

Variation in Past Tense Formation in the History of English

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1 Introduction

English has two classes of verbs which are distinguished by the way in which they form the past tense. The regular (weak) verbs form the past tense by the addition of a dental suffix (*walk/walked*), while in the irregular (strong) verbs there is an alternation of the root vowel (*drive/drove*). The strong system is the remnant of the Indo-European ablaut while the weak system is an innovation within Germanic. In English the vast majority of verbs are consistently conjugated either weak or strong. A number of the verbs that have (or appear to have) alternate past tenses might in fact be argued to represent separate lexical items. For instance, the verb *fly* has the irregular past *flew* while the past tense of *to fly out* (in baseball) is usually the regular *flied out*. Kim 1991 argue that *fly out* is a denominative derived from the noun *fly ball* and show that verbs derived from nouns in general take regular inflection, even when their stems are homophonous with an irregular verb (compare *high-sticked* in hockey not *high-stuck*). A second group which probably falls into this category are verbs like *hang*, *lie/lay*, and *shine*, which are descended from pairs of Old English verbs that were strong when used intransitively but weak when transitive. The appearance of an alternation between weak and strong conjugation for these two groups thus could represent confusion between two lexical items rather than true alternative past tenses to a single verb.

Only a small number of verbs actually have two past tenses in use which have no distinction in meaning. Some of the verbs with semi-weak pasts *crept*, *wept*, *dreamt*, *leapt* also have regular weak pasts *creeped*, *wepted*, *dreamed*, *leaped* and two originally weak verbs, *dive* and more recently *sneak* also have strong pasts in current use (*dived/dove sneaked/snuck*). If, however, as is often supposed, irregular forms are stored in the lexicon while the regular forms are created anew each time by rule,

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(Bybee and Slobin 1982, Kiparsky 1982, Prasada and Pinker 1993, etc.), even this small amount of variation becomes a problem since either a strong form is stored and can be accessed or it is not and a weak past must be formed. Cases in which either outcome is possible are excluded (the Elsewhere condition Kiparsky 1982).

These models, however, refer to the production of individuals. It may perhaps be the case that the variation in past tense formation is not an individual, but rather a community feature, perhaps associated with dialect. Thus while most people would recognize both forms, they would use only one themselves. By self-report at least some people claim to use both forms, but the unreliability of self-report for this sort of data makes it impossible to decide the question at this point. All the cases mentioned above are (fairly) recent innovations, and it might therefore be supposed that the variation they exhibit is short-term variation connected to their transition from one conjugation to the another and does not represent a stable situation. In this way, the variation is removed from the individual grammar and thus does not cause problems for theories of inflection.

The Modern English situation, however, may not be the “normal” one. Variation in past tense formation in earlier stages of English was extremely widespread, and often lasted for centuries. Moreover, evidence from writers such as Chaucer show that there was variation at the individual as well as the community level. In this paper I examine this variation in light of the proposals about the representation of inflected forms mentioned above, and especially the implication that uniformity and not variety is the norm for inflected forms. The fact that at least on the surface there appears to be a great discrepancy in the amount of variation tolerated in the inflection of the past tense at different times is one that requires an explanation.

The data used in this study is taken from the Oxford English Dictionary supplemented by the ablaut studies of Bülbrung 1889, Hannsen 1906, Kerns 1935, Long 1944, Rettger 1934, and Wackerzapp 1890, as well as Michelau 1910, a survey of weak forms. The data from the OED includes all the Old English strong verbs which have survived to the present day (136 verbs: 72 strong, 64 weak), excepting a few with very complicated history.

2 Variation in the formation of the past tense

A preliminary survey based on the information given in the OED shows that variation, at least in the community, was very widespread in earlier centuries. Of the 136 verbs examined, only 18 (13%) show no variation at all since 1000 AD. Assuming as outlined above, that uniformity is the norm and variation is only associated with change, we might expect that in verbs which remain strong (which I will refer to as Class A), the variation would be sporadic representing error, while in Class B (the verbs which have become weak) there might be a one or two century transition period during the change from strong to weak (possibly with sporadic variation preceding). The pattern

would be as in Figure 1.

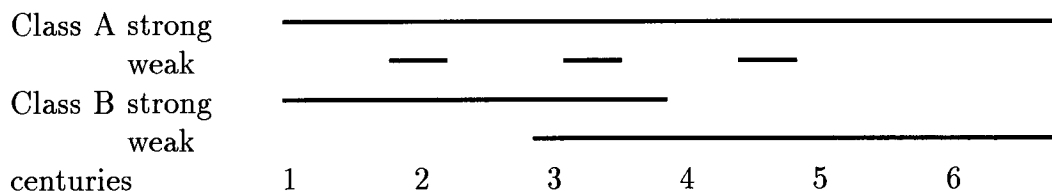


Figure 1: Hypothesized pattern of variation assuming uniformity of inflection as the norm

The pattern of variation found is quite different, however, as Table 1 illustrates.

centuries of variation	Class A	Class B
1 century	6 (.12)	7 (.13)
2 century	9 (.18)	7 (.13)
3 century	7 (.14)	11 (.20)
4 or more	15 (.30)	24 (.43)
sporadic	12 (.26)	7 (.13)
total	49	56

Table 1: Number of centuries of continuous variation in verbs whose first recorded weak form (preterite or past participle) is in the 11-16 century (data from the OED)

The only confirmation of the hypothesis comes from the fact that Class A (verbs which remain strong) has a relatively high amount of sporadic variation (26%). Class B (verbs which become weak) has only half as much. Otherwise the largest group of verbs (from both Class A and Class B) varies for 4 or more centuries.

3 Possible sources of variation

The previous section gives an overall picture of the variation in past tense formation based on the information available in the OED. There are a number of problems with this data, however, which might lead to false impressions. First, since the OED lumps all data together, it might be the case that the variation is at the level of the community and that no speaker in fact makes use of more than one form. The variation described above in this case might result from the presence in the community of older/conservative and younger/innovative speakers. A second possibility is that

the variation is attributable to the conservative force of certain genres such as poetry which can artificially keep archaic forms alive. A final possible source of variation at the level of the community is dialect mixture. Since the OED does not consistently distinguish dialect forms, the variation may simply be the result of considering all dialects together. In the remainder of this section I will address each of these possibilities in turn.

3.1 Variation at the individual level

The first question to ask about the OED data is whether the variation it records really represents individual variation or only variation within the community. The obvious way to test this is to look in detail at the writing of individuals. Chaucer is a good test case since he was a very prolific writer and his writings have been concordanced. A search through the Tatlock and Kennedy 1963 concordance produced 24 verbs which were strong in OE for which Chaucer used both weak and strong past tense forms. Setting aside 7 cases which had fewer than 5 past tense forms total (too few to be useful), the frequency of weak past occurrence for the remaining 17 is given in Table 2. Paired examples are given in (1) and (2).

verb	strong pasts	weak pasts	percent weak	verb	strong pasts	weak pasts	percent weak
stick	2	10	83	weave	7	1	13
walk	3	10	77	stretch	7	1	13
creep	5	6	55	grow	8	1	11
sleep	18	14	44	laugh	19	2	10
weep	28	20	42	quake	12	1	8
awake	7	4	36	drench	23	2	8
wake	9	4	31	shine	31	2	6
pluck	5	1	17	smite	35	1	3
shriek	6	1	14				

Table 2: Originally strong verbs which show both weak and strong past tense forms in Chaucer.

- (1) a. And seyde thus: 'For I ne kan nat fynde
A man, though that I *walk'ed* into Ynde (C.Pard.722)
- b. And so bifil that in his slep him thoughte
That in a forest faste he *welk* to wepe
For love of her that him this peyne wroughte (TC.5.1235)

- (2) a. Adoun by olde Januarie she lay,
 That *sleep* til that the coughe hath hym *awak'ed*.
 Anon he preyde hire strepen hire al nak'ed, (E.Mch.1957)
- b. And *slepte* hire firste sleepe and thanne *awook*;
 For swich a joye she in hir herte took, (F.Sq.367)

Clearly, then, variation at the individual level cannot be entirely ruled out, but the question of what this variation represents is still open. The verbs seem to fall into two classes, those that are mainly strong with only the odd weak past and those in which the amount of variation is quite robust. It is not entirely clear to me how to characterize this difference. It might be that the sporadic weak forms represent some kind of occasional lapse, the equivalent of a speech error, although the literary nature of the data makes this seem somewhat implausible. Another possibility is that the less frequent forms occur in verbs in which the weak pasts are not yet well-established. Leaving this question open for the present, it can at least be said with certainty that the first seven verbs in Table 1 cannot be dismissed as noise, since they show far too much variation.

Chaucer, however, was an educated literary man from a large metropolitan area (London), and he wrote poetry as well as prose. He certainly was not writing in the vernacular. It still remains a possibility that his use of alternate past forms was not “native” but literary. As a contrast to the literary production of Chaucer I looked at the use of the past in the Paston Letters. This is a series of private letters written by and to the Paston family from 1420-1503. The Pastons were a well-off Norfolk family, who were educated (many of them were trained in law) but not literary. An investigation of past tense forms in the Paston Letters yields an extremely small amount of variation, at most in the past tenses of three verbs, and at a rate so low that the most likely explanation of it is certainly error. The results are given in Table 3.

verb	strong pasts	weak pasts	percent weak
write	399	1	.25
take	167	2	.01
know	89	1	.01

Table 3: Past tense variation in the Paston Letters

Thus to contrast with the case of an individual who appears to use alternate pasts, we have a small set of individuals who (essentially) do not do so. Their writings also contrast, however, in that while all of Chaucer’s writing is literary, the Paston Letters represent about the closest we’ll ever come to the vernacular of the time. Clearly, in the vernacular alternate pasts did not occur more than sporadically.

3.2 The effect of genre: poetry versus prose

As in the Paston Letters, much of the variation in past tense use in Chaucer is sporadic and does not necessarily represent well-established alternate past forms (although it is still unclear what it does represent). If we weed out the verbs which show sporadic variation (defined as less than 20% weak pasts) we are left with robust variation in seven verbs. Given that Chaucer wrote both poetry and prose, the most obvious possibility is that this variation is linked to genre. It is well known that poetry often retains archaic usages long after they have died out in prose, and thus archaic and innovative past tenses might be expected to occur side by side. In fact, this is not the case, as Table 4 shows.

All Verbs			
genre	strong pasts	weak pasts	percent weak
poetry	245	57	21
prose	30	5	14

Table 4: Comparison of the use of weak and strong past tenses in poetry and prose in Chaucer ($\chi^2 = .440$, $p < .7$)

We might further suppose, on the theory that sporadic variation is something akin to error, or at least unconscious, and robust variation is manipulatable, that robust but not sporadic variation would show a poetry/prose difference. However, this is also not the case, as shown in Table 5. Examples of both past tense forms of a single verb in use in prose is given in (3).

- (3) a. Paulus, consul of Rome, whan he had taken the king of Percyens, *weep* pitously for the captivyte of the selve king. (Bo.2.p.2.310-15)
- b. Jhesu Crist, oure Lord, hymself *wepte* for the deeth of Lazarus hys freend (B.Mel.2175-80)

genre	Sporadic Variation			Robust Variation		
	strong pasts	weak pasts	% weak	strong pasts	weak pasts	% weak
poetry	182	13	7	63	44	41
prose	25	1	6	5	4	44

Table 5: Comparison of the use of weak and strong past tenses in poetry and prose in Chaucer for verbs with sporadic variation ($\chi^2 = .308$, $p < .7$) and robust variation ($\chi^2 = .038$, $p < .9$)

Interestingly, although there is no overall difference between poetry and prose, it is still the case that in poetry Chaucer uses alternate pasts forms of verbs showing robust variation for the purpose of rhyme. Thus if we compare the use of strong and weak pasts at the line end (where the form of the past could be exploited for rhyme) versus in the middle of a line, the difference is significant for verbs which show robust variation but not for those in which variation is sporadic.¹

	Robust Variation			Sporadic Variation		
	mid line	line end	total	mid line	line end	total
strong pasts	60	15	75	129	53	182
weak pasts	26	17	43	10	3	13
total	86	32	110	139	56	195

Table 6: A comparison of mid line and line end use of strong and weak pasts of verbs showing significant variation ($\chi^2= 5.277$, $p < .05$) and sporadic variation ($\chi^2= .217$, $p < .70$)

These results show that robust variation, while not limited to poetic usage, is indeed manipulated for literary effect. Sporadic variation, on the other hand, shows no such effect, further strengthening the hypothesis that sporadic variation is not consciously controlled.

Interestingly it is weak past forms that favour line-end position rather than the strong as might be expected. The reason for this becomes clearer if we look at the rhymes, which are summarized in Table 7.

Past Form	Rhymes	
(for/a)waked	naked (3)	maked (1)
(a)woke	took (3)	quook (1)
wept	kept (3)	
weep	keep/N (1)	(sleep (1))
slept	kept (5)	(crept (2))
sleep	keep/N (2)	deep (1) (weep (1))
crept	kept (1)	(slept (2))
creep		

Table 7: Rhymes for strong and weak forms of the verbs (*a/for*)wake, (*be*)weep, sleep, and creep in Chaucer²

¹Table 6 is based on the verbs (*be*)weep, sleep, (*a*)wake, and creep, as these verbs occur most commonly in both weak and strong forms.

²Parentheses indicate forms included twice and bold-face “forced” rhymes.

In most case the rhymes are "forced" by the form of the rhyming word (although of course, in a sense, no rhyme is forced since the poet could have said something else). Thus *naked*, *maked*, *took*, *kept*, *keep*, which is a noun here, and *deep* have no (relevant) alternatives and *quake* only occurs weak once in Chaucer (in a rhyme with *maked*). The rhymes of *weep*, *sleep* and *creep*, however are in no way forced since they all occur in rhyming forms both weak and strong, and Chaucer sometimes uses one set and sometimes the other, as in (4).

- (4) a. strong past rhyme
 On him she thoghte alwey til that she *sleep*;
 When he was absent, prevely she *weep*. (Anel.137)
- b. weak past rhyme
 And up he rist, and by the wenche he *crepte*.
 This wenche lay uprighte, and faste *slepte* (A.Rv.4194)

This use of alternate pasts in unforced rhyme positions is actually not all that surprising given that both forms are used in prose as well. Clearly, the use of alternate pasts isn't completely determined by the poetic diction. On the other hand, there may also be other poetic factors like metre at work, which haven't yet been investigated. The two examples in (4) aren't necessarily identical in terms of metre. The pronunciation of the final *e* in the weak case, for instance, would produce a different metrical feeling. In addition, many of the verbs which have an *-ed* past (rather than *-te*), as *walked*, *laughed*, etc. are generally scanned as two syllables, while their strong form *welk*, *lough* have only one. Compare (5).

- (5) a. I was go *walk'ed* fro my tree,
 And as I wente there cam by me
 A whelp..... (BD.387)
- b. And so bifil that in his slep him thoughte
 That in a forest faste he *welk* to wepe (TC.5.1235)
- c. For had he *laugh'ed*, had he loured,
 He moste have been al devoured (HF.1.409)
- d. Diverse folk diversely they seyde,
 But for the moore part they *lough* and pleyde; (A.Rv.3857)

These data then suggest that robust variation in past tense use in Chaucer is conscious and deliberate and can be manipulated for effect, while sporadic variation is not, since it is evenly distributed across all styles and positions, although the proper interpretation of this unconscious use remains unclear. The fact that the use of the two forms is not limited to poetry perhaps indicates that it is not simply a poetic device, but rather something more intangible, such as literary tone. At any rate, the partial artificiality of literary prose makes it unlikely that Chaucer's use of two past

forms is a case of true alternates in the relevant sense. In conclusion then, it appears likely that in earlier times there was no more variation in individual vernacular usage than can be attributed to error, no more in fact than today.

3.3 The dialect situation

The evidence in the previous section suggests that, apart from literary uses like those found in Chaucer, variation in past tense use in the Middle English vernacular was more at the community than individual level. In the Middle English period, however, there was apparently a great deal more of it than there is now. One possible source of such variation is obviously dialect mixture. Middle English, in an extremely oversimplified view, can be divided into five regional dialects: Northern, East Midlands, West Midlands, Southern and Kent, although the border of the South and West Midlands is highly disputed (see Map 1). During the 13th and early 14th century London seems to have nearly doubled in size and on the evidence of place-name surnames, a great part of the increase was due to immigration, primarily from East Anglia and the East Midlands, (Ekwall 1956). If the dialects differed in their past tense conjugations, there could have been present in the London community a variety of different ways forming the past tense. A Londoner like Chaucer could then easily have picked up alternate past tense forms.

This scenario rests on the assumption that the shift of verbs from the strong to the weak conjugation was more advanced in some dialects. Unfortunately the Middle English dialect situation is actually extremely complex³ and determining the place and date of composition of Middle English manuscripts, let alone the dialect they represent,⁴ is often fraught with difficulties. In addition, the format of the OED and the studies of past tense use which I have used to collect this data make it impossible to control for such things as the amount of text examined for each dialect, for whether the variation is sporadic or robust, etc. Therefore, the remarks I make in this section should be taken as suggestive rather than definitive.

Table 8 shows the texts which use weak forms in the 13th and 14th century and the number of verbs in each text which have at least one weak form, according to Michelau. Table 9 shows only unique first occurrences by century and dialect, on the theory that if weak forms for a verb appear in more than one dialect, the forms have already spread beyond their original boundaries.

As expected there is an uneven distribution across dialects with the largest numbers of weak forms in the East and West Midlands. The low numbers in the north cannot be taken seriously as there are very few texts from before 1400.

³See Morse-Gagné 1991) for a discussion of Middle English dialect terminology and associated problems.

⁴Determining the provenance of texts is further complicated by the fact that scribes often made changes in the texts they were copying.

century	North	EMid	WMid	South	Kent	London
13	no texts	Orm (7) G&E (4) Hav (2)	AR (6) LB (18) KG (2)		no texts	no texts
TOTAL		13	26			
14	CM (9)	Wycl (64) RM (2) PPS (2)	GG (2) AP (5) RG (6) WP (6) PP (8) KA (5)	PC (7) Ed (4) Oct (1) SF (1) SB (2)	LD (2) Shore (1) AI (1)	Ch (7)
TOTAL	9	68	32	15	4	7

Table 8: Texts in the 13th and 14th centuries that have weak past tense forms of strong verbs with number of verbs in parentheses (data from Michelau)⁵

century	North	EMid	WMid	South	Kent	London
13		5	19 (14 in LB)			
14	5	21 (all Wycl)	3	6	1	2

Table 9: First unique weak appearance of Class B verbs by century and dialect (data from Michelau)

It is not a great surprise to find that the more northerly and easterly dialects are innovative, since this is generally the case in the Middle English dialects. Noun and verb inflections also collapse first in these areas. As Jespersen 1922 (p.214) remarks, "in the regions in which the [Danish] settlements were thickest, the wearing away of grammatical forms was a couple of centuries in advance of the same process in the southern parts of the country." Many scholars besides Jespersen have attributed the rapid changes that took place between Old and Middle English at least in part to contact with Scandinavian (see Domingue 1977, Görlach 1986, Poussa 1982, Thomason and Kaufman 1988). Under this theory, the contact with Scandinavians led or at least contributed to the simplification of inflection in these areas. If the rather sparse data presented here turn out to have any basis under closer examination, they

⁵Texts are abbreviated as follows AR = Ancrene Riwe; G&E = Genesis & Exodus; LB = Layamon's Brut; Hav = Havelok the Dane; KG = Katherine Group; CM = Cursor Mundi; Wycl = Wyclif; GG = Gawain and the Green Knight; RG = Robert of Gloucester; PC = Polychronicon; LD = Libaesus Desconus; Ch = Chaucer; AP = Alliterative Poems; Ed = Editha; Shore = Shoreham; KA = Kyng Alisaunder; RM = Robert Mannyng; PPS = Prose Psalter; Oct = Octavian; AI = Ayenbite of Inwit; WP = William of Palerne; SF = Sir Ferembras; PP = Piers Ploughman; SB = Sir Beues

suggest that contact with Scandinavian may also have been a factor in the transfer from strong to weak verb inflection. I will return to this hypothesis in more detail below.

4 Transmission and progression of the change

In this section I return to the question of how past tense inflection is generated by speakers and what this implies about how a change from one class to the other could take place. A great deal has been written on past tense inflection in English and the relation between regular and irregular forms (see Bybee 1985, Bybee 1988, Bybee and Slobin 1982, Kim 1991, Kiparsky 1982, Prasada and Pinker 1993, Pinker and Prince 1991, Rumelhart and McClelland 1986, Stemberger and MacWhinney 1988 among others). For the purposes of this paper I will basically follow Prasada and Pinker 1993. As far as I am able to tell, the differences between this model and others such as Bybee 1985, Bybee 1988 or Stemberger and MacWhinney 1988 do not make any difference to this investigation.

Given the difference in form of the verb paradigms in English, that is, that a weak past is entirely predictable on the basis of the present form while a strong past is idiosyncratic, it seems plausible that the transfer from the strong to weak class is related to the regularity of the one form versus the other. The change may therefore be related to the way in which these alternate forms are generated by speakers. Prasada and Pinker 1993 use experimental evidence to support the traditional assumption that strong pasts are stored in the lexicon while weak pasts are created anew each time by rule. In general, since the presence of an irregular past form in the lexicon will block the creation of a regular past (Kiparsky 1982, Pinker and Prince 1991, etc.), an irregular verb will receive regular inflection only when retrieval of the correct form fails. Pinker and Prince 1991⁶ attribute this failure to the “low-strength memory traces of irregular verbs” to which a speaker hasn’t had sufficient exposure. In general, as irregular items in a language are among the most common tokens, the amount of exposure to such items is high; but if the frequency of such an item drops for some reason, the expected outcome is that it will become regular. Bybee 1985 shows, in fact, that the irregular verbs which survive into Modern English are significantly more frequent than those that have become weak.⁷ Thus the claim is that the transfer of verbs from strong to weak is due to a decrease in frequency, which leads either to no storage of the strong past or to frequent look-up failure.

Turning now to a look at how the change progressed, as represented by the century of first weak occurrence, shown in Table 10, we can see that both in verbs which remain strong (Class A) and verbs which become weak (Class B) there is the

⁶See also Bybee 1988

⁷Although her frequency counts are based on Modern English, not the English of the period in which the change occurred, a problem which she acknowledges.

same curve with its peak in the 14th century, although it is sharper in the Class B verbs.

century	Class A	Class B
11	3 (.5)	4 (.06)
12	0	1 (.01)
13	8 (.12)	13 (.20)
14	16 (.28)	30 (.47)
15	13 (.24)	9 (.14)
16	9 (.16)	5 (.08)
17	5 (.11)	1 (.01)
18	1 (.01)	0
19	0	0

Table 10: Class A and Class B verbs by date of first weak occurrence (data from the OED)

Clearly if the formation of an “incorrect” weak past results from a failure to store (or access) the “correct” strong form, there was some factor that was interfering with people’s ability to store strong pasts in the 13-14th centuries (or earlier if there is a time lag before these forms appear in writing). This implies either that there must have been a fairly sudden drop in the frequency of a large number of verbs at the time or that although the frequency of use of the verbs didn’t change significantly, the frequency of correctly formed irregular past tenses dropped. On the face of it, both these scenarios seem rather improbable; the latter, however, would be possible in a contact situation brought about by immigration, in which a population of adults shifts from using their L1 to using the language of their new home. This could create a disruption in transmission of the sort that leads to simplification in a number of areas, especially irregular ones, and naturally the forms that are most likely to be incorrectly inflected by language learners are the lower frequency ones. Once normal transmission is restored, things go back to normal and irregular forms are passed on in the usual way.

In the rest of this paper I investigate the hypothesis that such a disruption did in fact occur following the settlement of the east and north of England by the Scandinavians in the 9th and 10th centuries. This initial disruption was followed by others: the Norman conquest and the subsequent reversion of the French speaking population to English after 1200, mass migration to the cities in the 13th and 14th centuries (perhaps due to lack of agricultural land), and the movements and upheaval following the Black Death in 1348. The hypothesis is this: An initial period of contact (largely during the 10th and early 11th centuries), gives rise to a local dialect which has a higher rate of simplification or regularization in all areas of grammar, including the past tense inflection. During later population movements features of this dialect spread at the expense of the less uniform dialects of other areas.

5 The plausability of Scandinavian influence as one factor in strong verb collapse

5.1 Historical Background

Unlike the well-documented Norman Conquest of 1066, little direct evidence remains of the Scandinavian "invasion" of England in the 8th to 11th centuries. The scanty written sources record only calamitous events, and thus evidence for day-to-day relations must be inferred from indirect sources such as place-names, personal names, coinage and the effect it had on English. There is thus obviously much room for disagreement on the nature of English/Scandinavian relations in this period. What follows is an account based on standard sources.⁸

The first Viking raid on England took place in Dorset in the late 780s. This was followed by raids on the monasteries Lindisfarne, Jarrow and Iona in the 790s. In 865 (or 866) the Great Army landed in East Anglia. For many years it moved over the country as a unit, wintering in various places, but in the winter of 874-5 half the army, led by Halfdan, settled in Yorkshire, and the other half, led by Guthrum, continued its operations chiefly from Gloucester. In 877 part of Guthrum's army left and settled the Five Boroughs area of the East Midlands, and in 879 Guthrum, defeated and baptized by Alfred of Wessex, settled in East Anglia.

In 886 King Alfred met with the Danes to establish territories. Alfred took Wessex, western Mercia including London went to Aethelred, and the Danes kept the north and east. New Danish forces arrived in 892 and centered in Danish territory periodically raided the English-held parts of the Midlands.

In the first decade of the 10th century, the Norwegians who held much of Ireland suffered a number of defeats at the hands of the Irish and began to cross from Dublin into Yorkshire. The throne of Northumbria remained in contention for the next 40 years, vied for by various Norse and English claimants, until in 954 the English finally took permanent possession.

Viking raids continued in England through the 990's both from Ireland in the west and from the east across the channel. However, it is clear that Scandinavians were also present as settlers. In 1002, King Aethelred order the massacre of all Danes in England (the St. Brice's Day massacre) and in 1004 he complained that the Danes were sprouting "like cockles amongst the wheat". In 1009 a large Danish army arrived in Kent and exacted tribute. They operated in the area until 1012 when most of the army left. Thorkell, one of the leaders, changed sides, however, and remained in England.

In 1013 Swein Forkbeard, king of Denmark, and his son Cnut invaded England. He was accepted as king by the Northumbrians and the Danes of the East Midlands,

⁸This section relies heavily on a summary written by E. Morse-Gagné.

and after conquering Oxford, Winchester and London, was recognized as king of England in 1013. After his death the following year Cnut became king. There was some resistance from the English, but in 1016 Cnut consolidated his position and ruled until 1035. After Cnut died his sons, first Harold and then Harthacnut, ruled briefly. After Harthacnut's death, Cnut's first son Edward the Confessor ruled until the Norman conquest.

5.2 Scandinavian Settlements in England

While it is clear that some of the Scandinavians that came to England as part of the various armies stayed and settled, not much else about this aspect of English history is clear. Scholars disagree on the size of the original invasion parties, whether further waves of immigration occurred, and how integrated the Scandinavians were with their English neighbours. The areas of heaviest Scandinavian settlement, based on both the written sources and place and personal name evidence, are the north, especially around York and the north-east Midlands centred on the five boroughs area (Lincoln, Stamford, Derby, Nottingham, Leicester). Although East Anglia is legally part of the Danelaw, Scandinavian place-names are much sparser in this area (see Map 2).

5.3 The English/Scandinavian contact situation

van Coetsem 1988 distinguishes two major types of language contact situations which he calls recipient language agentivity (borrowing) and source language agentivity (imposition). The first type occurs in cases when the alteration being made in the recipient language is controlled by the speakers of that language (see Thomason and Kaufman 1988 for a similar account). The Norman/English contact situation was largely of this type in that French words were borrowed by English speakers and integrated into their language. Imposition, on the other hand, is the case in which the recipient language (the one being altered) is altered by a speaker (or population of speakers) of the source language. This is the "foreign accent" situation and it occurs when speakers learn an L2 and transfer elements of their L1 to it. Often this is a transitory and individual process which has no lasting effect on the recipient language. When whole populations learn an L2, however, it can have lasting and permanent effects.

One of the major distinguishing features between these two types of contact situations is the domain of language which is typically affected. In borrowing cases it is the least stable domains, largely vocabulary. In imposition cases, the more stable domains, (including phonology, morphology and syntax), are affected. Another possible result of imposition but not borrowing is regularization or levelling of distinctions in the recipient language.

The results of Scandinavian/English contact are more consistent with an imposition scenario, than a borrowing one. It resulted in one of the few (if not the

only) case of pronoun borrowing known, a notoriously stable category. There was widespread grammatical simplification of both nouns and verbs in the north centuries before it appeared in the south.⁹ Given that the increasing use of the weak conjugation served to simplify the verbal system, it seems plausible that Scandinavian contact could be a factor in this change.

5.3.1 Time frame

One problem with positing English/Scandinavian contact as a factor in this change is the time lapse between the Scandinavian settlement (9-11th centuries) and the apparent onset of the change (13th cent.) There are a number of factors, however, which may account for the delay. First, the West Saxon literary standard in operation throughout the Old English period no doubt served to keep most innovative forms out of literary works (although some verbs do have their first weak attestations in the Old English period); second, there are very few surviving texts from the 12th century making it difficult to determine the status of weak verb forms in the very early period; and third, even after the loss of West Saxon standard, the general formal effect which tends to delay new vernacular forms being adopted into the written form of a language would still operate.

In fact, the appearance of Scandinavian loan words in Middle English texts shows the same delay, as Table 11 shows (adapted from Hug 1987).¹⁰ The curve of Table 11 shows almost the same distribution as Table 10, although the peak is in the 13th rather than the 14th century (although the difference between the two is not statistically significant ($p < .5$), however).

⁹Kroch and Taylor 1993 suggests that the northern type of V2 syntax (which was quite different from that of the south and probably from Scandinavian) may have been the result of a reanalysis brought about by contact between the Scandinavian and OE systems.

¹⁰Hug takes her data from the Oxford Dictionary of English Etymology, which means it only includes words which survive to the present day.

century	nouns	verbs	adj	total	percent
pre-10	4	0	0	4	1
10	22	8	8	38	8
11	13	0	0	13	3
12	40	24	13	77	12
13	74	37	17	128	28
14	70	30	10	110	24
15	35	21	1	57	13
16	28	18	9	55	12
17	30	5	2	37	8
18	18	1	1	20	4
19	14	1	0	15	3
TOTAL	248	145	61	454	

Table 11: The distribution of Scandinavian loans in English by century (348 nouns, 145 verbs, 61 adjectives) taken from Hug (1987)

5.3.2 Correlation of weak pasts to Scandinavian loans

In addition, if we look more closely at the sources of first weak appearance, especially in the 13th century, we find that those texts that show Scandinavian loans, or other Scandinavian influence, tend to be those with early weak pasts.

In Michelau's survey of weak pasts we find examples for the 13th century in the following texts:¹¹

Northern	East Midlands	West Midlands
Cursor Mundi (1300)	The Ormulum (1200)	Katherine Group (1200)
	Genesis & Exodus (1250)	Layamon's Brut (1205/1275)
	Havelok the Dane (1200-1272)	Ancrene Riwe (1220)

All these texts are used by Hug in her study of Scandinavian loan words, thus we are in a position, for the most part, to see whether Scandinavian loans and weak pasts co-occur in texts. Overwhelmingly they do, the only exception being the Katherine Group, a group of texts occurring in a single manuscript from the West Midlands (c.1200-1220) in which Hug found no loans in those parts she looked at.¹² The Katherine Group, however, is said by McIntosh 1978 (p.104 fn.8) to include "a

¹¹The Cursor Mundi is included here as it is the earliest Northern text.

¹²In this part of her study, Hug is only looking at 36 words which are terms for natural phenomena, so the fact that she doesn't find any loans doesn't in fact mean there are none. In addition, some of those words were borrowed later than the 13th century, reducing the number even more.

considerable amount of Scandinavian material.” The interest of this data is clearly that not only do we find weak pasts in the North and East Midlands, but in texts from other areas that also show other Scandinavian features. Hug looked at 16 other texts from the southern West Midlands and finds loans in only three of them, none of which are mentioned by Michelau. Unfortunately, since Michelau doesn’t give a list of the texts involved in his study, it is not possible to tell how significant this is. Clearly this is an area which needs more investigation.

In summary then, there is some evidence which supports the theory that Scandinavian contact was a factor in the transfer of strong verbs to the weak declension, much which is suggestive, and none which definitely rules it out. More data, especially on the suggested correlation between the early appearance of Scandinavian loans and of weak pasts, is needed, however, to establish this with more certainty.

6 Conclusions

In conclusion, the stability of the Modern English verbal system in which the majority of verbs community-wide generally belong firmly to one or the other conjugation, is not found in earlier centuries. The majority of verbs show some variation over time, quite a large number show a great deal. This variation, however, although it appears in the literary writing of individuals, is most likely not a feature of the vernacular. A more plausible source of the variation is dialect mixture, perhaps triggered by contact with the Scandinavians in the Danelaw areas.

The transfer of verbs from the strong to the weak conjugation was a (relatively) sudden and isolated phenomena. Thus the number of originally strong verbs which vary in each century shows a rise in the 13-15th centuries which peaks in the 14th. Before and after this rise there is little variation. This pattern suggests that there was some disruption to the system in this period which caused a large number of strong verbs to be incorrectly inflected, so that learners failed to store the irregular form. While many factors no doubt combined to produce this situation, both external ones like those I’ve discussed here (and those such as the later French/English contact situation which I haven’t touched on), and internal ones like sound change, paradigmatic pressure, frequency, gang effects, etc. all of which remain to be investigated in detail, it appears that the partial simplification of the irregular verbs system in English may be yet another result of the deep and lasting influence of contact between English and Scandinavian.

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