The Scandinavian Source of Middle English Inflections

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Abstract. Very early in Middle English, texts especially in the North and East, tend to use a suffix spelled *–(e)s* for noun plurals, while in Southern texts the suffix *–(e)n* of the Old English weak declension at first spreads, but then by 1250 also yields to *–(e)s*. This sibilant plural has remained productive in English ever since. This essay shows on phonological grounds that the vocabulary item for this nominal plural must be *lexically specified* as +Voice. That is, the voicing is not due to any synchronic assimilation process. The source of this underlying voiced sibilant *–z*, completely absent in Old English, comes from the genealogical ancestor of Middle English, Common Scandinavian, whose non-neuter plural in structural case is precisely this segment *–z* (Haugen 1982). This essay argues that this form was an integral part of the Norse brought to England by Scandinavian settlers in the ninth century. The later change in Mainland Scandinavian of this *–z* to *–r*, completed in the twelfth century, failed to establish itself in the Anglicized Norse of England, due to sociolinguistic factors akin to those set out in Labov (1963).

1 The troublesome Middle English plural

Histories of English generally consider the change in Noun plural formation between the end of Old English (c. 1140) and early Middle English (c. 1180–1250) as striking, puzzling and extremely rapid. This essay will explain how this quick and pervasive change came about, and how it fits into a wider pattern in the full group of ME inflections. The detailed summary of this change in the authoritative traditional history of Baugh & Cable (2013: Ch. 7) merits reproduction in full:

> In early Middle English only two methods of indicating the plural remained fairly distinctive: the *-s* or *-es* from the strong masculine declension and the *-en* (as in *oxen*) from the weak (see §41). And for a time, at least in southern England, it would have been difficult to predict that the *-s* would become

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> the almost universal sign of the plural that it has become. Until the thirteenth century the *-en* plural enjoyed great favour in the south [the default, so-called "weak" Old English plural, JE], being often added to nouns which had not belonged to the weak declension in Old English. But in the rest of England the *-s* plural (and genitive singular) of the old first declension (masculine) was apparently felt to be so distinctive that it spread rapidly. Its extension took place most quickly in the north. Even in Old English many nouns originally of other declensions had gone over to this declension in the Northumbrian dialect. By 1200 *-s* was the standard plural ending in the north and north Midland areas; other forms were exceptional. *Fifty years later it had conquered the rest of the Midlands, and in the course of the fourteenth century it had definitely been accepted all over England as the normal sign of the plural in English nouns* [my italics, JE].

This view is not modified in any essentials in more recent work such as Fulk (2012) and Watts (2011: 110). According to Watts, the use of orthographic *-s* to mark Noun plurals is already widespread in thirteenth century, notably in the northern book *Ormulum* dated about 1200.

Thus, up until the end of the Old English (OE) period (c. 1140), Noun plurals were formed in accord with the OE Noun declensions, whose nominative and accusative suffixes ended in a variety of vowels, voiceless *-s,* or *-n.* Then, scholarship agrees, all these endings essentially disappeared, and within 100 years, noun plurals were productively formed all over England with an orthographic *-(e)s,* which comes into Modern English not as voiceless, but as an underlying voiced *-z,* as it does in grammatical words such as *is, was, as, his, hers, whose* and *those.* That is, a voiced sibilant became the regular way to form plurals in Early Middle English (ME). Other than in conservative southern and western ME dialects, which were closer continuations of OE, this usage was established within 50 years, from 1200 onwards; as noted in early scholarship (White 1852, xxii).

In fact, the problem of the changed plural is worse than what is presented above. Baugh & Cable's passage makes no mention of whether the English "*-s* plural" is voiced or not. But Section 2 will show that this plural must be lexically specified as voiced, meaning that the ME Plural derives from OE only if it follows the diachronic path *-en* → *-es* → *-s* → *-z.* The process of deriving the plural *-z* from OE must then involve several changes within at most one century. This complex sequence is the only proposed OE source for deriving a voiced plural *-z*, and almost all analyses have settled on this schematic account. The Appendix here examines this 3-step scenario, involving "re-lexicalization of *-n* as *-s,*"

followed by two ad hoc "sound changes" in ME, final *-es* → *-s* and final *s* → *z* . The conclusion of the Appendix is that none of the steps in this "established" source of the ME plural are justified, and so it must be rejected.

2 The lexical representation of the English sibilant plural

As is well known, the Modern plural suffix spelled *-(e)s* has three allomorphs as in (1), without exception conditioned by a noun stem's final segment: To my knowledge, there is no argument against assuming that this allomorphy has remained stable since the plural *-s* first began to be used.

(1) **Allomorphs of the English plural morpheme**:
   a. The plural morpheme is word-final *-z (*not *s*; cf. *peas/ ones/ bells* vs. *piece/ once/ else).*
   b. An epenthetic schwa is inserted after a stem ending in a sibilant.[2]
   c. When this *-z* immediately follows an unvoiced segment, it becomes unvoiced *-s.*

This allomorphy is identical for the English third singular agreement and possessive morphemes.[3]

Several early generative papers, Lightner (1970), Sloat & Hoard (1971), and Shibatani (1972), argue that the *underlying lexical form* of the English plural must be voiced *-z*, rather than either unvoiced *-s* or a "neutralized" sibilant unspecified for voicing, thus establishing the lexical (listed) voicing of *-z*. For concreteness, this essay provides three supporting arguments, including one which has not been previously framed in general enough terms.

A first argument is that the phonetic alternation of plurals (1) is exactly the same as that of contracted allomorphs of the free morpheme *is,* pronounced *iz.* This morpheme's final consonant in its uncontracted form is *always voiced.* Contraction consists in simply dropping the vowel, yielding *-z: that nun's here* (no change in the underlying voiced sibilant). But if the preceding consonant is –Voice, then devoicing changes *-z* to *-s: that monk's here.* By lexically listing the Noun plural as *-z* in the same

2. Epenthetic *e* might have been more widely distributed in ME; this doesn't affect any argumentation here.
3. The sibilant ending on the possessive pronouns (*his*, *hers*, *its*, *whose*, *(y)ours*, *theirs* could as well be spelled *'s*, since its allomorphs *s* and *z* are exactly those in (1).

way, the analysis for contraction automatically predicts the plural allomorphy, with no extra statement: *Those nuns met* (voiced), *those monks met* (unvoiced).

A second argument concerns the several irregular plurals of nouns ending in *f*: *calves*, *hooves*, *knives*, *leaves*, *lives*, *scarves*, *selves*, *shelves*, *wives*, *wolves*, etc. [4] Today's alternation must be lexically stipulated with these roots, because over centuries there has been no tendency whatever for the voiced allomorphs to generalize before vowels or sonorants (2a) or to other words (2b):

(2) a. *leafy*, *beefy*, *elfish*, *selfish*, *knifing*, *leafless*, *selfless*, *wifely*
**leavy*, **beevy*, **elvish*, **selvish*, **kniving*, **leavless*, **selvless*, **wively*
b. *chiefs/ *chieves*, *gulfs/ *gulves*, *graphs/ *graves*, *laughs/ *lauves*, *cliffs/*clives*

Now, if the underlying plural segment in the irregular pairs were either unvoiced or unspecified for voicing, the plurals would be completely irregular, since the voicing of the final consonant sequence (*–vz*) could not be related to any other source in English phonology. However, this voiced sequence *vz* can be related to an underlying . . . *f–z* by *regressive voicing* assimilation to a following voiced segment. While not productive in English, this universal tendency is sporadically found elsewhere in its lexical entries (and often reflected in spelling) in for example, *halv-ed*, *shelv-ing*, *lous-y*, *spas-m*, *thiev-ery*, *hus-band*, *fif-th*, *fif-teen*, *lef-t*, *twelf-th*.[5] These arguments that the sibilant plural is underlyingly voiced imply that it has the following lexical entry:

(3) **Lexical entry for the voiced English plural morpheme (-*z*)**
PLUR, N__, [+Continuant, +Voice, –Sonorant, Alveolar] [6]

There is a third independent argument for the presence of +Voice in (3), but it fits better in the discussion of ME phonology in the Appendix, and so is presented there.

4. According to Mossé (1952: 39) the final *f* of these roots was originally voiced between vowels in ME. However, the vowel in the ending was dropped by 1400, resulting in irregular roots with an *f/v* lexical alternation for singulars vs. plural (Lass 2006: 59). Given the many centuries that no vowel has followed these *v*, today's synchronic (and still learnable) analysis must be different than that of Mossé.
5. Regressive voicing assimilation is widespread cross-linguistically, though the few instances in today's English are isolated lexicalized remnants of earlier regularities. Nonetheless, current English has plenty of contexts, even with bound morphemes, with no assimilation: *childhood*, *dreadful*, *dukedom*, *handsome*, *handful*, and *Scotland*.
6. The notion "alveolar" may well combine more than one phonological feature, so I do not write it here with ±.

3 Germanic antecedents of Middle English

In order to account for quickly changed plural formation and other rather abrupt innovations of early ME, we will review the sociolinguistic context of late OE. In the ninth and tenth centuries two forces fought for control of what is now called England. The warring contenders were two Germanic tribal groupings from contiguous areas on the continent: the West Saxons (who had emigrated from German Saxony in the sixth and seventh centuries) and the more recently arrived Danes. The Viking raids of the eighth century had been followed in the eastern half of England by Scandinavian settlement, where Danish leaders were establishing English kingdoms.

In 878, the two sides agreed to a truce, which divided England into essentially halves by a line following a road from London northwest to the coast near Chester. The areas north and east of the border were under Danish rule and administration, and designated as the Danelaw; the areas to the south and west came to be known as West Saxony or Wessex. Though this line was subsequently shifting and contested, it turned out to have linguistic consequences well after it lost its political status.

Scandinavian colonists in the Danelaw were successful and innovative, for example, draining extensive marshes around Lincoln and turning them into farmland, and prosperous leaders in important market towns such as Leicester (Wood 1986). They were centrally involved in minting and coinage, and metal cultural artefacts reveal a history of fashion parallel to that in contemporary Scandinavia (Kershaw 2009; 2017). In fact, it must have been improved economic opportunities that attracted settlers to England in the first place. According to Wood's detailed study of the *Domesday Book* census (1086), due to their agricultural accomplishments and legal status such as a limited ability to own and (crucially) bequeath land, Scandinavian settlers came on average to surpass the native Saxon peasantry both economically and socially.[7]

On the Saxon side, under the leadership of Alfred the Great, especially the monasteries flourished, developing a written language, today usually called Old English, and producing copious parchment texts.[8] The West Saxons were among the first Germanic-speaking Christians, though

7. For ample material on the demographics and economics of the Scandinavians' extensive and continuous settlement in England over several centuries, see Wood (1986), Townend (2002) and Kershaw (2017).

8. Putting aside runic inscriptions and some rudimentary Old High German passages, OE was the sole widely written Germanic language prior to 800. The only earlier surviving Germanic text is a fourth-century Bible in East Germanic Gothic. (J. T. Faarlund, pers. comm.)

the English Scandinavians, following their leaders in Denmark, were also Christians by 950. Among northern European peoples, the West Saxons were cultural leaders in several fields (metal-working, tapestry, etc.). Thanks to the many West Saxon texts, it has been established that their language, that is OE, is in the West Germanic subfamily of Indo-European, along with, for example, Dutch, Frisian and German, in particular in its syntax.

In the Danelaw, it is undisputed that the settlers continued to speak the Scandinavian language they brought with them. North Germanic linguistics refers to this language from 800 to 1100 as "Common Scandinavian" (Haugen 1982).[9] CS was plausibly the Danelaw's principal language, since both its rulers and the most prosperous group among the ruled spoke CS when they emigrated. The linguistic motivation for the widely accepted view that they maintained their language is the large number of everyday ME words from CS which lack sources in West Saxon (OE); almost all English cognates of CS appear only after 1140.[10] Thus, either Early ME is simply a continuation of CS, or CS and Early ME existed side by side, and ME borrowed these words *after* OE ceased being written. The last truly OE texts are generally dated as 1137, a time when monks trained in OE prior to the Norman Conquest were finishing their scribal careers.

So the following is a non-controversial sociolinguistic picture of England from the Danelaw truce in 878 until the full linguistic effect of the Conquest (c. 1140). During these tumultuous 260 years, there were essentially two feudal countries in England, the Danelaw and Wessex. Until 1016, Danish control of parts of the Danelaw was disputed, and at its ebb there were 33 years of Saxon ascendency (954–987). However, the Danes' decisive victory at the Battle of Malden in Essex (987), chronicled in an OE poem of that name, restored their political supremacy, as evidenced by a huge annual tribute known to be paid them by the last Saxon king, Ethelred. Despite a futile gesture of abolishing the Danelaw, he had to flee to Normandy in 1013. From then until the Norman Conquest, Danish kings ruled *all of England* for half a century; they included Canute the Great, his son, and then his half Danish stepson, Edward the Confessor.[11] In this sense, the Danelaw was not abolished at all, but after

9. Common Scandinavian could be accurately called "late Proto-Scandinavian", but most historical linguists reserve "proto" for entirely unwritten languages. Since CS appears in short runic inscriptions, it is "attested" and hence cannot be referred to as a proto-language.

10. These ME words missing in OE are commonly called "borrowings from Norse" and studied as part of ME. Emonds & Faarlund (2014: Chs 2 and 7, and 2017) discuss them in greater detail with many examples.

11. Edward's mother Queen Emma was Danish, and brought him up from childhood in French Normandy, with three years at the Danish Court in Winchester as Canute's

1013 came to encompass all of England, and was truly replaced only by the Norman Conquest.

Each of the two countries, Wessex and the Danelaw, had its own language. West Saxon, that is OE, is a well-documented and researched WG language, as seen in both its morphology and its syntax:

(4) Some West Germanic syntax of Old English:
- predominant verb-final dependent clauses
- a system of separable verbal *prefixes* consisting of directional particles
- subjunctives used for indirect speech
- auxiliary variation (*be* vs. *have*) in the perfect tenses

These and several other West Germanic (WG) properties of Old English are given in Mitchell & Robinson (1992) and Emonds & Faarlund (2014: Chs. 3-6). Notably, no property listed above is part of either North Germanic (NG) or Middle English.

4 Where does Early Middle English come from?

Through the twelfth century, a descendent of Common Scandinavian must have been a prominent language in the Danelaw, since it was the source of the extensive ME "borrowing from Norse" sketched above. Scholarship generally refers to this CS descendent as Old Norse (ON). However, since the Scandinavian settlers in England were integrating themselves into a new land with novel flora and fauna and many new cultural concepts regarding Christianity, agricultural practices, artisanal production, and so on, their CS lexicon must also have considerably expanded and Anglicized. Because of this, Emonds & Faarlund (2014, henceforth "E and F") have coined the term "Anglicized Norse" (AN) for the English version of CS. In their view, the political and economic success of its speakers, involving full Danish military and political rule (1014–1066), caused AN to steadily supersede Anglo-Saxon dialects as the Danelaw's predominant tongue.

In this regard, the truce line between Danes and Saxons of 878 coincides closely with a later linguistic border that separates what is called the "East Midlands" dialect (including London, Leicester, Lincoln, etc.) from the Southern and smaller "West Midlands" dialect areas. Since

stepson. Like many later Normans, Edward's only relation to Saxons was that he ruled them.

it is generally agreed (Baugh & Cable 2013: Ch. 7, Pyles 1971) that the East Midlands dialect of the previous Danelaw is the principal medieval source of Modern English, it is a short step to postulating that the Danelaw's prominent language in 1100 (AN/ CS) might be the direct ancestor of this area's language in 1300 (the East Midlands dialect, that is, the immediate ancestor of Modern English).

Summarizing, there were two Germanic languages widely spoken in twelfth-century England, the West Saxon/ OE of Wessex and the unwritten Anglicized Norse/ Anglo-Norse/ AN of the Danelaw. A century later, however, there was a single enduring Germanic language in England, which was the written and native tongue of the whole country from about 1300, becoming the language of Chaucer, now called Late ME. So historians of English need to decide, based on the evidence, does ME, in particular the East Midlands dialect, descend from West Saxon (OE) or from Anglicized Norse (AN), and what happened to the other?

Ever since early scholars came to agree that OE and ME are closely related, it has been assumed, essentially without argument, that ME developed from OE, and that (Anglicized) Norse died out without a trace (Pyles 1971)—except for the mysteriously extensive Early ME borrowing of its everyday vocabulary. Historians of English, perhaps impressed with the cultural achievements of Wessex and its leader Alfred the Great, have settled on OE as the earliest written ancestor of what has become today's "world language".[12]

Nonetheless, there is no logical or compelling linguistic basis for a direct genealogical link. Consequently, this claimed descent has been challenged in Emonds & Faarlund (2014), which provides some 20 arguments that, whenever WG and NG differ, the syntax of Early ME points unambiguously to a Mainland Scandinavian character.[13] As examples, five WG properties missing in both NG and ME are listed in (4).[14] In fact, these authors claim that OE and ME *share no constructions* that dis-

12. Alfred and Canute are the only English sovereigns to receive the appellation "The Great." Among the immortal achievements of Wessex are the West Saxon works *Beowulf* (in content, an epic of Scandinavian heroes) and Bede's *Ecclesiastical History of the English People*.

13. Bech & Walkden (2016) observe that initial "scene-setting PPs" preceding uninverted subjects are shared by OE and ME, but missing in present-day Scandinavian. This argument against ME being AN, however, depends on the undemonstrated claim that ON also lacks this construction. But even if it did, Emonds (2016) argues that the Scandinavian pre-verbal particle *sa* 'so' today appears in subject position after these PPs. If so, current Scandinavian has scene-setting PPs in pre-subject position like ME and OE; it differs only in the grammar of *sa*.

14. I do not subscribe to the view that phonological sound change is the only sure foundation for linguistic genealogy. The ground-breaking papers in Battye & Roberts (1995) demonstrate that syntax as well as phonology can play a central role in uncovering a language's past.

tinguish them from ON and subsequent to the book, A. Holmberg (2016 and pers. comm.) has identified two further Scandinavian syntactic characteristics of English: *that*-deletion and a uniform perfect auxiliary *have*.

On the basis of this extensive syntactic argumentation, E and F propose that Early ME was the direct and linguistically unremarkable successor of the Danelaw's AN. After the Danish Conquest of England in 1013-1016, they claim that AN continued to spread southward, no doubt at first as a second language closely related to West Saxon, and eventually replaced it as England's first language.

(5) **Anglicized Norse (Anglo Norse) Hypothesis**. Early ME is the direct continuation of the Anglicized Norse of the Danelaw with a different name.

This non-traditional historical scenario immediately explains why Early ME contains so many Norse words for everyday concepts that, as observed by Baugh & Cable (2013: Ch. 7)), OE couldn't possibly have lacked (*angry, egg, get, leg, sister, skin, sky, wrong*, etc.).

We can also easily understand in contrast why AN borrowed from OE many everyday words of the type ordinarily not borrowed. At the *onset* of settlement, the Norse must have been *a tiny minority*, and so the sheer predominance of Saxon speakers could have led to settlers replacing Norse words for ordinary things with OE terms. In the contrasting traditional scenario (that is, OE extensively borrowed everyday words from ON), there was never a comparable period in which OE speakers could be motivated to replace their vocabulary because of a preponderance of ON speakers.

The consequences of this linguistic competition were summarized by a medieval observer. In 1387, a southerner from Cornwall, John of Trevisa, translated a Southwestern text from c. 1327 (Strang 1970: 160). His text comments on England's essentially different (but still Germanic) tongues:

> … also concerning the Saxon tongue that is divided *and has barely survived among a few uneducated men* [my emphasis, JE] (there) is great wonder, for men of the east with men of the west…agree more in pronunciation than men of the north with men of the south. Therefore it is that Mercians, who are men of Middle England, …understand better the languages on either side, Northern and Southern, than Northerners and Southerners understand each other (modern rendering from Freeborn 1998: 183).

This author thus straightforwardly asserts that Saxon (OE) is no longer written and is dying out in the fourteenth century, being limited to a small numbers of illiterates, although surprisingly to him, its eastern and western speakers (presumably from Kent and Cornwall) understand each other. Consequently, the *different language* of Mercians (those from the Midlands) has become the common language of the whole country. Trevisa's text thus chronicles the demise of OE (Saxon), whose last areas were in his native South, and its replacement by AN.

5 The Norse basis of ME inflections

E and F's (2014) arguments for the AN Hypothesis (5) do not focus on morphology. Nonetheless, as in syntax, whenever differences arise between West and North Germanic, the characteristics of ME inflection all, with one exception, point to Common Scandinavian as their source. Here is a list of ME inflections with their source language.

(6) a. **Adjectival Comparison**. Both ON and ME replaced synthetic comparison on longer adjectives with analytic grading: English *more*, *most*; ON *meir*, *mest*. This does not occur in OE or WG.[15]

b. **Gerunds**. The nominalizing suffix *-ing* appears in ME from 1200 (Lass 2006: 146) and originates in ON (e.g. *viking* 'walking'); it differs from OE *-ung*.

c. **Infinitives.** WG infinitives have an inseparable prefix (OE *to*, Dutch *te*, German *zu*), while NG has free morphemes (ME *to*), that is, both NG and ME infinitives can be "split" by adverbs, but a corpus search for OE split infinitives with *to* revealed none (S. Pintzuk, pers. comm.).

d. **Possessives.** Early ME and Mainland Scandinavian both develop *phrasal genitive* suffixes spelled *-s,* rather than the word-based genitive suffixes of WG languages.

e. **Third Singular Agreement.** In Northern ME, eventually spreading and becoming the uniform Modern English usage, verbs with third singular subjects exhibit the CS lexical agreement inflection *-z,* spelled *-(e)s.* In the Midlands and South, the development is different; see below.

f. **Noun Plurals.** Arguments in Section 2 and the Appendix show that the English noun plural is lexically voiced *-z* and has retained this form ever since the time of CS.

With regard to plurals, it is instructive to review the citation from Baugh & Cable (2013: Ch. 7) in Section 1, which traces the replacement of OE *-n* by *-s*. The striking thing about this passage is that it *equally well describes*, mutatis mutandis, the wholesale replacement of OE by AN argued for in E and F (2014). The sibilant plural spread southward exactly in the way and at the time of *several dozen other abrupt "Norsifications"* of Early ME, just as ME became a written language.[16] Consequently, if the ME noun plural *-s* is rooted in CS, its blanket replacement of the OE plurals is no longer a puzzle, but simply an unproblematic confirmation of the Anglicized Norse Hypothesis (5).[17]

More generally, the list of ME inflections (6) reveals (only) one circumscribed area of ME inflection that shows some specifically OE influence, namely the finite verbal agreement suffixes. In both the East Midlands and the South (but rarely in the North by the fourteenth century), Late ME, for example Chaucer, uses the allomorphs *-(e)st* (second singular), and *-(e)th* (third singular); see Van Gelderen (2000: Section 4.3.2). Less systematically one finds *-(e)n* (plural agreement) and *-(e)* (first singular). ON texts use none of these as present tense agreements. So we can accurately refer to these reflections of OE in ME as "Saxon Agreement."[18]

But I take it as no accident that these agreements from West Saxon finally disappeared and did not survive into Modern English. This happened in stages: "In the North, the endings *-e* and *-en* on finite verbs are lost after the earliest [ME] texts" (Fulk 2012: 74), while the second singular was absent in the North after 1300 (Van Gelderen 2000: 175–176) but persists for a time elsewhere. Probably led by the socially pres-

15. Thus, long German adjectives are compared only with the inflections *-er* and *-(e)st* and never with the grading adverbs *mehr* 'more' or *meist* 'most'; I thank Bettina Knipschild for these data and judgments.

*aufschlussreicher/ *mehr aufschlussreich/ more revealing/ *revealinger*
*bedeutungsvoller/ *mehr bedeutungsvoll/ more significant/ *significanter*
*am pessimistischsten/ *am meisten pessimistischen/ most pessimistic/ *pessimisticest*

16. The term Norsification is from Thomason & Kaufman (1988: 278–279). These authors list dozens of morpho-phonological differences between ME and OE: "These features of Simplification and Norsification…did not appear gradually; they appear in the earliest ME documents of the Danelaw…"

17. For dating and more discussion of the sharp and general ME break with OE, see Watts (2011: Ch. 3–4).

18. Instances of *-st* for second person agreement in ON are limited to the preterit (Faarlund 2004: 52). More details of these person/ number agreements can be found in Barber (1993), Fischer et al. (2000), and Van Gelderen (2006: Chs. 5–6). Especially *-en* and *-e* are sporadically found in other persons and numbers. This fluctuation leads to doubts about whether Saxon Agreement was really implanted in the minds of ME speakers; it may have been only a mark of prestige written style. Uncertain and inconsistent usage is the hallmark of prestige and education not rooted in unconscious competence.

tigious bi-lingual French speakers in England (Anglo-Normans), who in the early 14th c. were switching to English as their first language, English restricted the earlier 2nd singular pronouns and inflection (*thou*, *thee*, *thy*, *-st*) to speech directed at intimates or inferiors. Though many papers have concentrated on these different 'social meanings' of two second person singular forms, few have ventured to explain the exceptional *loss* of the less formal *thou/thee* in the very register (spoken language) that would seem to favour it. None of the Indo-European languages with the same 2nd person distinction (French, German, Russian, Spanish, etc.) have ever shown the slightest sign of losing the original 2nd singular forms. For no apparent socio-linguistic reason, by 1450 unreflective usage of ME had simply dropped the intimate 2nd singular forms.[19]

So we must ask, what factor unique to English could bring about such a rare change, when so many surrounding languages left "familiar" 2nd singulars untouched? In the perspective of traditional histories of English, no such factor can be found. But according to the Anglicized Norse hypothesis (5), Middle English has a sociolinguistic aspect not shared with these other languages. According to (5), the ME 2nd and 3rd singular finite agreements (*-st* and *-th*) were brought into ME by the 12th c Saxon speakers and writers who adopted AN; these inflections were imports, not inherited from Common Scandinavian (see also note 18). In the other languages mentioned, the 2nd singular morphology (containing voiceless sibilants) had been interiorized since Indo-European times. Thus, even though OE *-(e)st* and *-(e)th* persisted for centuries in the Midlands, they eventually followed the path of grammatical innovations of second language speakers, in accord with the views in Kroch, Taylor & Ringe (2000):

> Now almost universally, even when massive lexical borrowing is under way, native speakers maintain their grammars. Though speakers changing their language [that is, West Saxons switching to AN, JE] often impose not only content words but also grammatical features of their native languages on the language they are learning … these effects ordinarily disappear in subsequent generations, but not always.

19. Three 15th c. collections of English letters, many circulating internally within well-educated families, demonstrate a near total loss of *thou/thee* in ordinary speech considerably earlier than the impression created in Shakespeare. According to the tables in Rutkowska (2007: 183–184), an examination of the Cely letters (1472-1488) found 2001 tokens of singular *you/ye*, compared to 43 tokens (2%) of *thee* and none of *thou*; the Stoner and Plumpton letters (1424 – 1483) used *you/ye* exclusively; and of 5981 singular 2nd person pronouns in the Paston letters (1425 – 1495), *thou* occurs 27 times and *thee* not at all. The total absence of one case form or the other in all the sets of letters suggests further that these 15th c. writers' internal grammars, like that of the 1950's Quaker crooner Pat Boone, no longer distinguish *thou/thee*.

In conformity to this view, no OE grammatical innovations were ever permanently imposed on ME (Anglicized Norse).[20] By 1450, Saxon verbal inflections were not part of spontaneous English writing and speaking. Their eventual disappearance suggests that their use was an accretion imposed by Saxon speakers and writers, many being clerics who were the country's only fully literate social class.[21]

Summarizing: in the traditional view of twelfth-century English, OE was dominant and spreading and ON was contracting. Judging by what usually happens in these situations, pre-contact OE should *not* have been significantly influenced by Norse while the latter was dying out. But in fact, because of the numerous syntactic and lexical ME borrowings from Norse, advocates of the traditional view must insist that contrary to the above sociolinguistic principle, the dominant OE changed massively *in the direction of the contracting and dying Norse*. This scenario is most implausible, but one forced upon advocates of the traditional derivation of ME from OE.

In contrast, according to E and F (2014 and 2016), the twelfth-century contact pair was the reverse of the above: Anglicized Norse was dominant and West Saxon (OE) receding, and what should have happened (according to Kroch, Taylor and Ringe) did happen. Late OE shows the typical syntactic changes of a contracting language, some "early signs" of changes in the direction of the spreading AN/ME for instance, in word order, post-verbal particles, etc. (E and F 2014: Sect. 1.1). Doubtless, early OE speakers helped denude AN of much inflection (such as nominal cases and adjectival agreements) and spoke it imperfectly, but ultimately their offspring acquired the unchanged syntax of the Norse speakers around them. A handful of OE verbal agreement inflections lingered for centuries in the prestigious written language, but from Jonathan Swift (early 18th century) onwards, the only agreement on V in Modern English is from Common Scandinavian. [22]

20. There is one instance in the history of English where second language speakers have permanently introduced a syntactic construction previously foreign to it. Emonds & Havranová (2014) observe that fourteenth-century French/ English bilinguals successfully extended interrogative Wh-pronouns like *which* to use as (still current) English relative clause markers, alongside invariant ME *that*.

21. We should pause over this unanticipated prediction of the AN Hypothesis (6). In the argument here, late Middle English eventually lost the proto-Germanic singular 2nd person pronouns because of the obligatory agreement inflection *-st* that West Saxon speakers brought into the language. For all the speculation about the "meaning" of ME *thou*, I know of no principled account of why this pronoun of familiar address disappeared only in English. The actual dates of this loss of the spontaneous 2nd singular, chronicled in Rutkowska (2007), are considerably earlier than widely assumed.

22. The arguments for the AN Hypothesis (5) all depend on the idea that intensive language contact does not lead to just any changes, either in morphology or syntax. Rather, both aspects of grammar are subject to principles such as the one cited above

6 The CS source of the ME Noun Plural

A motivated and plausible source of the lexical *-z* of the ME noun plural is the North Germanic language brought to England by Scandinavian settlers after the early Viking raids (750–800) and prior to the Norman Conquest. When speaking of Scandinavia, this largely unwritten language is called Common Scandinavian (CS), but when transferred to England, the same (unwritten) language is misleadingly called Old Norse, the name of the written language in Scandinavia *after 1150*. Whatever the name, it is generally agreed (Section 3) that West Saxon (= OE) and Old Norse (= CS) co-existed in England well into the twelfth century, that is, for more than 300 years. Here I will call this language CS, from Scandinavian linguistics.

Texts in ME first appear at the same time as written ON texts in Scandinavia, in the late twelfth century. Perhaps the first book in ME is the monk Orm's strongly Scandinavian *Ormulum* of c. 1200. This volume is notable among other things for its wide use of the nominal plural inflection *-s* (Trips 2000). The question that concerns us is, where did this *-s* come from?

The fact that ME syntax is typologically North Germanic (Gianollo, Guardiano & Longobardi 2008) prompted Emonds & Faarlund (2014) and Faarlund (2018) to argue on the basis of syntax that, counter to previous classifications, ME descends *directly* from CS and so is not only typologically but also genealogically an NG language, though modified over three centuries in England to include extensive West Saxon (OE) vocabulary. E and F's term (Section 3) for this NG branch is "Anglicized Norse" (AN), which is then synonymous with Early ME.

In their study, these authors leave morphology somewhat to the side. They follow traditional scholarship in noting that AN/ ME lacks much of the bound morphology of both OE and ON. Nonetheless, almost all the remaining ME inflections in (6) arguably *derive from NG*. And since *all inflections* are typically an integral part of syntax, the AN Hypothesis (5) leads us to expect that the last ME inflection in (6f), the Noun plural, should also have a source in Norse.[23] And as we will see, the prehistory of CS independently forces this conclusion upon us.

To see whether the ME plural (3) comes from the CS plural, we of

from Kroch, Taylor & Ringe (2000). For a critique of the unconstrained approach, see Emonds & Faarlund (2016).

23. As for verbal morphology, Section 5 has related ME agreement inflections to both ON and OE. The finite and participial past forms in Norse and OE are too similar for constructing convincing arguments for locating their source in one or the other (Strang 1970: Ch. IV).

course need to know what that plural was.[24] Historical NG linguistics unsurprisingly derives the PS/ CS plural from Indo-European. In Latin, which for our purposes is a not too distant reflection of I-E, non-neuter nominative and accusative plural suffixes consist of *an unstressed long vowel plus final s* (Emonds 2014).[25] These I-E plurals are, for example, the source of the Modern Spanish noun plural *-(e)s*. Another suffix of similar form is the Latin second-person singular ending *-s,* which is also cognate to today's Czech *-š* and Spanish *-s*.

In Proto-Germanic, and hence in PS/CS, since the final *s* of these I-E plurals followed unstressed vowels, it was subject to the regular sound change of Verner's Law, and hence became a voiced *-z*.

(7) **Verner's Law (Germanic)**
+Continuant → +Voiced / -Stress ___

Later in some Germanic languages such as German and English, final *-z* again devoiced with other word-final fricatives. But general final devoicing did not apply in early PS/CS, so their productive Noun plural *remained -z* for a considerable time. So we need to know, when Scandinavians were emigrating and settling in England (between 800 and 1066), did their CS plural remain *-z*?

In CS runic writing, which Haugen (1982: 36 and 57-62) locates squarely in the emigration period, the ninth through eleventh centuries, this *z* is represented by *a special rune fully distinct* from the two runes for its nearest phonetic neighbors *r* and *s* (*z* differs from each by only one distinctive feature). If this rune, roughly of the shape ᛉ, developed from *s* in a context affected by Verner's Law, but is not yet an *r* (its later ON successor), the CS plural really cannot be anything else but a *z*.

The conclusion is confirmed in Haugen's (1982) comprehensive and authoritative *Scandinavian Language Structures.* His detailed tables in Ch. 4–5 (90–91; 122–125) unfailingly represent the PS plural nouns (and second singular Verb agreement) as a *voiced sibilant z*. We can summarize the arguments for this as follows:

(8) **Arguments that the CS/PS plural rune ᛉ was a voiced sibilant**

24. In this section, I use the terms Common Scandinavian (CS) and Proto-Scandinavian (PS) interchangeably, since the only difference is that CS refers to the language as attested in some form, while PS refers to the unwritten reconstructions in the same language.

25. The only exception concerned the Latin nominative (not accusative) plurals of two of its six declensions, where the ending was *-i.* These two basic structural cases are generally taken to be the source of forms that result when other morphological cases are lost.

i. In the nearly contemporary East Germanic language Gothic, Noun plurals and second singular Verb cognates of CS endings are written as sibilants.

ii. Regarding voicing, the CS rune ᛉ occurs after unstressed vowels, where throughout Germanic *fricatives are predictably voiced by Verner's Law*.

iii. This PS/ CS ᛉ has fully expected *unvoiced* non-Germanic cognate sibilants *both* in today's Spanish noun plural and in Czech and Spanish second singular agreement.

iv. During the CS period, the separate rune ᛉ represented Noun plurals and second singular agreement, and this rune was *clearly distinct* from those for either its I-E ancestor *s* or ON descendent *r*. Thus, the distinct diachronic stages were I-E *s* → CS ᛉ (= *z*) → ON *r*.

v. When PS/CS *z*/ ᛉ later dissolved into allophones of other ON phonemes (twelfth century), all of them are coronal and (except for *s*) all are voiced: *d*, *n*, *l*, *r*, *s* (Haugen 1982: 62).

Moreover, this "pitch-fork" rune ᛉ (for a phonemic voiced continuant) persisted in certain regions into the twelfth century (Haugen 1982: 57–62), when Latin script superseded runic writing.

Haugen's tables of nominal inflections (1982: 90-91), reflecting the points in (8), indicate that the most common PS nominal plural (in all non-neuter nominatives and accusatives) is by far a monosegmental voiced *z*, just like the Middle and Modern English plural (3).[26] I therefore conclude:

(9) **Genealogical source of the English plural.** The Middle/ Modern English and Common Scandinavian Noun plurals are phonemically identical -*z*.

This conclusion is the principal result of this essay. Since the arguments for an underlying CS *z* plural are just a straightforward use of the established Comparative Method of historical linguistics, and since an underlying English plural *z also* is the consensus in generative phonology, I conclude that the AN Hypothesis gives the best possible analysis. The ME plural simply continues the *unchanged CS plural*. It was not created by a linguistics change, but by the lack of one.

Since this conclusion requires nothing more than some standard Germanic historical linguistics and some early generative phonology, it is

26. All "strong noun plurals" in Haugen's tables have this form, except that some masculine nouns take -*n* in the accusative. All non-neuter nominatives and all feminine nouns take -*z*.

more than surprising that the identity in (9) has escaped mention in the literature.

Although both later written ON and today's NG plural suffix is *-r,* those who brought Scandinavian to England were not speakers of the language written after 1150, centuries after they emigrated; they spoke rather PS/ CS. The noun plural in earlier NG was not yet a phonemic *r*, but a phonemic *z*. So there is consequently no mystery about the ME plural (3); it is the *unmodified continuation* of the identical CS plural. In brief, the development of the ME plural involved no linguistic change at all.

7 An additional argument for the AN source of plurals

Traditional histories deriving ME from OE have no real account of another clear ME innovation, the emergence of *z* as a phoneme separate from *s*. As argued in Lass (2006: 59–61), distinctive voicing of ME *z* both initially and in sibilant plurals was present from the *beginning* of ME.

> Be that as it may, by around 1250, /v/ and /z/ were separate phonemes in foot-initial position…The development of a final voice contrast is tied to the loss of final /ə/ [reference omitted], which probably began *in the north and north midlands in the twelfth century* [my emphasis, JE], and then spread southwards…[27]

This dating of voiced continuants becoming distinctive in ME leaves open the issue of a *motivated source* for the new peripheral phoneme *z*. In this regard Lass makes two points: first, he favors an account in which phonemic distinctness in both final and initial positions reinforce each other.[28] Second, his source for distinctive phonemic voicing of initial *v* and *z* is based on some non-productive borrowings from southern dialect into written ME (for example, *fox* vs. *vixen*).

The first point seems broadly correct, but the second is very weak. I suggest instead that the long standing voicing in CS plurals provided a

27. To situate a ME "innovation" prior to 1200 in the traditional framework is equivalent to making it part of what I claim is the changeover from writing OE to writing AN.

28. We should discard any "intuition" that distinctive consonantal phonemes always begin in word-initial position. The English non-initial voiced palatal continuant phoneme *zh* is a counter-example: *lesion* vs. *lotion; occasion*, vs. *station; allusion* vs. *Aleutian*.

robust springboard for extending a contrastive ME *z* in both initial and final positions. Note that this view is consistent with the sequence of dates. As stated by Lass, the voicing of the sibilant plural, spreading southward from before 1200, *preceded* the establishment (1250) of an initial *s*–*z* contrast. That is, the best motivated source for the ME voiced *phoneme z* is in CS; its wide distribution cannot be convincingly squeezed out of either Anglo-Norman French borrowings or OE dialect forms.

8 Continental development of Common Scandinavian -z

The preceding sections have established that both the PS plural and the ME *-z* of entry (3) are *voiced alveolar continuants*. That is, given the AN Hypothesis (5), the appearance of the ME plural (6f) involved no linguistic change whatever (putting aside phonetic detail). This conclusion is in no way weakened by the fact that the productive CS nominative plural suffix, a reflex of this PS final *-z*, subsequently became a Latin alphabetic *-r* in written ON (1150 onwards).The development of ON involved a change that distinguishes ON *-r* from ME *-z*; the single feature difference between the two segments is that ON *-r* was sonorant, unlike the earlier CS obstruent *-z* retained in ME.

Keep in mind that the English plural *-s* is just a spelling for a lexical *z*. Since other instances of rhoticization (*z* → *r*) are widely attested in both North and West Germanic of the Middle Ages, it is not surprising that Proto-Germanic final *-z* in plurals could develop into ON *-r*.

From this perspective the history of English plurals is as follows:

(10) **North Germanic history of English plurals**

i. The modern Noun plurals in English *-z* and Scandinavian *-r* (differing by the feature ±Sonorant) both originate in IE case/ number inflections that contained *-s* preceded by a vowel, e.g. *-e:s*, *-o:s*.

ii. These IE inflectional long vowels on nouns were usually *unstressed*.

iii. After Proto-Germanic stress became initial, all final sibilants in plurals become voiced because of Verner's Law, with possibly also some "analogical levelling".[29]

iv. When NG short vowels dropped due to vowel syncope/ apo-

29. The unstressed IE nominative and accusative plural suffixes are transparently reflected in their Latin descendants. The declensional tables in Henle (1945: 2–13) contain many long but unstressed final syllables.

cope in the Proto-Scandinavian of the seventh and eight centuries (Haugen 1982: 28–29), voicing of the plural sibilant *z* became distinctive, that is, based on a lexical entry with this feature, as seen in (3).

This last step (10iv) preceded the bulk of Nordic settlement in England (c. 850–1066). That is, the settlers brought with them a phonemic Noun plural inflection that was some kind of voiced coronal continuant. The one uncertainty, to be discussed below, is: what was its mode of articulation? Was it a fricative, as it had been, or a sonorant, as it would become, and was it alveolar or dental?

Whatever the answer, one can conclude that in NG languages, the final coronal continuant (*z* or *r* with possibly some allophonic variation) that marks Noun plurals has *never lost the voicing brought on by Verner's Law*. By 1150, this continuant became *r* in ON (written in Latin script), but it remained a *phonemic z* in Middle and Modern English. There is no actual evidence for any devoiced stage; the diachronic comparative method, given the factors listed in (8), led to a consensus that the CS Noun plural suffix was a voiced sibilant represented with the "pitchfork" rune ᛉ.[30] Haugen (1982: Ch. 4-5) is thus justified to alphabetically transcribe this rune for the plural in his tables as a *voiced sibilant z*.

However, in written ON after c. 1150, nominative plurals no longer ended in *-z* but in *-r,* which is called *rhoticization*. To this day, the NG nominal plural remains '(vowel) + *r*'.[31]

The exact phonetics of the NG change from *z* to *r* need not concern us. Nonetheless, since runic writing doesn't generally record phonetic detail, the *phonemic z/r* distinction plausibly lasted as long as it was reflected in writing, which in some dialects was into the twelfth century (Haugen 1982: 57–62). Since significant Scandinavian immigration to England had ended with the Norman Conquest, we can conclude that the Noun plural for most immigrants was the separate CS phoneme *z* distinct from *r,* written during this period with a distinctive rune ᛉ. Whatever its exact phonetic quality, this plural morpheme was certainly +Voice, like both its PS source and its ON descendent.

As is well known, a phonemic change, here from *z to r* in ON, is typically preceded by phonetic precursors. According to Thöny (2016), a first stage of this rhoticization occurred *early* in the PS period. This idea can be succinctly expressed by saying that the phoneme *z,* written ᛉ, acquired a Sonorant allophone, at least in word-final contexts.

30. On this alphabetic system and the stages of "runes" used in North Germanic inscriptions see Spurkland (2005). Like the runes for *s*, *m*, and *h*, later runic script modified its form; in the case of *z*, the "pitchfork" was inverted but easily recognizable.
31. ON maintains numerous distinct case inflections (Faarlund 2004: 24–33), but its accusative plural nouns are either identical to nominatives or simply lack *r*.

(11) **CS Allophonic Rhoticization of *z***
[+Continuant, +Voice, Alveolar] → +Sonorant / …word-final…

Thöny proposes that that this rhoticization exempted *z* from later devoicing of final obstruents. If so, I suggest that the change (11) produced a sonorant *allophone* of *z*, but that its feature set still differed from the features of "true *r*". For clarity, we can label this new alveolar allophone *R,* reserving small *r* for the descendant of the rhotic phoneme of I-E.

Consequently, during most or all of Scandinavian settlement in England, their Noun plural remained more akin *phonemically* to its origin as a fricative than to its future as a sonorant. Well into CS (800–1150), the *z* that became an inflectional -*r* in ON was not yet part of that phoneme. This chronology conserves a transparent CS source for the AN/ME plural morpheme (3) expressed as *a voiced sibilant.*

9 Common Scandinavian splits into Anglicized Norse (ME) and Old Norse (ON)

The main diachronic structural event affecting CS *z* thus occurred not in the history of English but in Scandinavia. The CS *z* underwent a phonemic change, apparently starting around the tenth century, but not fully completed before the twelfth.

(12) **ON Rhotic Merger**
The word-final allophone *R* of the phoneme *z* in (11) loses the Alveolar specification that distinguishes it from the phoneme *r*. Phonemically, ᛉ → *r*.

Prior to Rhotic Merger, phonetic "Rhotacization" (11) (becoming a sonorant) had not yet made *z* into an *r* like any other. Somewhat like the peculiar *r* sounds of today's American English and Standard French, the PS/ CS "true *r*" *was not alveolar,* even though the allophone *R* of *z* was. Although the allophonic rule (11) began in PS, it did not itself bring about merger with the phonemic *r* (which still kept a separate rune, well after Thöny's early dating). In order for ON *z* (= phonetic *R*) and *r* to merge phonemically as in (12), they first had to lose their contrasting specifications for the property/ feature Alveolar.[32]

In the AN/ME of England, on the other hand, Allophonic Rhoticization (*z* → *R*) was not (permanently) implemented; instead, the earlier

32. Czech also has two *r* phonemes that differ by the feature Alveolar; its orthographic *r* is an alveolar trill, while orthographic *ř* is palatalized.

z was retained. It might be asked, why would Scandinavian speakers in England not simply adopt it and transmit it to ME? The fact is, sociolinguistics frequently describes phonetic innovations in a language's homeland or central area that do not develop in its colonies or overseas extensions. Thus, French in Canada is often more conservative than in France; and English changes like loss of post-vocalic *r* or word-initial *h* have not occurred in most of Ireland, Scotland and the United States.

Though such divergence (often involving allophones) may sometimes be random, according to Labov (1963), it can also reflect split cultural allegiances within populations, in the case at hand to an "old world" (Scandinavia) and a "new world" (the Danelaw), even when both used the same basic language, CS (800–1150). As Scandinavian colonists in the Danelaw were prospering and their leaders eventually conquering the whole country (see again Section 1), Anglicized Norse apparently replaced Anglo-Saxon dialects, from North to South as the predominant and unifying native tongue. So the settled English Scandinavians, far from remaining poor immigrants who identified with their ancestral country, were better off than more recently arriving immigrants and had acquired their own English social identity.

It is thus sociolinguistically natural to propose that in the tenth and eleventh centuries, the conservative Norse of established settlers, who kept the CS -*z* as a plural, was more prestigious in the Danelaw than that of new generations of immigrants and seaborne raiders, whose speech could be identified by unwelcome Mainland innovations such as the phonetic *R* of (11).

This situation in tenth-century England calls to mind that on another island a millennium later, the dialectal differences on Martha's Vineyard off the New England coast, as analyzed in Labov's (1963) sociolinguistic classic. He uncovered social correlates of the unconscious differences in allophones of their English dialects. (In the quote, "the model" refers to the conservative speech of the oldest English stock fishing families on the island.)[33]

> If someone intends to stay on the island, this model will be ever present to his mind. If he intends to leave, he will adopt a mainland reference group, and the influence of the old-timers will be considerably less. The differential effect in the degree of centralization used is a direct result of this opposition of values … In summary, we can then say that the meaning of centralization, judging from the context in which

33. Labov's phonetic term "centralization" refers to a conservative absence of the final stage diphthongs *ai* and *au* in the English vowel shift. The conservative speech of the Islanders did not use these diphthongs.

> it occurs, is *a positive orientation towards Martha's Vineyard.* (Labov 1963: 305–306)

Replacing "(the degree of) centralization" with "a non-sonorant plural", I suggest that for Scandinavian settlers in the Danelaw, a phonetic *z* plural signified *a positive orientation towards living in England,* and a corresponding lack of identification with Scandinavian innovations.

Especially in the tenth century, when Allophonic Rhoticization (11) was spreading on the mainland, English Scandinavians strongly identified with being permanently settled in England, and rejected or never seriously considered severing links with their established island home. In fact, English Scandinavians are known to have often sided with Anglo-Saxon efforts to ward off ever renewed Norse incursions. They thus had social reasons for not identifying with their newly arrived and often aggressive mainland "cousins". Instead, while retaining and spreading their mother tongue AN/ ME inside England, they willingly adopted West Saxon vocabulary and unconsciously resisted Mainland linguistic innovations such as Rhoticization (11).[34]

As a lasting result, English has steadfastly adhered to older PS hallmarks such as the CS voiced sibilant plural *-z*. The torturous traditional derivation of ME plurals from the very different and non-productive West Saxon / OE plural *-as*, reviewed here in the Appendix, can and should be abandoned. Finally, on the general question of whether English inflection is North Germanic, we see that not only some but all productive Modern English inflections in (6) have ancestral lineages traceable to Scandinavian rather than to Old English.

Appendix. Three steps needed to derive ME plurals from OE

For centuries, scholarly studies of ME have assumed without argument that outside of lexical borrowing, essentially all ME characteristics originate in OE.[35] The origin of the ME plural *-(e)s* is no exception. So

34. A fortiori, AN never adopted some even later Scandinavian morphological devices, such as a definite enclitic *-en* on Nouns, which first appeared in Mainland runes around 1100 (Haugen 1982: 173–174). The same holds in phonetics; since the Saxon and Scandinavian communities understood each other (Townend 2002), it appears that the latter sometimes adopted Saxon cognates like the prepositions *in* and *on*, in preference to the CS innovations *i* and *a*.

35. The possible sociological, religious and historical motivations for this assumption are too many and too obvious to merit space here. One crack in the traditional armor is the view that ME is a "creole" (that is, derives from multiple linguistic sources). This idea is indisputably true of its lexicon, but there is no worked out argument for ME

traditional analysts set out to find an OE precursor and have settled on a kind of consensus.

Now in OE as in Scandinavian, regular plurals had developed from I-E plurals and were subject to Verner's Law. But in several declensions, the final *z* had dropped in OE, and if it was retained, OE devoicing in final position had changed it back to *s*. OE thus ended up with *several different* plural suffixes, *none of them containing z.*: *-en*, *-as*, *-e*, *-a*, and *-u*. So by assumption, one of them had to become ME *z* via some modification.

In the traditional account, the postulated demise of the vocalic plurals at the end of the OE period left only *-en* and *–as* (with a neutralized vowel *-es*) as standard plural inflections.[36] Since the ME plural is an orthographic *s,* historians of English decided that OE *-es* somehow "won out" over *-en*. But as the next subsection shows, this result cannot be linguistically motivated. By the reasoning used in these studies, the outcome should have been the contrary.

Given the strange re-lexicalization from productive *(e)n* to productive *(e)s*. the overall traditional scenario is that the ME plural then followed the diachronic path (Section 1), *-en* → *-es* → *-s* → *-z*. This is summarized in the Wikipedia passage below, which repeats what one commonly learns about ME plurals. Note that it makes no mention of the discrepancy between OE voiceless *s* and the voiced *z* of Middle and Modern English (Section 2):[37]

> The English plural *-s* is the only survivor of a much more complicated Old English nominal declension system. . . The plural ending for the Nominative and Accusative of "strong masculine nouns" was *-as*, and as the Old English nominal system broke down, this ending was generalized to *all* nouns in *all* cases. By Middle English we only have the ending *-es* for all nouns, and in Modern English the *-e-* has disappeared (except in spelling in some cases), giving us the plural *-s*.

I cite this passage only because it encapsulates exactly what I don't believe. It presents in a popularized way what every traditional history of English (wrongly) holds about the ME plurals.

being a grammatical creole.

36. On the vowel reduction, see Lass (2006: 152). Most unstressed OE short vowels became *e* in late OE (Minkova 1991: Ch. 1).

37. Source: `https://english.stackexchange.com/questions/34029/origin-of-pluralisation-of-verbs-and-nouns-in-english` The passage inaccurately implies that Modern English lacks pronounced epenthetic *e* (*matches*).

Step 1 (arbitrary). Re-lexicalizing of *-en* as *-es*

There is no reason, other than a necessarily vague appeal to "frequency," why of these two OE endings, only *-es* should have become the productive survivor. Already a century ago, Classen (1919) showed that the frequency factor favored rather *-en*, not *-as*.[38] The logic of the traditional scenario is thus not based on linguistic plausibility or independently justified aspects of ME. Rather, *by assumption (not argument)*, among the five OE non-productive plurals, the choice is *-as* only because it "looks like" ME *-(e)s* orthographically more than do the others.

Obviously, OE *-as* and ME *-(e)s* should be compared in terms of *phonological features*, not graphemes. There is no phonetic affinity between ME *-z* and OE *-as*; in OE, as eventually in WG Dutch and German, non-sonorant continuants (*s, f, th, χ*) were *unvoiced* in word-final position (Strang 1970: 288; Mitchell & Robinson 1992: 15; Lass 2006: 57–61).[39] Since final voicing was not possible, the re-lexicalization of *-(e)n* as *-(e)s* cannot be taken as a motivated step toward the ME final *z;* it is purely arbitrary. In contrast, the derivation of ME *-z* from NG (Section 6) contains no such arbitrary step.

Step 2 (ad hoc). Short *e* Deletion in closed final syllables: *-es* → *-s*

The second and third steps in the path from OE *-es* to ME *–z*, far from being regular sound changes, are arbitrary and isolated, needed only to maintain the traditional perspective. Adding to their implausibility is the fact that all three changes would have to occur within a single century, c. 1150–1250.

There are numerous studies of ME deletion of schwas, written *e,* but these schwas are *word-final*; unlike the vowel in the OE closed syllable plurals.[40] In any case, Minkova's claim (1991: 9) that "there is no par-

38. Classen's hybrid analysis crucially involved ON: OE speakers in the Danelaw first borrowed many Norse nouns, and then due to similarities in the *oblique cases*, they misanalysed them as OE "strong declension" nouns, so that *-as* plurals became (for only Danelaw speakers) more frequent, while OE *-en* plurals remained more frequent in the South. As a result, the North generalized *-as* and the South *-en*. Classen's account depends on OE speakers recognizing the oblique case forms of Norse declensions, a far-fetched assumption, especially since oblique nominal case endings were disappearing at the time in both languages.

39. Since voicing in fricatives was non-distinctive in OE, it occurred phonetically only inter-vocalically. As a result, the *s* in the OE suffix *-as* was always unvoiced.

40. "Schwa loss during the ME period is axiomatic in all standard descriptions of the history of English" (Minkova 1991: 36). Although the date of schwa loss is debated,

allel development in Scandinavia" is at best misleading. Short vowel deletion in final syllables, including *e*-deletion, was *endemic* in earlier NG, practically its hallmark (Haugen 1982: 28–29). Since the issue here is precisely how ME and Scandinavian are related, it would be circular to claim their losses of schwa are unrelated by using a dating difference determined by *assuming* that they are different. If as I claim ME is simply one written successor of unwritten PS/ CS, it is no wonder that any *general* final ME *e*-deletion, resembling NG syncope, is found only in ME and not yet in OE. Many words with final schwas that appear to "delete" in Early ME are quite possibly words whose final *e* deleted earlier in NG.

Whatever its timing, ME schwa loss was systematic and pervasive *only in word final position*, and *not* before final consonants such as *s*. And importantly, no vowel preceding a consonant in any other inflection has ever been subject to a general deletion:

(13) **Stability of schwas in Middle and Modern English inflections**

- Germanic short *e* never delete in English superlatives; *slowest, truest, highest, grayest* don't rhyme respectively with *toast, boost, Christ, taste*.
- The short *e* in English comparatives or agent nouns never delete: the pairs *rower/ roar, lower/ lore,* and *mower/ more* are not homonyms.
- The ME verb suffix *-eth* never productively lost its vowel; *groweth/ growth, showeth/ both* and *stayeth/ faith* are not rhyming pairs.
- Vowel deletion has never affected the unstressed *vowel* in the pervasive suffix *-ing*.

Even outside inflections, only scattered instances of ME schwa delete in final closed syllables; see Lass (2006: 102–105; 109–111).[41] Moreover, according to Fulk 2012: 50, "Unstressed /ə/ in final syllables is never lost when the result would be a final consonant cluster in which the sonority of the final consonant is greater than that of the preceding consonant. In this same passage, Fulk crucially refers to the "high sonority of fricatives." By this reasoning, the vowel in the OE plural *-as/-es* should never be lost after a stop, yet *it always is*. This conflict makes it impossible to relate the deletion of *e* to the general history of the ME

on the basis of words without final *e* in early ME documents, Minkova (1991: 24) puts it in the twelfth century. This dating suggests that the loss was not internal to OE, but due to AN/ME replacing OE as England's written first language.

41. If late OE final *-es* changed to *-s* amd then to *-z* by regular sound changes, we could also expect that OE *-ness* → *-nz*, giving rise to absurdities such as *shyness* → phonetic *shinez*, *lovliness* → phonetic *lovlinz*, and *baroness* → phonetic *baronz*.

plural.[42]

In sum, an empirically accurate history of ME is forced to treat any proposed *e*-deletion in its plurals as an ad hoc step with no counterpart in the rest of ME.

Step 3 (also ad hoc). Progressive Voicing: final *-s* → final *-z*

The required third step in the traditional derivation is a spontaneous voicing of an OE word-final *s* in plurals, so as to produce the lexical *z* of later English (Section 2). Vachek (1978) calls it a second application of Verner's law (separated from the first by the entire OE period); he thus realizes that this voicing must be overtly postulated and can't be glossed over. Though authors often fail to mention this, Honeybone (2012) underscores the isolated nature of this putative voicing: "English is odd in this regard. It seems to feature a case of final obstruent voicing, which is essentially *unheard of in the history of languages*" (2012: Sect. 3.4, JE's emphasis). And as seen just below, such final voicing cannot be related to any special tendency of English to use progressive voicing. Hence the last step from *-en* to *-z* is as unjustified as the first two.

Indeed, progressive assimilation, particularly of +Voice, is rare in languages (Lombardi 1999; Borowsky 2000). In fact, outside the two monosegmental suffixes *-z* and *-d* (the regular past tense), English itself *entirely excludes progressive voicing* in any other compounds or suffixes, despite several suffixes with an initial voiceless *s* (*–self, –son, –some*). Neither these *s* nor any other suffix-initial voiceless segments ever progressively assimilate to a preceding +Voice.

(14) **No rightward phonetic spreading of +Voice in English:**
- *him-self* (**himzelf*), *one-self (*one-zelf)*, *my-self (*my-zelf)*
- *hand-some, fear-some, cumber-some* (*–some* never becomes **-zome*)
- *John-son, Atkin-son, Richard-son, William-son* (*-son* never becomes **-zon*)
- *special-ty, frail-ty, casual-ty* (**special-dy, *frail-dy, *casual-dy*)
- *four-th, nin-th, ten-th, leng-th, wid-th, tru-th, heal-th* (voiced *th* excluded)
- *contain /content, restrain(t), high/ height, weig(t)* (*-t,* never *-d*)

42. Fulk (2012: 59–60) also claims via metric analysis of poetic texts that some ME medial *e* are indeed purely orthographic, for instance monosyllabic *sinnes* 'sins' from the poet Richard Rolle (c. 1325); by the meter, the plural here consists of only a consonant.

- *spoon-ful, hand-ful, dread-ful, care-ful* (*–ful* never assimilates to **–vul*)
- *Bingham-ton, Tren-ton, Barring-ton, Middle-ton* (*-ton* never becomes **–don*)

The diverse historical sources of these combinations testify to the lack in Middle and Modern English of any phonetic "tendency," even slight, to spread voicing of a final segment to a following morpheme. The pattern in (14) strongly suggests that throughout history, the voicing in the English noun plurals (3) has been in its underlying lexical entry rather than due to a derivational process. Minkova (2014: 89) argues similarly for the Past morpheme *-d*, that voicing of the alveolar stop of the regular English past tense is due to its lexical entry, not to derivation. But if both these inflections (*-z* and *-d*) are underlyingly voiced, the remaining robust pattern (14) essentially forces acceptance of the following:

(15) **Progressive voicing exclusion.** No English rule progressively assimilates +Voice.

Many textbooks, looking for an example of "progressive assimilation" readily claim that English plurals result from a rule that spreads a stem-final voice feature *rightward* to a suffix's adjacent consonant. But the well supported restriction on voicing assimilation (15) excludes such a rule and instead constitutes a third argument that the Voice feature in (3) is lexical.

A doubt about the ban (15) might linger if English phonology required some other type of progressive assimilation of –Voice, that is, if progressive devoicing were needed to account for the *voiceless* plural allomorph */-s/*, or a voiceless Past allomorph */-t/*. But even this "assimilation" is a misconception.

While the English regular plural morpheme consists of an *underlying voiced sibilant -z*. voicing on this morpheme disappears if a noun's final segment is voiceless: *cats, naps, cliffs, rocks*. Interestingly, this devoicing has its source in a *more general* phonotactic restriction which is *bi-directional*. Consider for example clauses that *begin with* the contractible singular copula *is*. In (16a), the contracted forms are voiced, in accord with this copula's lexical representation. But in (16b) the contractions cannot be voiced, due to the *following* adjacent voiceless segment:[43]

43. The contracted morphemes are not separate words because they have no vocalic nucleus. Generally a full contraction must be part of a *preceding* word, but when contraction is clause-initial, it becomes part of the *following* word

(16) a. *Is Dave/ Ann coming back?*
Contracted *'s* must be pronounced */z/:'s Dave/ Ann coming back?*

b. *Is Ted/ Fanny coming back?*
Contracted *'s* must be pronounced */s/. 's Ted/ Fanny coming back?*

Devoicing in the contracted copula is therefore *bi-directional*. This can be accounted for by a general phonetic restriction (17), plausibly valid across many if not all languages, which prohibits isolated voiced obstruents:

(17) **Bi-directional Voicing Restriction**. Voicing is not realized in any obstruent C if a voiceless segment *separates C from all sonorant segments in the same word.*[44]

The Restriction (17) automatically explains *all* devoicing of contracted English singular copulas. It equally well accounts for the voiceless allomorphs of the English plural morpheme in (1), as well as of their homophones in the possessive *-'s* and in third singular agreement, even though these morphemes are all *lexically specified as* +*Voice,* In fact, the Voicing Restriction (17) allows us to dispense entirely with the problematic process of "progressive assimilation," and to conclude*: English has no progressive assimilation of either feature value* ±*Voice.*

Deriving the voicing in English plurals from final voiced segments, either synchronically or diachronically, is thus excluded in principle. This supports the earlier conclusion that the source of +Voice in English Noun plurals is and always has been its lexical entry.

The thrust of this Appendix can be summarized as follows: Deriving the voiced ME plural *-z* from one OE plural inflection (among many) requires that it comes from the non-productive "*e* + voiceless *s*", followed by two otherwise unmotivated rules: *vowel deletion in a single closed syllable inflection* and an isolated *progressive voicing assimilation* of a final consonant. And to get started, this productive ME plural *-z* has to spontaneously replace a late OE tendency to extend the default (West Saxon) plural *-n*, as attested elsewhere in WG. So in conclusion, all three steps in the traditional scenario for deriving the ME plural from OE are entirely ad hoc, and due solely to the circular assumption that OE is the only conceivable source for the ME plural.

44. For a theoretically current general justification of the feature Sonorant, see Kaisse (2011).

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