)', *wyrt-walan* 'root of plant (acc. pl.)', and derivatives of **gaian* 'sing'. While forms such as *hwalas* and *-walan* show a stage of Mercian with *a* prior to SF, they have also presented scholars with a problem, because here SF fails before single *l*. Dresher proposes to account for this mystery as well as another which we will discuss shorty by reanalyzing SF not as a historical sound change in Mercian, but rather as the loss of a backing rule called *a*-Restoration. To see how this works, let us turn now to his account of SF in Mercian.

For the prehistorical stage of Mercian, which presumably corresponded roughly to the WS paradigms such as (1) above, Dresher proposes the following treatment. Here a rule *a*-Restoration (7) handles the alternations.

(7) ***a*-Restoration**

$$\begin{bmatrix}+\text{syll}\\+\text{low}\end{bmatrix} \rightarrow [+\text{back}] \,/\, \begin{bmatrix}\text{------}\\+\text{stress}\end{bmatrix} [-\text{syll}] \begin{bmatrix}+\text{syll}\\+\text{back}\end{bmatrix}$$

This rule, together with the undiscussed rule of Palatalization, operates on underlying forms like /dæg + es/ (gen. sg.) and /dæg + as/ (nom. pl.) to ultimately derive the correct surface forms *dæġes* and *dagas*. For the later Mercian of the VP, the optimal grammar would, Dresher claims, simply postulate a rule of *æ*-Raising, given in (8), but no rule of *a*-Restoration.

(8) ***æ*-Raising**

$$\begin{bmatrix}+\text{syll}\\-\text{back}\\-\text{long}\end{bmatrix} \rightarrow [-\text{low}] \,/\, \begin{bmatrix}\text{------}\\+\text{stress}\end{bmatrix} \begin{bmatrix}-\text{syll}\\-\text{back}\end{bmatrix}$$

In the grammar for VP the gen. sg. and nom. pl of *deġ* would thus be derived as shown in (9).

(9) **Sample derivation of Mercian *deġ***

	gen. sg.	nom. pl.
underlying	/dæg + es/	/dæg + as/
Palatalization	dæġes	———
æ-Raising	deġes	———
Surface forms	deġes	dægas

Note that *æ*-Raising does not apply in the plural, since it is restricted to occur only before a non-back consonant and palatalization does not operate in the plural.

Comparing the earlier and later grammars of Mercian, it appears that Mercian has added the rule of *æ*-Raising, while losing the *a*-Restoration rule, as we see in (10). However, Dresher rejects the possibility that a rule of SF, given in (11), was added to the grammar to produce this situation by fronting *a* > *æ*, because it cannot naturally account for the blocking of SF before *l*. Such exceptions to SF before *l* would have to be handled by the apparently ad hoc specification [-lateral] in the rule, in order to prevent, for example, *hwalas* from incorrectly becoming **hwælas*. In order to account for such exceptions in a non ad hoc manner, Dresher proposes a different explanation

(10)	*Early Mercian*		*Later Mercian*	
Underlying	/dæg + es/	/dæg + as/	/dæg + es/	/dæg + as/
Palatalization	dæġes	———	dæġes	———
a-Restoration	———	dagas	LOST	
æ-Raising	NONEXISTENT		deġes	———
Surface	dæġes	dagas	deġes	dægas

(11) **Second Fronting**

$$\begin{bmatrix}+\text{syll}\\+\text{low}\\-\text{long}\end{bmatrix} \rightarrow [-\text{back}] \,/\, \_\_ \begin{bmatrix}-\text{syll}\\-\text{lateral}\end{bmatrix} \begin{bmatrix}+\text{syll}\\+\text{back}\end{bmatrix}$$

for the change. First of all, he claims that a separate rule of Retraction (12) was already in the grammar and backed underlying *æ* to *a* before velar *l* and *w* in forms such as *awel* and *ald,* as well as in *hwalas.*[7]

(12) **Retraction**

$$\begin{bmatrix}+\text{syll}\\+\text{low}\end{bmatrix} \rightarrow [+\text{back}] \,/\, \begin{bmatrix}\text{———}\\+\text{stress}\end{bmatrix} \begin{bmatrix}-\text{syll}\\+\text{son}\\+\text{back}\end{bmatrix}$$

Sample derivations for the relevant forms prior to SF are given in (13).

(13) **Sample derivations before SF**

underlying	/æwel + *ϕ*/	/æld + *ϕ*/	/hwæl + as/	/dæg + as/
Retraction	awel	ald	hwalas	———
a-Restoration	———	———	———	dagas
surface forms	awel	ald	hwalas	dagas

We are now set to see how Dresher's rule loss analysis proposes to explain the failure of fronting before *l.* Dresher accounts for these exceptions to SF by rejecting the traditional analysis: he claims that there was no rule of SF introduced into the phonology of Old English, but that the already existing rule of *a*-Restoration was simply lost, thereby allowing the underlying *æ* to surface in forms such as *dægas.* To see how this would work, consider the derivations offered in (14). If a rule of SF had

[7] It is claimed, not without precedent, that *l* was velarized before back vowels or any consonant, and that this caused retraction. Actually, Dresher argues that Retraction originally was restricted to the environment preceding *w* or *l* plus consonant, and only later reanalyzed to the more general form given in (12). For the purposes of the present discussion, we disregard this added complication.
Dresher also argues that the few forms which might be viewed as evidence that *l* generally caused retraction do not in fact warrant this conclusion. For the form *galendra* 'sorcerer (gen. sg.)', he postulates an abstract underlying form like **galandira,* where the *l* is velarized by the following *a* and hence Retraction applies before Umlaut fronts the following back vowel. The form *agalæne,* past participle of **agalan,* is dismissed, following Kuhn (1965) and Hogg (1977) as dubious due to possible scribal error. Finally, *hel,* pret. ind. 1. sg. of **heolan* 'conceal' is held to count against the claim that Retraction occurred before all *l*'s.

(14) **Sample derivations under rule loss analysis**

Underlying	/æwel + ϕ/	/æld + ϕ/	/hwæl + as/	/dægas/
Retraction	awel	ald	hwalas	——
a-Restoration		LOST		
Surface	awel	ald	hwalas	dægas

been added to the grammar, there would be no way to explain the exceptions before *l*, Dresher claims, since SF should simply have fronted all remaining *a*'s. However, if *æ*-Retraction and *a*-Restoration were separate rules operative in the grammar and only the latter was lost, then the apparent exceptions to fronting would be accounted for without any ad hoc stipulations, since the loss of the one rule would not necessarily affect the output of the other. Hence, Dresher maintains that this is an argument in favor of his reanalysis of what has traditionally been termed Second Fronting as the loss of the independent rule of *a*-Restoration.

In addition to this first piece of evidence in favor of his rule loss analysis, Dresher also offers a further argument concerning another hitherto unexplained peculiarity of SF. This has to do with Back Mutation and a resultant gap in the forms recorded in the CP dialect. While forms such as *dægas* occur in VP with *æ* before a back consonant, in other instances with no following back consonant a later rule, called Back Mutation or Velar Umlaut (15), diphthongized front vowels here.[8]

(15) **Back Mutation (Velar Umlaut)**

$$\phi \rightarrow \hat{o} \; / \; \begin{bmatrix} +\text{syll} \\ -\text{back} \\ -\text{long} \\ +\text{stress} \end{bmatrix} \text{——} \begin{bmatrix} -\text{syll} \\ -\text{back} \end{bmatrix} \begin{bmatrix} +\text{syll} \\ +\text{back} \end{bmatrix}$$

As seen in the forms of (16), this rule caused diphthongization of *æ* to *æð* (=<*ea*>) in the plural of *fet* 'vat' and diphthongization of *e* to *eð* (=<*eo*>) in *wer* 'man'; note that it did not apply in *dægas* due to the following back consonant.

(16) **Mercian paradigms showing Back Mutation**

	'vat'		'man'	
	Sing.	Pl.	Sing.	Pl.
Nom	fet	featu	wer	weoras
Gen.	fetes	feata	weres	weora
Dat.	fete	featum	were	weorum
Acc.	fet	featu	wer	weoras

If the various spellings found in the manuscripts are any indication, it is clear what the relative chronology must be: first *fatu* through *a*-Restoration — or failure of First Fronting — then *fætu* after SF — or, as Dresher claims, after the loss of *a*-

[8] The actual pronunciation of what were written in Old English orthography as diphthongs has been a matter of considerable debate over the years. For the sake of simplicity, we adopt Dresher's analysis of these graphemes as true diphthongs, as nothing crucial appears to rely on this assumption.

Restoration — and finally *featu* after Back Mutation, i.e. the fronting feeds Back Mutation.

In EP we in fact find all these spellings, though *a* predominates. However, there is a peculiar gap in CP: it contains *a* spellings as well as *ea* in the environment before a consonant plus back vowel, but there are no forms with *æ* here, except of course before a back consonant, where Back Mutation was regularly blocked, as noted above. As opposed to EP, where all three stages are documented, in CP we only find the two end stages, but not the posited intermediate one. Hence there are forms such as *gabul* and *geabul,* but no forms such as **gæbul.* The puzzling question is why there are no spellings with *æ.* Dresher also asks how it can be that *a* was being fronted to *æ* before a back vowel — a dissimilation process, as he calls it — while at the same time front vowels were developing a following back vowel in the same environment — obviously an assimilation.

Dresher proposes to answer these questions through the following analysis. The development of the EP dialect is outlined in (17).

(17) **Development of the EP dialect**

a.	Stage I: *a*-Restoration is added		
	Underlying	/fæt + u/	/wer + as/
	a-Restoration	fatu	——
	Surface	fatu	weras
b.	Stage II: *a*-Restoration is lost		
	Underlying	/fæt + u/	/wer + as/
	Surface	fætu	weras
c.	Stage IIIi: Back Mutation begins in the low vowels		
	Underlying	/fæt + u/	/wer + as/
	Back Mutation		
	(æ only)	fæǝtu	weras
	Surface	fæǝtu	weras
	Orthography	featu	weras
d.	Stage IIIii: Back Mutation generalizes		
	Underlying	/fæt + u/	/wer + as/
	Back Mutation	fæǝtu	weǝras
	Surface	featu	weoras

In this dialect *a*-Restoration is lost before Back Mutation is added (stage II vs. stage III); hence all three forms are found here. In addition, Back Mutation begins here in the low vowels, but does not immediately generalize to non-low vowels, since they normally are not affected by this rule,[9] and only later does this rule generalize to the non-low vowels. In fact, as was pointed out previously, all three stages are found documented in this glossary. However, in accounting for these facts Dresher's analysis offers no great advantages over an analysis which includes the addition of a rule of SF, since if we add SF in stage II instead of losing *a*-Restoration, we obtain the same results.

[9] There is only one instance of a non-low vowel being back mutated.

However, when we turn to the CP, there is a striking difference between the two analyses. Here the Back Mutation of *e* and *i* is quite far advanced (two thirds of the time), but Back Mutation of *æ* is present only one third of the time. Furthermore, remember that we only find forms like *fatu* and *featu* but not the posited intermediate stage *fætu* here. Dresher suggests that *a*-Restoration was not lost until after Back Mutation entered the dialect of CP. Hence, *a*-Restoration bled off potential inputs to Back Mutation, as we see in the development of the dialect outlined in (18).

(18) **Development of the CP dialect**

a. Stage I: same as in (17a)

b. Stage II: Back Mutation is added

Underlying	/fæt + u/	/wer + as/
a-Restoration	fatu	———
Back Mutation	———	weðras
Surface	fatu	weðras
Orthography	fatu	weoras

c. Stage III: *a*-Restoration is lost

Underlying	/fæt + u/	/wer + as/
Back Mutation	fæðtu	weðras
Surface	fæðtu	weðras
Orthography	featu	weoras

Here stage I is the same as in the EP dialect; but in stage II Back Mutation is added while *a*-Restoration is still in the grammar. Hence, at this stage one only gets *fatu* (due to *a*-Restoration), but *weoras* (due to Back Mutation). When in Stage III *a*-Restoration is lost, Back Mutation, already present in its most general form, immediately applies to underlying forms like /fætu/ to produce *featu*. Therefore, surface *fatu* must go directly to surface *featu*, without ever passing through a surface form *fæatu*. Given that Back Mutation was already present in the grammar, Dresher's rule loss analysis of Mercian SF effectively predicts that *fætu* would never occur.

In summary, Dresher attempts "to show that what were previously considered separate puzzles surrounding the Mercian Second Fronting can both be solved by doing away with Second Fronting altogether, as far as it applies to the shift from *a* to *æ*, and instead attributing the change to the loss of the rule of *a*-Restoration." He goes on to claim that these problems cannot be handled in a theory which limits sound change to the addition of rules to the end of the grammar. Finally, he argues that the strength of his analysis lies in the phonological theory adopted for it, one which allows deeper levels of representation than just the surface level as well as the ordering of phonological rules and argues that more concrete, surface oriented theories without rule ordering supposedly cannot account for the data as well as his analysis does.

This account offered by Dresher is clearly very interesting, and if no more concrete analysis of the facts could be offered, then his conclusion that his more abstract type of theory is preferable would seem to hold true. However, I would like to argue that this is not so and outline an alternative solution which does adhere to the phonetic surface and eschews rule ordering, yet still manages to account for the facts as well as or better than Dresher's analysis. Since Dresher's analysis in essence only

deals with the fronting rule and not with the process of *æ*-Raising, I will be mainly concerned with the former process. I claim that both processes were sound changes, more or less in the traditional sense of the term — rules added to the end of the grammar, as Dresher puts it in standard generative terms — rules which operated on surface forms without rule ordering. Although a concrete theory of the type Dresher discusses may not be able to account for the data as well, I would argue that one which deals with synchronic variation seriously can.

Before we present our counteranalysis, note that by separating the raising of *æ* to *e* from the second fronting of *a* to *æ* and studying only the latter, Dresher neglects to relate the two changes to one another and, more specifically, to offer any reason for why *a*-Restoration should have been lost at all. We seem to be dealing here with a drag or push chain of sound changes, a concept made famous by another famous linguist associated with the Prague School, Andre Martinet (cf. Martinet 1955). Thus, the occurrence of precisely these two changes at roughly the same time does not seem to be fortuitous; instead, they should be viewed as interrelated changes, perhaps even a continuation of the phonetic tendencies which brought about the general First Fronting.

Dresher essentially offers two basic arguments in favor of his analysis. Let us deal with the failure of SF before *l* first. He claims that this is inexplicable unless Retraction existed as a separate rule in the Old English grammar and hence was not affected when *a*-Restoration was lost. However, there is no synchronic justification for postulating such a rule of Retraction before *l* in violation of Kiparsky's Alternation Condition (Kiparsky 1973): in relevant cases such as *awel* there are no surface alternations which might motivate such a rule. Why then should speakers have posited it together with underlying forms with *æ* which never surfaced? With *ald - ældra* there was a morphologically conditioned alternation with *æ* in the comparative, but this would only have suggested that Retraction was not a productive, i.e. exceptionless phonotactic rule of Old English. If this is so, why did SF fail before *l*?

To answer this question, consider the places where the First Fronting had failed in Mercian, namely before *w*, back *l*, and consonant plus back vowel. Note that all these phonetic environments are ones which could plausibly inhibit a fronting process, since they all involve back segments. Dresher himself, following others, admits that *l* was velarized in Old English (except in places where First Fronting did not fail), and that this was the reason for its influence. Now when SF came along, the only *a*'s left were in environments which up until then had resisted fronting: the environment before back glides and liquids (*w* and *l*) continued to resist fronting, whereas in the environment of a following back vowel the resistance was overcome, perhaps because it was a non-contiguous segment. The failure of fronting here was not due to the presence of a separate rule of Retraction being already present in the grammar, but rather to the continued backing influence exercised by the natural class of non-front glides and liquids. Therefore, *a*-Restoration was not lost, but rather Second Fronting occurred as a historical sound change, a fronting which was blocked by the continued backing influence of back sonorants.

Note furthermore that SF was not a "dissimilatory process", as Dresher claims, and therefore there is no inherent contradicition in its going on while Back Mutation was occurring. Back Mutation was clearly an assimilatory process, whereby front

vowels developed back off-glides before back vowels. However, the Second Fronting was not so conditioned by the the following back vowel and hence it was not "dissimilatory": it just so happened that due to First Fronting and the continued failure of fronting to apply before *a* and *l* the rule could only occur before back vowels, but SF was a spontaneous, unconditioned change, as opposed to Back Mutation. Thus there is no reason to view the occurrence of the two processes at the same time as incongruous.

Let us turn now to Dresher's second piece of evidence for his rule loss analysis, the lack of forms with *æ* in CP. Remember that in the earlier EP all three stages *fatu* ~ *fætu* ~ *featu* were represented, whereas in CP we only find *fatu* ~ *featu* Dresher attempts to account for this by the evolutions sketched in (17) and (18) above. Frankly, I have trouble dealing with these schemas. Dresher seems to treat each stage as discrete and yet somehow several of them are supposed to be represented in each glossary. For example, in EP he seems to say that *a*-Restoration is added, but again it is lost. How he intends the actual synchronic grammar behind these variations to be interpreted is in other words not clear.

I believe that instead of dealing with discrete stages here, we are confronted with synchronic variation in the grammar due to the variable rates of implementation on different rules, Second Fronting and Back Mutation, which were "sound changes in progress". I follow Dresher here in interpreting the orthographic variation in the texts as reflecting genuine synchronic variation and not merely as due to orthographic conservativism, although this is not the only possible interpretation. Let me outline now how I see this development.

At the time of the EP, the Second Fronting of *a* > *æ* was already underway, probably as a drag chain affect of *æ*-Raising. At this point it was a variable rule operating on surface forms and probably working its way through the lexicon ("lexical diffusion") to produce alternate pronunciations of given words such as *fatu* ~ *fætu*. At the same time, Back Mutation was just starting as an incipient tendency, beginning with low vowels, to diphthongize front vowels. Newly created forms such as *fætu* are then subject to Back Mutation, but not very frequently; non-low vowels are not yet affected.

Now in the CP dialect we have a similar and yet different story. By this later date, Back Mutation has "overtaken" Second Fronting, so to speak; Back Mutation has generalized to non-low vowels and become an obligatory rule, while Second Fronting is apparently still variable. Hence we find both older forms with neither rule applying such as *fatu* — which by now were perhaps becoming archaic or register-bound — together with newer forms to which both rules applied: *featu*. In addition, we find Back Mutation of the non-low vowels. However, due to the obligagory nature of Back Mutation at this point in time, it has resulted in a surface phonotactic constraint against sequences of *æ* followed by a back vowel; due to this phonotactic constraint, forms like *fætu* are no longer acceptable and hence are not found in the text. The two sound changes have been implemented at different rates, perhaps because Back Mutation was a patent conditioned assimilatory process, whereas fronting was a spontaneous non-assimilatory change. We see here an example of what Jakobson (cf. Jakobson and Waugh 1978) liked to call "dynamic synchrony": synchrony is not a static, frozen system like a still-frame in photography, but rather a dynamic system

with change as well as stability, with variations between older and newer forms coexisting in the language community.

This then is an outline of my counterproposal to Dresher's account of the Mercian Second Fronting. My analysis posits Second Fronting as a genuine sound change that ran its course in Old English times: it was a variable rule which applied to surface forms but was inhibited in backing environments, namely back glides and velarized liquids and was still optional when Back Mutation became obligatory in the CP dialect. There was no synchronic rule of Retraction before *l* nor was *a*-Restoration merely lost. The fronting which took place may well have been motivated by *æ*-Raising in a type of drag chain affect. Since my solution involves non-abstr t surface forms and no rule ordering, it follows that Dresher's analysis does not offer evidence in favor of a less constrained theory which allows such devices. QED.

REFERENCES

Bartsch, Renate and Theo Vennemann. 1982. *Grundzüge der Sprachtheorie. Eine linguistische Einführung.* Tübingen: Niemeyer.

Brunner, Karl. ^{3}1965. *Altenglische Grammatik. Nach der angelsächsischen von Eduard Sievers.* Tübingen: Niemeyer.

Campbell, A. 1959. *Old English Grammar.* Oxford: Clarendon Press.

Dresher, Bezalel Elan. 1980. "The Mercian Second Fronting: A Case of Rule Loss in Old English." *Linguistic Inquiry* 11: 47-73.

Hogg, R. M. 1977. "The Chronology and Status of Second Fronting." *Archivum Linguisticum* (n.s.) 8: 70-81.

Hooper, Joan B. 1976. *An Introduction to Natural Generative Phonology.* New York: Academic Press.

Jakobson, Roman and Linda Waugh. 1978. *The Sound Shape of Language.* Bloomington, Ind.: Indiana University Press.

Kiparsky, Paul. 1973. "Abstractness, opacity and global rules," in Osamu Fujimura (ed.), *Three Dimensions of Linguistic Theory.* Tokyo: TEC.

Kuhn, S. M. 1965. *The Vespasian Psalter.* Ann Arbor: University of Michigan Press.

Lass, Roger and John M. Anderson. 1975. *Old English Phonology.* Cambridge: Cambridge University Press.

Linell, Per. 1979. *Psychological Reality in Phonology.* Cambridge: Cambridge University Press.

Martinet, Andre. 1955. *Économie des changements phonétiques.* Berne: A. Francke.

Pullum, Geoffrey. 1976. "The Duke of York Gambit." *Journal of Linguistics* 12: 83-102.

Vennemann, Theo. 1974. "Words and Syllables in Natural Generative Grammar," in A. Bruck, R. A. Fox, and M. W. LaGaly (eds.), *Papers from the Parasession on Natural Phonology.* Chicago: Chicago Linguistic Society.

----------. 1978. "Universal syllabic phonology." *Theoretical Linguistics* 5: 175-215.