

1976

## Two Cases of Diachronic Rule Reanalysis in the Mercian Dialect of Old English

B. Elan Dresher

Follow this and additional works at: <https://scholarworks.umass.edu/umop>



Part of the [Linguistics Commons](#)

---

### Recommended Citation

Dresher, B. Elan (1976) "Two Cases of Diachronic Rule Reanalysis in the Mercian Dialect of Old English," *University of Massachusetts Occasional Papers in Linguistics: Vol. 2*, Article 12.

Available at: <https://scholarworks.umass.edu/umop/vol2/iss1/12>

This Article is brought to you for free and open access by the Graduate Linguistics Students Association (GLSA) at ScholarWorks@UMass Amherst. It has been accepted for inclusion in University of Massachusetts Occasional Papers in Linguistics by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

two cases of diachronic rule reanalysis  
in the  
mercian dialect of old english

b elan dresher

Introduction.

In this paper we will examine some aspects of the development of the Mercian dialect of Old English as exemplified in the Vespasian Psalter and Hymns (henceforth VP). In particular, we will be looking at a certain type of change which we shall call rule reanalysis. It is known that phonological rules can be added, lost or reordered; such changes bring about changes in the surface forms of a language. Finding ways to explain such innovations has been a central aim of generative diachronic linguistics. Yet, from the assumption that native speakers will always construct an optimal grammar from the data available to them, it follows that changes in surface forms will in turn affect the formulation of other rules in the grammar. This kind of rule reanalysis may often occur quite inconspicuously, for it does not necessarily change surface forms -- we would expect that rules are formulated to account for surface data, not to change them. We will claim that there are at least two cases in the history of Mercian

where developments forced a reanalysis of a rule in order to create an optimal grammar. Further, the positing of this reanalysis predicts otherwise irregular changes which occur at a later stage.

The chronology we will be adopting is essentially due to Campbell, 1959, and through Campbell, to Luick. When we use the term traditional, we are referring to this Luick-Campbell tradition. The chronological order of the sound changes discussed in this paper, adapted from Campbell is given below:

Stage I	:	W Germanic <u>a</u> becomes OE <u>ae</u> , except before nasals
Stage II	:	Breaking and Retraction
Stage III	:	<u>a</u> -Restoration
Stage IV	:	Second Fronting
Stage V	:	Back Mutation
Stage VI	:	Smoothing

This chronology is not universally accepted, and there exists another tradition, represented by Sievers and Brunner. Brunner believes that Back Mutation occurred before a-Restoration (and hence that Second Fronting did not exist), and he denies the reality of Smoothing, claiming that it was a purely orthographical phenomenon. I have not undertaken to examine all the evidence on which these chronologies are based, and it strikes me that much of it would be considered invalid by us, for it relies on just the kind of extrapolation from synchronic rule ordering that this paper argues against. Yet there is stronger evidence as well -- from documents and restructuring -- and the best we can do here is simply accept Campbell's chronology as one reconstruction which is at least as plausible as any other. The arguments we shall be making are to some extent independent of the details of this chronology, anyhow.

Mercian is a term used to imply all the Anglian dialects excluding Northumbrian, and we shall use it in particular for all stages of the dialect of OE which led up to the dialect of VP. This dialect is represented in its earlier stages by Mercian charters, three manuscripts of a glossary known as the Corpus, Epinal and Erfurt glossaries, and other manuscripts. The dialect of VP is generally believed to date from the mid-ninth century. As the beginning of the Germanic invasion of England is considered to date from c 450, we will be dealing with sound changes that occurred in the period c 450 - c 850 AD.

### 1. The Case of Extra Retraction.

In West Saxon, we have the following paradigm for masculine and neuter a-nouns with root vowel ae :

1.	<u>Sg.</u>	Masculine	Neuter	<u>Pl.</u>	Masculine	Neuter
		[day]	[back]		[days]	[backs]
Nominative		daeġ	baeċ		dagas	bacu
Accusative		daeġ	baeċ		dagas	bacu
Genitive		daeġes	baeċes		daga	baca
Dative		daeġe	baeċe		dagum	bacum

The ae alternation of (1) -- a when a back vowel stands in the following syllable, and ae elsewhere -- is characteristic of W-S phonology. Thus we also have singular-plural contrasts in other a-nouns such as hwael<sup>h</sup>hwalas [whale], staef<sup>h</sup>stafas [staff], faet<sup>h</sup>fatu [vessel] and dael<sup>h</sup>dalū [dale]. The traditional way to account for these alternations is to posit a rule of a-Restoration, which turns ae into a before a back vowel<sup>2</sup>. We will write a-Restoration as in (2):

2. a-Restoration.

$$ae \rightarrow a / \left[ \begin{array}{c} \text{---} \\ + \text{ stress} \end{array} \right] \times \left[ \begin{array}{c} + \text{ syll} \\ + \text{ back} \end{array} \right]$$

The only other rule we need to derive the forms of (1) is a rule that will palatalize g and c in the appropriate environments. We will write it as (3):

3. Palatalization.

$$\left[ \begin{array}{c} + \text{ cons} \\ + \text{ high} \end{array} \right] \rightarrow \left[ \begin{array}{c} - \text{ back} \\ - \text{ coronal} \end{array} \right] / \left[ \begin{array}{c} + \text{ syll} \\ - \text{ back} \end{array} \right] \text{---} \left( \left[ \begin{array}{c} + \text{ syll} \\ - \text{ back} \end{array} \right] \times \right) \#$$

Rules (2) and (3) suffice to generate the forms of (1). For example, the genitive singular and plural of daeg would be derived as in (4):

4.	Underlying	/daeg + es/	/daeg + a/
	Palatalization (3)	daeges	-
	<u>a</u> -Restoration (2)	-	daga

So far, we have been looking at W-S. In the dialect of VP, these forms look quite different:

5.	<u>Sg.</u>	Masculine	Neuter	<u>Pl.</u>	Masculine	Neuter
		[day]	[back]		[days]	[backs]
	Nominative	deġ	beċ		daegas	baecu
	Accusative	deġ	beċ		daegas	baecu
	Genitive	deġes	beċes		daega	baeca
	Dative	deġe	beċe		daegum	baecum

The forms in (5) exhibit one of the distinguishing characteristics of the VP dialect known as the Second Fronting. It is called the "second" fronting because West Germanic a had been fronted to ae at an earlier stage of OE; now OE a was being fronted in Mercian. Notice also that Second Fronting is the name given to the raising of ae to e, as well as the fronting of a to ae. In traditional accounts, these two changes are viewed as being part of the same process.

If we were to accept this view of Second Fronting, we would derive the nominative singular and plural of deġ as follows:

182

6.	Underlying	/daeg + Ø/	/daeg + as/
	Palatalization (3)	daeǵ	-
	<u>a</u> -Restoration (2)	-	dagas
	<u>Second Fronting</u>	deǵ	daegas

The different stages of the derivation in (6) represent the surface forms that existed at successive stages of the dialect of VP, but it is very unlikely that anyone would propose (6) as the synchronic derivation of the forms in (5). A comparison of the underlying forms of daeg- with their surface realizations in W-S and VP suggests a far simpler derivation:

		<u>Singular</u>		<u>Plural</u>		
	Underlying	W-S	VP	Underlying	W-S	VP
Nom.	/daeg + Ø/	daeǵ	deǵ	/daeg + as/	dagas	daegas
Acc.	/daeg + Ø/	daeǵ	deǵ	/daeg + as/	dagas	daegas
Gen.	/daeg + es/	daeǵes	deǵes	/daeg + a/	daga	daega
Dat.	/daeg + e/	daeǵe	deǵe	/daeg + um/	dagum	daegum

In the singular, VP has added a rule of ae-Raising, and the simplest derivation is as in (6). But in the plural, no new rules are needed to derive the VP paradigm -- we have only to omit a-Restoration. This last observation leads us to a new interpretation of the Second Fronting, which now must be considered to have involved two different kinds of changes: the change from ae to e is a case of rule addition, but the change from a to ae is a case of rule Loss. So the only rules needed to account for the forms of deǵ and beǵ in the VP dialect are Palatalization (3) and a new rule of ae-Raising, which we will write as (8):

8. ae-Raising.

$$ae \rightarrow e / \left[ \begin{array}{c} \text{---} \\ + \text{ stress} \end{array} \right] C_0 \left( \left[ \begin{array}{c} + \text{ syll} \\ - \text{ back} \end{array} \right] X \right) \#$$

We can further summarize our analysis up to this point by the following derivations:

		<u>West Saxon</u>		<u>Mercian (VP)</u>	
	Underlying	/daeg + Ø/	/daeg + as/	/daeg + Ø/	/daeg + as/
	Palat (3)	daeǵ	-	daeǵ	-
	<u>a</u> -Rest (2)	-	dagas	LOST	-
	<u>ae-Raise</u> (8)	NONEXISTENT		deǵ	-
	Surface	daeǵ	dagas	deǵ	daegas

It may be thought, given what we have said up until now, that Mercian never had a rule of a-Restoration in the first place. Evidence that this is not the case is the existence in VP of forms which appear to have undergone a-Restoration. These are: hwalas [whales], wyrtwalan [roots], and derivatives of galan [sing]. Campbell says that Second Fronting does not take place before l. Since he conceives of Second Fronting as a unified

process which changed a to ae and ae to e, he is led to the conclusion that ae-Raising (our rule (8)) also fails before l. There is only one relevant form in VP, hel [he concealed], which Campbell is forced to consider to be an error. In our analysis, however, there is no reason to expect ae-Raising to fail before l, and hence we have no reason to consider hel an error. Given the inconclusive nature of the evidence<sup>3</sup>, we have no reason to accept Campbell's claim about ae-Raising before l, and will continue on the assumption that hel is not an error, and that similarly the singular forms of hwalas had root vowel e after ae-Raising entered the dialect, and so too the singular of wyrtwalan, etc.

But if the forms with restored a before l provide some evidence for the earlier existence of a-Restoration (2), they also pose a perplexing puzzle: why was a-Restoration not lost when the variable X was l? There is no major class feature that distinguishes l in the sound system of Mercian. If rule loss is to be looked at as a form of simplification (as in Kiparsky, 1968), then the restriction of a-Restoration to the case where X is l is certainly a peculiar type of simplification.

Now, it may well be the case that we are simply dealing with an odd fact about Mercian which has no further explanation. We do not yet know enough about language change to be able to state that rules cannot be lost in this way. Nevertheless, the development in Mercian is curious enough to lead us to take a closer look at the phonology of this dialect at the time of the loss of a-Restoration. To gain some further insight into this problem, let us first go back to an earlier stage of OE.

At an early stage in the development of OE, which we may call Stage I, the stressed vowel in all of the following words was ae:

10. Stage I: daeges<sup>4</sup> ([day] gen sing), daegas ([days] nom pl)  
hwaeles ([whale] gen sing), hwaelas ([whales] nom pl)  
faet ([vessel] nom sing), faetu ([vessels] nom pl)  
haerg ([shrine] nom sing), haergum ([shrines] dat pl)  
saelm ([psalm] nom sing)  
awel<sup>5</sup> ([hook] nom sing)  
saex<sup>5</sup> ([knife] nom sing)  
haerpe ([harp] nom sing)

To the grammar of Stage I were soon added two rules, traditionally called Breaking and Retraction. These terms describe early changes undergone by the front vowels when they are followed by w, h, and l and r followed by a consonant. Sometimes the vowels are retracted in these environments, ie, ae→a, e→o, and i→u, and sometimes they are broken, ie ae→ea, e→eo, and i→io. The distribution of Breaking and Retraction differs across the various dialects of OE, and there is considerable variation even within dialects. However, we can reconstruct the following earliest stages of Breaking and Retraction in OE:

11.	Vowel	_____w	_____lC	_____rC	_____h
	<u>ae</u>	<u>a</u>	<u>a</u>	<u>ea</u>	<u>ea</u>
	<u>ae</u>	<u>a</u>	<u>ae</u>	<u>ae</u>	<u>ea</u>
	<u>e</u>	<u>eo</u>	<u>e</u>	<u>eo</u>	<u>eo</u>
	<u>e</u>	<u>e</u>	<u>e</u>	<u>e</u>	<u>eo</u>
	<u>i</u>	<u>io</u>	<u>i</u>	<u>io</u>	<u>io</u>
	<u>i</u>	<u>i</u>	<u>i</u>	<u>i</u>	<u>io</u>

(11) is somewhat oversimplified, but is a fair view of the situation that we actually find in OE. There are many special environments in which the rules either fail or give results that are different from those on the chart<sup>6</sup>, but as far as I can see, these special cases do not affect our argument. So, for our purposes, (11) is a reasonable approximation of the earliest effects of Breaking and Retraction, and we will write the rules as (12) and (13)<sup>7</sup>:

12. Breaking.

$$\emptyset \rightarrow \left[ \begin{array}{l} + \text{syll} \\ + \text{back} \\ - \text{high} \\ \alpha \text{ low} \\ -\alpha \text{ round} \end{array} \right] / \left[ \begin{array}{l} + \text{syll} \\ - \text{back} \\ \alpha \text{ low} \\ < - \text{long} > \\ + \text{stress}^a \end{array} \right] \rightarrow \left( \begin{array}{l} \left[ \begin{array}{l} \beta \text{ cons} \\ -\beta \text{ voiced} \\ + \text{cont} \\ + \text{back} \\ + \text{high} \end{array} \right] \\ \left[ \begin{array}{l} + \text{son} \\ + \text{cons} \end{array} \right] \end{array} \right) \left[ - \text{syll} \right] \rightarrow b$$

where: b → a  
 (β=) → a

13. Retraction.

$$\left[ \begin{array}{l} + \text{syll} \\ - \text{back} \\ + \text{low} \end{array} \right] \rightarrow [+ \text{back}] / \left[ \begin{array}{l} \text{_____} \\ + \text{stress} \end{array} \right] \left( \begin{array}{l} \left[ \begin{array}{l} - \text{syll} \\ - \text{cons} \\ + \text{back} \end{array} \right] \\ \left[ \begin{array}{l} + \text{son} \\ + \text{cons} \\ + \text{lat} \end{array} \right] \end{array} \right) \left[ - \text{syll} \right]$$

Notice that (13) must be ordered before (12) in order to get retraction of ae before w, and not breaking. In the order where (12) precedes, we would have to put an extra condition on (12) to prevent it from applying to ae before w. We have written Retraction ignoring the fact that long ae does not retract before lC. This is because Mercian had no long ae at this stage. Other dialects would have to add a condition to the rule.

Breaking and Retraction affected some of the forms listed in (10), and produced the next stage of the language, which we will call Stage II, in which the relevant forms were as shown in (14):

14. Stage II : daeges, daegas, hwaeles, hwaelas, faet, faetu,  
hearg, heargum, salm, awel, seax, hearpe.

Given the data of Stage II, it is impossible to formulate a retraction rule that is any more general than (13). But now consider the data of Stage III, which is the stage immediately following the addition of a-Restoration (2):

15. Stage III: daeges, dagas, hwael, hwalas, faet, fatu,  
hearg, heargum, salm, awel, seax, hearpe.

At Stage III, we observe the following retracted forms: dagas, hwalas, fatu, salm and awel. The first three forms are produced by a-Restoration (2), and the other two can be derived by Retraction (13). But now no speaker learning the language would posit rule (13) to account for these cases. For we are assuming that native speakers will always try to formulate the most general rules possible, and given a choice between a grammar that requires two rules, and a grammar that requires one, they will always prefer the grammar with one rule. Therefore, it will be observed that retraction occurs in the environments \_\_w and \_\_lC, as in Stage II; but that unlike in Stage II, it is now also the case that retraction occurs in the environment \_\_l [V, + back]. It has been claimed that in English, l in the environments \_\_C and \_\_g [V, + back] are all the cases of back l when a front vowel precedes. In other words, OE effectively contained a rule of l-Backing like rule (16):

16. l-Backing.

$$\left[ \begin{array}{l} + \text{ cons} \\ + \text{ son} \\ + \text{ lat} \end{array} \right] \rightarrow [+ \text{ back}] / \left. \left. \left. \begin{array}{l} + \text{ syll} \\ + \text{ back} \\ [+ \text{ cons}] \end{array} \right\} \right\}$$

l-Backing may apply in more environments than are specified by (16), but (16) will suffice for our purposes.

Given a rule such as (16), we can see that Retraction occurs before back l and w, which is also a back sonorant. Therefore, if (16) is ordered before Retraction, a more general Retraction rule can be written:

17. Retraction.

$$\left[ \begin{array}{l} + \text{ syll} \\ - \text{ back} \\ + \text{ low} \end{array} \right] \rightarrow [+ \text{ back}] / \left[ \begin{array}{l} \text{---} \\ + \text{ stress} \end{array} \right] \left[ \begin{array}{l} + \text{ son} \\ + \text{ back} \\ - \text{ syll} \end{array} \right]$$

At Stage III, then, the grammar contained the following rules <sup>9</sup>:

18. Rules at Stage III: Palatalization (3)  
l-Backing (16)  
Retraction (17)  
Breaking (12)  
a-Restoration (2)



We are now finally in a position to account for the survival of hwalas, galan etc, into the next stage of the language, when ae-Raising (5) entered the grammar and a-Restoration was lost to it. For it now appears that a-Restoration (2) was in fact lost in its entirety; the more general Retraction rule (17), which had replaced rule (13) at Stage III, remained in the grammar to produce a in the words with l followed by a back vowel.

19. Stage IV : deges, daegas, hwel, hwalas, fet, faetu,  
hearg, heargum, salm, awel, seax, hearpe.

20. Rules at Stage IV: Palatalization (3)  
l-Backing (16)  
Retraction (17)  
Breaking (12)  
ae-Raising (8)

## 2. The Case of the Unexpected Raising.

Now we will look at another case where an apparently irregular change is caused by a reanalysis of a rule which has no immediate effect on the data. Recall that the rule of ae-Raising (8), which entered the grammar at Stage IV, applies at that stage to every stressed ae which is a potential input to the rule, except in the case where a back vowel stands in the next syllable. This must be the case, because the rule has to be formulated so as to raise dege but not daegas, fet but not faetu, and hwel. The other forms in (19) do not play a rôle in deciding how to formulate ae-Raising because they do not have an ae at the stage in the derivation where ae-Raising applies.

The irregularity in question occurs in the aftermath of the operation of a new rule called Smoothing, which had the effect of monophthongizing diphthongs that stood before back consonants. Thus, eo and io became e and i respectively, and ea (=aea) became ae, when it stood directly before a back consonant. But when r intervened between the vowel and the back consonant -- for Smoothing occurred here too as will be discussed below -- the ae was raised to e. Such an ae-raising pattern cannot be accounted for by our rule (8).

Once again, it is possible that no principled explanation for these facts exists. But unlike the case involving Retraction, the raising pattern of "smoothed" ae is not only unpredictable by the rules of our grammar, but is even incompatible with them. So in this case there is no doubt that a reanalysis of ae-Raising (8) is going to be required. The only question that remains is: why did the reanalysis occur ?

Consider the following Mercian paradigm for neuter a-nouns:

21.		Singular	Plural
		[vessel]	[vessels]
	Nominative	fet	featu
	Accusative	fet	featu
	Genitive	fetes	feata
	Dative	fete	featum

In the singular, fet is just like beç, as we would expect. But in the plural, we have not faetu as in Stage IV, but featu. The occurrence of ea is due to a new rule called Back Mutation (also known as Velar Umlaut), which changes short ae, e and i to ea, eo and io respectively, when a back vowel stands in the next syllable. Although all dialects of OE had this rule, they differed in which consonants were allowed to intervene between the two vowels. In Kentish, it could be any consonant; in W-S it could be a labial or a liquid (f, p, w, m, l, r), ie anything except back and dental consonants, and in Mercian it could be any consonant except the back ones (c, g).<sup>10</sup> Hence, we see daegas, not \*deagas. Except for rare cases, only one consonant was allowed to intervene between the two vowels. We will write the Mercian Back Mutation rule as (22):

22. Back Mutation.

$$\emptyset \rightarrow \left[ \begin{array}{l} + \text{ syll} \\ + \text{ back} \\ - \text{ high} \\ \alpha \text{ low} \\ - \text{ round} \end{array} \right] / \left[ \begin{array}{l} + \text{ syll} \\ - \text{ back} \\ \alpha \text{ low} \\ - \text{ long} \\ + \text{ stress} \end{array} \right] \text{ — } \left[ \begin{array}{l} + \text{ cons} \\ - \text{ back} \end{array} \right] \left[ \begin{array}{l} + \text{ syll} \\ + \text{ back} \end{array} \right]$$

The addition of Back Mutation creates a new stage, and the language now contains the following sample forms:

23. Stage V : deges, daegas, hwel, hwalas, fet, featu,  
hearg, heargum, salm, awel, seax, hearpe.

A comparison of (23) with the forms of Stage IV, listed in (19), reveals that only one form has been changed: where before we had faetu, we now have featu. Yet we will show that this one change was sufficient to make possible a simpler formulation of the ae-Raising rule. A native speaker of the new generation, considering the data of Stage V, will observe, like his Stage IV predecessor, that deges alternates with daegas; but, while fet still has an e as the stressed vowel, featu has neither e nor ae, and so, like hwalas, seax, and all the other words in the list, it does not necessarily bear directly on the formulation of ae-Raising. For if Back Mutation is ordered before ae-Raising, then the only form that must be prevented from raising is daegas. While rule (8) will still produce the correct forms, we can now achieve the same results with a new ae-Raising rule :

24. ae-Raising.
$$ae \rightarrow e / \left[ \begin{array}{c} \text{---} \\ + \text{ stress} \end{array} \right] \left[ \begin{array}{c} - \text{ syll} \\ - \text{ back} \end{array} \right]$$

(24) is clearly simpler than (8), since (8) is actually two rules collapsed by use of parenthesis notation.

It is interesting how several unrelated processes have conspired to allow two such unrelated rules as (8) and (24) to have equivalent empirical consequences. (8) allows raising everywhere except when a back vowel stands in the next syllable. But when a back vowel stands in the next syllable, Back Mutation bleeds every input to Raising except when the intervening consonants are g or c, which are back consonants. In the case of the other back consonants, h has already caused Breaking, and l and w have caused Retraction. Furthermore, when a back vowel does not follow, c and g undergo Palatalization, and are no longer back, so that there are no back consonants before ae except when a back vowel follows. The only other cases where (24) and (8) would make different predictions are when  $C_0$  in (8) is null or greater than 1. I know of no cases where it is null; when greater than 1 -- ie, when a geminate or group intervened between the two vowels -- rule (24) would raise if a back vowel followed, but rule (8) would not.

In principle, this would be a clear test; however, there seems to have been some uncertainty over whether Back Mutation applied to such cases or not. At Stage IV, such forms would undoubtedly occur with ae; the fact that they sometimes had ea in Stage V could have reduced their worth as evidence bearing on ae-Raising. Except for these uncertain cases, then, it was possible, without changing the data, to reanalyze the Stage V grammar to produce derivations such as those in (25):

25.	Underlying	/daeg + e/	/daeg + a/	/hwael + as/
	Palat. (3)	daege	-	-
	l-Back(16)	-	-	hwaelas
	Rtrctn(17)	-	-	hwalas
	Breakg(12)	-	-	-
	Back -			
	Mut(22)	-	-	-
	<u>ae</u> -Rsg(24)	dege	-	-
	Surface	dege	daega	hwalas
	Underlying	/faet + a/	/haerg + ø/	
	Palat (3)	-	-	
	l-Back(16)	-	-	
	Rtrctn(17)	-	-	
	Breakg(12)	-	hearg	
	BckMut(22)	feata	-	
	<u>ae</u> -Rsg(24)	-	-	
	Surface	feata	hearg	

The fact that there is virtually no empirical difference between having (24) in the grammar as opposed to (8) is due, as we have observed, to a convergence of facts having to do with back vowels and back consonants. If at a later stage the grammar changes in such a way as to produce forms with ae followed by a back consonant with no back vowel in the following syllable, or forms with a back vowel in the following syllable with no back consonant immediately following ae, then we will have clear crucial evidence that will force a choice between the two ae-Raising rules.

Fortunately, a rule soon entered the Mercian dialect which created exactly the kinds of forms we are looking for. This is the rule of Smoothing mentioned earlier, so-called because it "smoothed" out all diphthongs that stood before a back consonant. The rule is given in (26):

26. Smoothing.

$$[+ \text{syll}] \rightarrow \emptyset / \left[ \begin{array}{l} + \text{syll} \\ + \text{stress} \end{array} \right] \text{ — } \left( \left[ \begin{array}{l} + \text{cons} \\ + \text{son} \\ - \text{nasal} \end{array} \right] \right) \left[ \begin{array}{l} + \text{cons} \\ + \text{back} \end{array} \right]$$

Clearly, Breaking (12) is now a very vulnerable rule. Since it is impossible to recover the fact that ae was broken before h and r followed by a back consonant, Breaking must be restricted to (27):

27. Breaking.

$$\emptyset \rightarrow \left[ \begin{array}{l} + \text{syll} \\ + \text{back} \\ - \text{high} \\ \alpha \text{ low} \\ - \text{round} \end{array} \right] / \left[ \begin{array}{l} + \text{syll} \\ - \text{back} \\ \alpha \text{ low} \\ - \text{long} \\ + \text{stress} \end{array} \right] \text{ — } r \left[ \begin{array}{l} - \text{syll} \\ - \text{back} \end{array} \right]$$

If we look again at the forms in (23), we can see that seax, hearg and heargum will no longer undergo Breaking. They will start out with underlying ae, and will thus become subject to ae-Raising. Notice that these words will show us what kind of raising rule is actually in the grammar. In /saehs/ we have a back consonant immediately following a stressed ae; in /haergum/ we have a back vowel in the following syllable, and even though g is a back consonant, r is not. If the grammar still contained rule (8) we would expect to get \*sex and \*haergum; if the grammar contained rule (24), we would expect saex and hergum, which are in fact just the forms we find in VP. Other relevant forms in VP are erc [ark] (from earc), gesnerc [dwindled] (from gesnearc), merglice [marrowy] (from mearglice), various forms of naeht [night] (32 times with ae, twice with e), maehte [could], various forms of maeht [power] and maehtig [powerful] (many times ae versus once with e), forms of slegen [beat], fegernis [beauty], meg, mege, maegon [can] (and once the totally exceptional magun), megen [power] (many times e

versus once maegne), <sup>12</sup> forms of deg, daegas [day] (many times with the forms as given in (5), next to deg once, degas once, dega once, degum four times, dagum once).

At Stage VI, then, we have the following forms:

28. Stage VI : deges, daegas, hwel, hwalas, fet, featu,  
herg, hergum, salm, awel, saex, hearpe.

29. Rules at Stage VI:

Palatalization	(3)
<u>l</u> -Backing	(16)
Retraction	(17)
Breaking	(27)
Back Mutation	(22)
<u>ae</u> -Raising	(24)

To answer the original question of this section, then, we have seen that the apparently irregular ae-raising that followed the introduction of Smoothing was in fact perfectly regular, and a consequence of the reanalysis that ae-Raising underwent -- or, better had to undergo -- when Back Mutation was added to the grammar. For purely formal reasons, ae-Raising had been reanalyzed from a rule which referred to back vowels to one that referred to back consonants.

### Conclusion.

We have presented two cases of rule reanalysis in the history of one dialect of OE. Both cases follow a similar scenario. In each case we start with a rule being added to the grammar (Retraction; ae-Raising). This rule changes the data in such a way as to force a reanalysis of the earlier rule. Then there follows a stage where new forms are created, either by rule loss (a-Restoration) or the addition of a rule (Smoothing, followed by the loss of parts of Breaking and restructuring). In each case, this third change had some apparent irregularities which in fact turned out to be completely predictable consequences of the earlier reanalysis.

The observation that rules are constantly susceptible to reanalysis is not new, and has been used to show that it is wrong to draw inferences about the proper synchronic analysis of a language from evidence concerning earlier stages of that language. However, by looking at the way rules interact when they are added, lost or reordered, it may be possible to make hypotheses about what kinds of rules must have existed at an earlier stage, and such hypotheses in turn bear directly upon principles of synchronic analysis. For example, in the ae-raising case, we had to choose between two different ae-Raising rules. One rule was formally simpler, but it had to be ordered after Back Mutation, which bled many of its environments. The other rule was more complex, but it applied more "maximally". The diachronic evidence suggests that in this case simplicity was preferred to avoidance of

bleeding order.

This is not to say that diachronic evidence of this kind should dictate synchronic principles. For although we claim to have accounted for two particular occurrences in the history of Mercian, there are many other changes which we have not attempted to account for, and it may turn out that similar diachronic arguments in other cases will support a different synchronic analysis. On the other hand, if diachronic evidence consistently supports certain synchronic principles, analyses in accord with those principles will carry that much more weight.

#### Footnotes.

<sup>1</sup> Campbell, section 1.

<sup>2</sup> Kuhn, 1938, says that OE a before a back vowel (and also before w and l plus consonant -- see the section on Retraction) remains from West Germanic a, and was never fronted to ae. If he is right, then, at least at an early stage, we would not have a backing rule from ae to a, but a fronting rule from a to ae. Campbell (section 157) argues against this view on the grounds that OE slean must have developed from \*slaehan, since slean cannot be produced except by Breaking, which operated only on front vowels. If Primitive Germanic \*slahan became \*slaehan, then Prim. Gmc. \*drazan must have become \*draezan; it follows that OE dragan is derived by a-Restoration and is not original.

<sup>3</sup> The Middle English evidence for VP ael as opposed to el is inconclusive, and the number of examples is small. SRT0 d'Ardenne, 1961, cites some ME spellings in eal rather than el, which she suggests shows that VP should have had ael. However, as she points out, eal is often seen for el of various origins, eg French, as in beal ami (p 185).

<sup>4</sup> I do not wish to take a stand on the question of when Palatalization entered the language, so I will not represent it until Stage III.

<sup>5</sup> The x in saex represents hs where we are using h to represent a voiceless velar fricative.

<sup>6</sup> For example, retraction of ae fails in the group -aewi-, the breaking of i fails in the group -iwi-, and in Anglian, in -iri-; i is retracted to u between w and r followed by a consonant in non-W-S dialects, e is broken before lh, and before lc only when s precedes, etc. I will not attempt to account here for these developments.

<sup>7</sup> There has been a great controversy concerning the nature and status of the sounds represented by ea, eo and io. We are representing them

as diphthongs, following Luick; Sievers; Zeuner, 1881; Campbell, 1959; Brunner, 1953; and Kuhn, 1938, 1961. Stockwell and Barritt, 1951, 1955, 1961; and Hockett, 1959, have argued that they represented back monophthongs, and others such as Daunt, 1939, believe that they represented ae, e and i followed by a diacritic indicating the nature of the following consonant. The last view has been widely criticized, and we do not accept it, but it is unimportant to our analysis what the exact nature of these sounds were. Most of those who accept the diphthongal interpretation agree that ea represented aea, and that is how we are treating it here.

8 For example, by d'Ardenne (p 185).

9 It may be objected that Breaking and Retraction did not create alternations, and hence simply caused restructuring and dropped out of the language. In the case of Retraction, the rule could have remained productive if there had been adjectives ending in l, because they would combine with suffixes such as -a, -es, -um, -re, -ra, -ne, and these would show an alternation. Thus an adjective like smael [small] would have declined in Stage II: smalne, smaeles, smaele, smalra, in the accusative and genitive singular and plural. Unfortunately, I am not aware of any actual such cases.

As for Breaking, our analysis does not depend on whether it is a rule or not, and similarly for the w case of Retraction. If Retraction was not preserved in the environment before w, then we would not have to add [+ lateral] to the environment of (17), because our principle that rules are written as generally as possible would allow the rule to be written in its most general form.

10 So Luick; but Sievers believed that Back Mutation applied before all consonants, and was later smoothed away before back consonants. If this was so, then ae-Raising could have been written perfectly generally at this stage and the reanalysis we are proposing would have to have been postponed until the next stage. This point will be discussed further in the section on Smoothing.

11 Or, if there was no longer a rule of Breaking, we will have to assume that Smoothing reordered with ae-Raising, or else all smoothed ea will show ae. In fact, this is the situation in the Corpus Glossary (CP), which is written in the form of Mercian somewhat older than that found in VP. In CP we find faerh [pig], haerg [shrine], saex [knife] etc. We have not included this stage in our narrative, because CP often has ae for e, and such a stage may never have existed. If it did, then there existed a stage where ae-Raising did not occur before back consonants, or back consonants preceded by r. In the next stage, restructuring occurred, and ae-Raising applied to the restructured forms. Yet if there was a stage where haerg, faerh existed, should not ae-Raising have been reanalyzed to take these into account? We can only note that in order to block both saex and haerg from raising, we would require an ae-Raising rule consisting of several subparts, and such a rule would be very complex. We may speculate that the rule was then simplified to (24).

Note that if CP represents a real stage, it is no longer important to our argument whether Back Mutation applied before back consonants or not.

The common thread that runs through all these scenarios is still : a reanalysis occurred, we can explain why it occurred, and the reanalysis accounts for the raising pattern found in VP.

<sup>12</sup> Since VP did not indicate palatalization marks, it is possible that the exceptional forms maegne and degas, dega, etc, are due not to irregular ae-Raising but to irregular Palatalization.

### Bibliography.

- Brunner, K, "The Old English vowel phonemes", 1953, English Studies 34, 247-251.  
 -----, Altenglische Grammatik nach der angelsächsischen Grammatik von Eduard Sievers, 1965, (third revised edtn), Tübingen: Max Niemeyer.
- Campbell, A, Old English Grammar, 1959, Oxford: Clarendon Press.
- Chomsky, N and Halle, M, The Sound Pattern of English, 1968, New York: Harper and Row.
- d'Ardenne, SRT0, Pe Liflade and te Passiun of Seinte Iuliene, 1961, The Early English Text Society, No 248, London: Oxford University Press.
- Daunt, M, "Old English sound changes reconsidered in relation to scribal tradition and practice", 1939, Transactions of the Philological Society, 1939, 108-137.
- Hockett, CF, "The stressed syllabics of Old English", 1959, Language 35, 575-597.
- Kiparsky, P, "Historical Linguistics", 1971; in W Dingwall (ed), A Survey of Linguistic Science, University of Maryland Press, 576-649.  
 -----, "Linguistic Universals and Linguistic Change", 1968; in E Bach and RT Harms (eds) Universals in Linguistic Theory, New York: Holt, Rinehart and Winston, 171-202.  
 -----, "On the evaluation measure", 1974; in A Bruck, RA Fox and MW Lagaly (eds), Papers from the Parasession on Natural Phonology, Chicago Linguistic Society, 328-337.
- Kuhn, S, "A grammar of the Mercian dialect", 1938, Chicago: Chicago University Theses, Vol 4.  
 -----, "On the syllabic phonemes of Old English", 1961, Language 37, 522-538.  
 -----, "The Old English digraphs: a reply", 1955, Language 31, 390-401.  
 ----- and Quirk, R, "Some recent interpretations of Old English digraph spellings", 1953, Language 29, 143-156.
- Stockwell, RP, and Barritt, CW, "Some Old English graphemic-phonemic correspondences -- ae, ea, and a", 1951, Washington DC: Studies in Linguistics: Occasional Papers, No 4.  
 -----, "The Old English short digraphs: some considerations", 1955, Language 31, 372-389.  
 -----, "Scribal practice: some assumptions", 1961, Language 37, 75-82.
- Sweet, H, (ed), The Oldest English Texts, Early English Text Society, OS 83, London: N Trübner & Co.
- Zeuner, R, Die Sprache des Kentischen Psalters, 1881, Halle: Max Niemeyer.