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38 Early Modern English: Morphology

- 1 Nominal inflectional morphology
- 2 Verb morphology
- 3 Derivational morphology
- 4 References

Abstract

By the end of the Middle English period there is already considerable loss of inflectional morphology, and in Early Modern English we see the last reflexes of a shift from synthetic Old English to analytic Modern English (Lass 1999: 139). In fact, the inflectional system of Early Modern English is not very different from what we have today (Görlach 1991: 79). The changes in inflection which do take place between 1500 and 1700 show marked sociolinguistic differentiation and are the subject of well-known case studies in sociohistorical linguistics. The derivational morphology of Early Modern English, on the other hand, is considered to demonstrate much more wholesale and radical change in the form of new Latin prefixes and suffixes reanalyzed from borrowed lexis. The rate of integration of these word-formation processes is not, however, very uniform, and capturing this diversity is a major aim of this survey.

1 Nominal inflectional morphology

1.1 Nouns

Gender marking on nouns was already lost by late Middle English. The only case marking left by 1500 is the genitive *-s* with the same allomorphs (/ɪz/, /s/, and /z/) as the plural morpheme (Barber 1997: 145). The use of the apostrophe *s* (*'s*) for the spelling of the possessive singular is not common until the late 17th century, and the *s* apostrophe (*'s*) for the possessive plural is not common until the late 18th century (Barber 1997: 143; Görlach 1991: 82). The analytic variant, the *of* genitive, is available from late Middle English but becomes markedly more popular over the Early Modern period. The *-s* genitive tends to occur with human nouns and on modifiers in subjective relation to the head (*the boy's arrival*) and the *of* genitive tends to occur with inanimate nouns and on modifiers in objective relation to the head (*the release of the boy*). This pattern remains quite

consistent in the 17th century. At this time the *-s* genitive is regarded as somewhat more informal (Altenberg 1982; Rissanen 1999: 201–202).

A much discussed construction associated with Early Modern English is the “*his* genitive” (*the Kinge his fool*). This is widespread in the 16th and 17th centuries, but in fact arose earlier (12th century) due to the homophony of the genitive morpheme and weak forms of *his* with /h/ deletion (Barber 1997: 146; Lass 1999: 146). It may have been a popular feature which then in the 16th century made its way into “respectable” prose (Görlach 1991: 81). An oft-cited example from Shakespeare is *the Count his gallies* (*Twelfth Night*). The construction was extended to feminines in the 16th century, as in Lyly’s *Juno hir bed*, and apparently to plurals, as in *the vtopians their creditors* (Robinson’s translation of More’s *Utopia* 1551). However Allen (2008) has shown some well-known examples such as the latter, which is cited in the OED, to be misanalyzed cases of apposition. Typically the construction is restricted to proper names ending in sibilants which would otherwise have no formal marker of possession as in Glanvill’s *Democritus his Well* and *Hercules his Pillars* (Barber 1997: 146; Görlach 1991: 81).

Number marking with inflectional *-s* is highly regularized in Early Modern English. In Middle English the unstressed schwa of [əz] was lost except after sibilants, and this was followed by assimilation to preceding voiceless consonants, giving three allomorphs /ɪz/, /s/, and /z/. This allomorphy is more or less established by the 15th century, but unexpected forms in Hart’s transcriptions of 1569 such as *birds*, *prinses*, and *faultz* show that the system is not stabilized until about 1600 (Barber 1997: 144; Lass 1999: 141–142).

Some of the mass nouns of Modern English are count nouns in Early Modern English (*salmons*, *trouts*). Conversely some nouns that today have an *-s* plural today could take a zero plural in Early Modern English (*board*, *brick*). *Horse*, *winter*, *year*, and *lamb* in Early Modern English are variable. Umlaut plurals (*mice*, *geese*) are in decline by Middle English and the older Old English plural in *-en* (as in *oxen* and *children*) is used only for deliberate archaism such as Spenser’s *eyen*, *foen*, *skyen* (Lass 1999: 141; Barber 1997: 145; Görlach 1991: 80).

1.2 Pronouns

Unlike nouns, pronouns in Early Modern English are still marked for person and gender as well as number and case. The EModE paradigm in Table 38.1 shows that as per the ME development, gender is marked in the third person only. Although the /h-/ of neuter *hit* was lost in Middle English, some claim that *hit* was still in use in the 16th century (Barber 1997: 150). In the late 16th century, *its* emerges as the neuter possessive pronoun, replacing *his* (Lass 1999: 148; Görlach 1991: 85–86). *His* can still be observed in the Authorized Version, as in (1):

- (1) *if the salt haue lost his savour, wherewith shall it be salted?* (1611 *King James Bible* Matthew 5:13; Barber 1997: 150)

Mine and *thine* as determiners are common before vowels and /h/ in the 16th century, but by the 17th century attributive /-n/ forms are rare (Barber 1997: 152; Görlach 1991: 85). Changes in the neuter third person pronoun and the system of second person pronouns are shown with arrows.

Table 38.1: Early Modern English personal pronouns (Nevalainen 2006: 77)

Person/ number	Subjective	Objective	Possessive determiner	Possessive
1P SG	I	me	my/mine	mine
1P PL	we	us	our	ours
2P SG	thou ~ ye → you	thee ~ you	thy/thine → thy ~ your	thine ~ yours
2P PL	ye → you	you	your	yours
3P SG personal	he, she	him, her	his, her	his, hers
3P SG non-personal	(h)it → it	him, (h)it → it	his → its (of it)	(his >its)
3P PL	they	them	their	theirs

One of the most remarkable developments in the pronoun system of Early Modern English is the emergence and then decline of social deixis in the second person. *You*, historically the plural form, became used in Middle English, under courtly French influence, as a polite or deferential singular (Barber 1997: 153; Görlach 1991: 85). In a parallel change, nominative *ye* ceases to be an alternative to *you* (complete by 1600) and *you* becomes the form for the nominative and the accusative. Yet English did not develop a typically European T/V system (Brown and Gilman 1960) with reciprocal *thou* (T) encoding intimacy and solidarity and non-reciprocal T/V encoding asymmetry in power or status (Brown and Gilman 1989: 177; Lass 1999: 149; Wales 1983). In the middle of the Early Modern period, *you* is the polite form used by inferiors to superiors, but it is also a neutral and unmarked form among the upper classes. The general use of *you* spread down the social hierarchy and “by 1600, *you* was the normal unmarked form for all speakers with any pretension to politeness” (Barber 1997: 155). *Thou* was retained to occasionally mark asymmetrical relationships; mostly it had an “emotional” use to convey intimacy and affection, sometimes contempt.

These affective shifts are reflected in the switching of pronouns by the same interlocutors even within the same text. Some evidence comes from dramatic dialogue: In *Macbeth*, Malcolm addresses Macduff with *you*, a proper form for a Scottish thane, until Malcolm’s emotional statement “but God above deal between me and thee” (IV.iii.120–121; Brown and Gilman 1989: 177). There are also abundant examples from private letters. Sir Thomas More, who otherwise addresses his daughter as *you*, says “Surely Megge a fainter heart than thy fraile father hath, canst you not haue” with the concord for *thou* applied to *you* (Lass 1999: 151). *Thou* becomes increasingly restricted to high registers by the end of the 17th century, although it is also associated with regional use (Nevalainen 2006: 18) (see Busse, Chapter 46).

1.3 Adjectival comparison

In Early Modern English the only morphological marking on adjectives is the comparative and superlative degrees of comparison (*-er*, *-est*). The periphrastic expression of gradation (*more*, *most*) had already become common in Middle English, providing two systems. In the modern system periphrasis is in complementary distribution with suffixes: monosyllabic bases take suffixes (*bigger*, *biggest*), disyllables prefer suffixes, but can take periphrasis (*hairier*, *more hairy*); trisyllabic and longer forms take

periphrasis (**beautiful-er*). This situation is not completely established in Early Modern English, however. We find forms like *easilier* and *more brief* in John Hart's *Orthographie* of 1569, *famousest* and *difficuldest* in Milton, *learneder* in Johnson, and *ragingest* in Nash. Double comparison was more common in the 16th and 17th centuries, illustrated by Shakespeare's "this was the most unkindest cut of all" (*Julius Caesar*) and "more nearer" (*Hamlet*). There is also apparently more free variation: Ben Jonson uses both *fitter* and *more fit*, Shakespeare uses *sweeter* and *more sweet* (Lass 1999: 156–158; Barber 1997: 136–147).

Görlach (1991: 83–84) believes that the periphrastic form was more associated with written or educated language and that much of the loss of the inflected form for disyllabics was due to prescriptivism. However, studies of the Helsinki and ARCHER corpora (Kytö 1996; Kytö and Romaine 1997) suggest that the inflectional forms reassert themselves after 1700.

2 Verb morphology

2.1 Person and number

The second person continues to be marked in Early Modern English in concord with the pronoun *thou*, but falls into disuse along with *thou* in the 17th century (Barber 1997: 164–165; Görlach 1991: 88; Lass 1999: 139). The second person marker *-st* appears on the present (*bearest*, *giuest*, *walkest*) and the past (*barest*, *gauest*, *walkedst*). Third person plural is marked in the present by the Midlands variant *-en* in 15th century texts, as in (2):

- (2) *Southern western & northern men speken frenssh all lyke in soune & speche* (1480 *The Description of Britain* [Caxton edn.]; Görlach 1991: 89)

The marker falls away quickly in the 17th century from the standard language. The normal plural for Early Modern English is the uninflected form (Barber 1997: 170–171).

Although there is only one marker of third person singular in Modern English, *-s* is in competition with *-eth* throughout the Early Modern English period. The *-s* form was originally northern and had spread to the East Midland system by the 15th century. The original southern *-eth* form became the standard written form when the new standard literary language took shape. Yet *-s* continued to move southwards and in 1500 was probably common in southern speech. The use of *-s* increases and over the 16th century it becomes the normal spoken form (Barber 1997: 166–167; Lass 1999: 162–164; Nevalainen 2006: 17). More precisely, variation in the early stages is between *-eth* and *-es* (as in *comyth* and *makys*) rather than the contracted *-s* and the syllabic *-eth* which we find in the 17th century (Nevalainen and Raumolin-Brunberg 2003: 67–68).

Yet it would be simplistic to think in terms of a spoken variant and a written variant. Rather, *-eth* is associated with more formal text types, namely official documents, poetry, sermons, and biblical translations (such as the Authorized Version of 1611); and *-s* appears in journalistic prose, drama, private letters, and diaries (Barber 1997: 166–168; Görlach 1991: 88; Nevalainen and Raumolin-Brunberg 2003: 81). Studies of the variation in Shakespeare's plays reveal rapid change over a short critical period (Taylor 1976; Stein 1988). More longitudinal research using the *Corpus of Early English*

Correspondence (CEEC) shows two waves of change. In the “first wave” in the latter half of the 15th century, the change to *-s* is led socially by the “lowest literate ranks”. In the second wave, around 1600, the middle or upwardly mobile ranks lead this change, especially women in these ranks (Nevalainen and Raumolin-Brunberg 2003: 121–122, 140, 144, 178–179).

The (present) inflected forms of HAVE and DO (*hath* and *doth*) retain the older form for much longer, but it may be that these continued to be used as written forms after the spoken use of *has* and *does* (Lass 1999: 163–165; Barber 1997: 168). Modal auxiliaries were normally not inflected for the third person singular (unless they are also still lexical verbs as in *he dares* and *he willeth*), but they do have the second person singular inflection (*thou canst*). The second person singular forms of *shall* and *will* are *shalt* and *wilt* (Barber 1997; Görlach 1991: 89).

2.2 Tense, mood, and aspect

All weak verbs in Early Modern English as today are marked in the past tense. The Modern English system of allomorphy of the past tense marker *-ed* was not established until 1600: /əd/ after /t/ or /d/ (*waited*, *heeded*), /d/ after a vowel or voiced consonant (*died*, *begged*) and /t/ after a voiceless consonant (*looked*, *wished*) (Barber 1997: 174). There was considerable variation into the 18th century (Lass 1999: 172), and the /əd/ pronunciation with the schwa vowel, which began to be lost in the 16th century (Görlach 1991: 92) could be used in more positions than is possible today. Syncope is indicated around 1600 by spelling (*begd*, *lookte*, *placst*); there is a 17th century tendency to standardize spelling as *-ed*, but syncope is indicated in poetry e.g. Dryden’s *confess’d* (Barber 1997: 175; Nevalainen 2006: 6).

Certain Old English strong verbs developed a regular past tense, but both forms remained available in Early Modern English; for example, the past tense of *help* could be *holp* or *helped*, with past participle as either weak *holped/helped* or strong *holp/holpen* (with original strong past participle ending *-en*). Not all strong verbs which developed this past tense variation in Early Modern English (e.g. *shake* could be *shaked* or *shook*) retained the regular form in Modern English (Barber 1997: 174). Some historically weak verbs had strong forms in Early Modern English e.g. *snow*, *snew*. Some weak verbs even changed over to the strong class on the basis of analogy e.g. *spit* and *stick* (Görlach 1991: 91).

Tense marking on strong verbs in Early Modern English often had a different pattern for the form of the preterit and the past participle to both Middle English and Modern English. Different verbs go through different patterns, taking some time to stabilize (Nevalainen 2006: 20). As Lass says “it seems as if each verb has its own history” (1999: 168–170), which can be illustrated by changes in the paradigm for DRINK:

late 15th	drink, drank, drunk
end of 16th to 19th	drink, drunk, drunk
17th to 19th	drink, drank, drank

The periphrastic expression of the future with auxiliaries *shall* and *will* goes back to Old English. By the early 16th century both auxiliaries had lost much of their modal meaning of obligation and volition and could express pure future.

Perfect and pluperfect aspect has been expressed through auxiliaries HAVE and BE since Old English (Rissanen 1997: 213); the expression of progressive aspect by means of the BE + present participle construction can also be found in Old English. However, after its growth in Middle English the progressive can only be said to be grammaticalized by 1700, and according to Rissanen (1997: 216), “the set of progressive forms in all tenses, active and passive, is fully developed around the end of the eighteenth century”. He shows how Polonius in *Hamlet* (II.ii) asks “What do you read my lord?” but in *Troilus and Cressida* (III.iii) Achilles uses “What are you reading?”. (See further Seoane, Chapter 39.)

As always in English, the base form of the verb in Early Modern English serves as the imperative mood. Although in Middle English already there is no distinct plural form of the subjunctive mood, the subjunctive is far more in evidence in Early Modern English than it is in Modern English. This is due in part to the contrast of zero-marked to inflected verb forms in the singular. The subjunctive is typically found in subordinate clauses following a conditional conjunction. In the present, we find the base form of the verb used with the second and third person instead of the inflected forms (-*st*, -*s*, -*eth*). The subjunctive form of BE is invariable *be* in the present tense (*I be, you/thou be, s/he be*), and plural *were* with the singular in the past tense (*I were, thou were*). This passage (3) from Tyndale illustrates both regular verbs in the subjunctive and BE:

- (3) *Agre with thyne adversary quicklie / whyles thou arte in the waye with him / lest that adversary **deliver** the to the iudge / and the iudge **delivre** the to the minister / and then thou **be** cast into preson* (1526 Tyndale, *Bible*; Barber 1997: 171)

In modern English traces of the subjunctive remain in phrases such as “long live ...”, “if need be” and “if he were”. Through drama especially, it is evident that the subjunctive is not elevated language in Early Modern English, but “comes regularly from the lips of tradesmen, apprentices, artisans, peasants, people with no social pretensions” (Barber 1997: 173). Auxiliaries have been important in the expression of modality since Old English, but the loss of distinctive verb endings almost certainly speeded up the replacement of subjunctive forms by auxiliary periphrasis (Rissanen 1999: 228–230; Nevalainen 2006: 96). For example, we find *may* used for the optative subjunctive (*in heauen may you finde it*) and *let* for hortative subjunctive (*let him love his wife even as himself*). The preterit subjunctive (*were*) is replaced by *would* or *should*, (4):

- (4) *if any body **should** ask me ... I should say, I heard so; and it **would** be very good Evidence, unless someone else were produc’ed* (1685 *Trial of Titus Oates*; Nevalainen 2006: 97)

3 Derivational morphology

Both popular and scholarly accounts hold that not only did non-native derivational morphology become productive in the course of the 16th century, but the period showed intensified productivity and creative word-formation with native morphology too. Indeed, it is often remarked that the exploitation of lexical resources in the Renaissance has never been surpassed (Hughes 2000: 162). George Gordon (1928: 262, 269) writes of the “genuine and widespread feeling for word-creation” of the Elizabethans and “the

fertility and happy-go-luckiness of Elizabethan English". Shakespeare's experiments in word-formation are, for Gordon, the emblem of these Elizabethan tendencies. Scholarly debate has swung between the Victorians who characterized Shakespeare as a Saxonist "lack Latin" who drew mainly on his native vocabulary, and later 20th century critics who claimed that Shakespeare coined thousands of Latinate words. More considered analyses reveal that Shakespeare made extensive use of Latinate prefixes and suffixes, although not always according to the rules of Latin word-formation, for instance in the way that he prefixes the noun *moment* with *in-* to form the adjective *immoment* "unimportant", or the way that he combines native and non-native elements in hybrids like *bi-fold* and *fore-recited* (Garner 1987: 215; Schäfer 1973; Schäfer 1980).

The integration of non-native elements into the English word-formation system began in Middle English, predominantly through the attachment of native suffixes to Fr. bases, for example *chasteness* (1386). Much less common, and typically later, is the attachment of non-native suffixes to native bases, as in *allowment* (1579) (Gadde 1910; Nevalainen 1999: 357). Despite their rarity, these hybrid forms are often taken as an indication that lexemes containing the non-native suffix are analyzable for speakers of Early Modern English and that the suffix is thus in some qualitative sense productive (Dalton-Puffer 1996). As most of the new borrowed affixes were in fact limited to Romance and classical bases, it makes sense to speak of a "quantitative shift towards a non-native basis of coining new words in Early Modern English" (Nevalainen 1999: 378).

This picture of emerging productivity in non-native affixes in Early Modern English is supported by research following the publication of the *Chronological English Dictionary* (CED) (Finkenstaedt et al. 1970). With this new tool, Finkenstaedt, Leisi, and Wolff, followed by scholars like Richard Wermser, were able to show how French and Latin loans were the greatest source of new vocabulary between 1600 and 1700 (Finkenstaedt et al. 1973: 118–119; Wermser 1976: 45; Görlach 1991: 166; Nevalainen 1999: 364; Hughes 2000: 152–153). Subsequently it has become clearer that the apparently dramatic peak of Latinate vocabulary observable at the turn of the 16th century is an effect of the OED's extensive sampling of this period relative to the 18th century (Schäfer 1980; Brewer 2006), and in particular the sampling of hard word dictionaries (Osselton 1958; Starnes and Noyes 1946; Barber 1997: 169) (see Lancashire, Chapter 40).

Wermser further aimed to show on the basis of the CED how affixation increased in relation to loanwords. Coined words outnumber loans by 58.3% to 37.6% by the 18th century, after two centuries of the two processes being roughly even (Wermser 1976: 40; Nevalainen 1999: 350; Görlach 1991: 138). This proportion is later confirmed by Barber's 2% sample of the OED (Barber 1997: 221). The relative frequency of nonnative affixes to native affixes in coined words rises from 20% at the beginning of the Early Modern English period to 70% at the end of it (Wermser 1976: 64; Nevalainen 1999: 352). The proportion of Germanic to French and Latin bases in new coinages falls from about 32% at the beginning of the Early Modern period to some 13% at the end (Wermser 1976: 64, 67; Nevalainen 1999: 378). Together these measures confirm the emergence of non-native affixes as independent English morphemes over the Early Modern period. They also seem to contradict claims that the native affixes in Early Modern English are just as, if not more productive, than ever (Barber 1976: 185–188;

Nevalainen 1999: 391), although it is always less likely that words coined with native affixes would be recorded in a dictionary, especially the Shorter OED, on which the CED is based.

We cannot be sure how Wermser was interpreting the etymologies of OED entries – the OED etymologies frequently equivocate, sometimes providing the source of a loan *and* showing how it could be formed through affixation. For any historical period, it is hard to ascertain whether a given word with a non-native base and a non-native affix is a loan or a coined word, in the “language”, as well as in the mental lexicons of individual speakers. Accounts of Early Modern English word-formation rely on the idea that non-native suffixes become productive over this period, but this is not always based on extensive evidence, and substantial differences in the productivity of processes can be obscured. Thomason and Kaufman (1988) are less persuaded of a new integrated word-formation system emerging in Early Modern English. With the exception of some suffixes like adjective-forming *-able* (first seen on Middle English loans from French), they consider the derivational phenomena emerging from Latin lexical influence in English post-1450 as “productive for uncultivated speakers to a limited extent only” (Thomason and Kaufman 1988: 308; 1988: 329).

Detailed overviews of native and non-native individual prefixes and suffixes can be found in works such as Marchand (1969) and Nevalainen (1999). Like these, the summaries below rely extensively on the OED (Simpson [ed.] 2000–) articles for individual prefixes and suffixes. Here the focus is on affixes emerging in Early Modern English. Sometimes the OED article offers an explicit comment on the stage at which the form is considered to be an independent affix; sometimes this trajectory, where there is one, must be inferred from the dates of coined words. Emphasis is placed on the loan-word models for words coined with the new affixes, most commonly on non-native bases. Where non-native affixes do appear on native bases this may be indicative of greater productivity, but not necessarily.

3.1 Prefixation

The new negative prefixes, with their general semantics, probably have the greatest impact on the word-formation system of all the new prefixes. *Non-* is adopted early (late 14th century) through Old French loans which in turn came from Law Latin (*non-sense, nonchalant*). The prefix first coined words on native and non-native nouns (*non-truth; non-activity*) but the input range broadened in the 17th century to adjective bases (*non-harmonious*) including some participles (*non-preaching*) (Nevalainen 1999: 380) although native adjectival bases (*non-bookish, non-English*) tend to be 19th century. There are rare examples of *non-* prefixed to native and non-native verbs (*non-act; non-licentiate*). *In-* with its allomorphs *il-* and *im-* appears later in the form of Latin (*innocens, illiteratus, immensus*) as well as Fr. loans (*incompetent, inexpressive*). From the 16th century we find *in-* on primarily non-native adjectives (*incautious, inarguable, inexpedient; infit*). Reversative and privative *dis-* is also a later addition appearing in Lt. loans such as *dispute* from *disputare* even though *dis-* is not a separable prefix in Latin (Garner 1987: 215). *Dis-* is described as a “living prefix” after 1600 by the OED, used to form new verbs on existing native and non-native verb bases (*disown, disangularise; disrank*) and even some noun (*discharacter, diseye*) and adjective bases (*disgood, disrespectful dishonest*).

All three imported negatives parallel native *un-*, which appears on all classes of base (*unfortunate*, *unhouse*, *unnerve*), and remains the most common negative prefix in Early Modern English (Nevalainen 1999: 380–382). There is ample evidence of alternation between *un-* and *in-* on adjectival bases before the 16th century. The OED indicates that both could appear before the adjectives *cautious*, *ceremonious*, *certain*, *communicative*, *devout*, and *distinguishable*. The practice in the 16th and 17th centuries was to prefer the form with *in-*, as in *inadable*, *inarguable*, and *inavailable*, but items with Latinate bases were later revised to *in-*, with other bases taking *un-* (*unavailing*, *uncertain*, *undevout*, *unexpected*). Matthews has described a kind of cyclic process whereby negative prefixes lexicalize with evaluative meanings as in *improper*, and the alternate prefix remains neutral. Compare *unnatural* and *non-natural*, *immeasurable* and *unmeasurable*, *immoral* and *amoral* (Matthews 1991: 72–74). Words prefixed with *in-* are probably more inclined to lexicalize in this way given their strong link to Latin lexis. *De-* and *dis-* overlap on verb bases as in the oft-cited *disthronize*, *disthroned*, *dethrone*, *unthroned*, *dethronize* (Görlach 1991: 80). The prefix *de-* is only found in the 18th century, although there are some “tentative” 17th century examples like *detomb* 1607 (Nevalainen 1999: 383).

Whilst some suffixes are assimilated relatively early through French, the numerous new prefixes are, by contrast, typically borrowed later from Latin (Burnley 1992: 446–449). They tend on the whole to be restricted to certain technical registers, or at least, to form exclusively technical terms. Typical examples from the set of locatives would be *sub-* emerging from French loans such as *subsequent*, *subsection*, and forming words on all classes of base, as in *subtrench*, *subconsular*, *subrenal*, and *subdecimate*; *trans-*, also from Fr. loans like *trespasser* and Lt. *transferre*, forming verbs on verb bases (*transplace*) and some noun bases (*transfashion*); and *circum-*, from Lt. *circuminvolvare* and *circumscrivere*, appearing on native and non-native verbs (*circumbind*, *circumgyre*, *circumclose*). The intensifying prefix *hyper-* appears in *hyperconformist*, *hyperangelical*, and *hypermagnetic* on analogy of Gk. words like *hyperbole*, *hyperborean*. The quantitative prefixes are late 16th or 17th century: *multi-*, from Lt. *multiplex*, *multifarious* and Fr. *multiplier*, *multitude*, is applied to noun and adjective bases to form *multivariety*, *multilateral*; *mono-*, from Fr. (*monarch*, *monosyllable*) and Gk. (*monoculus*, *monoxylon*) loans, forms *monoptic*, *monopyrenous*; *uni-*, from Lt. *universitas*, *unicornus*, forms *univalve*, *unifoil*, *unipresence* (from which *unipresent* is then back-derived); *bi-*, on the analogy of loans *bicome*, *biennium* appears principally on non-native adjectives such as *bicapsular*; *tri-* appears on noun and adjective bases *trigram*, *tricentral*; Lt. compounds such as *semicirculus* are imitated to form *semi-quaver*, *semi-riddle*, *semi-cubit*, *semi-Atheist*. *Demi-* in fact is somewhat earlier than *semi-*, appearing in 15th century heraldic loan translations (*demigod*, *demi-angel*, *demi-lion*).

A number of the prefixes with productivity restricted by register only show a substantial increase in frequency *after* the Early Modern period. For example, types like *transapical*, *circumcorneal*, *postcerebellar*, *pre-chemical* are all 19th century and later. The prefixes *pan-* (from Gk. *pandemic*, *panoply*) and *poly-* (from Gk. *Polygamia*) do form words in Early Modern English (*panpharmakon*, *pantheology*, *Panglyphic*; *Polyacoustic*) but this is rare, and most examples are 19th century and later. Although *pseudo-* occurs in borrowed words in Early Modern English (*pseudo-christ* from Gk. *pseudochristus*) it is rarely a “living prefix” in English before 1800 (*pseudo-religious* 1672) (Marchand 1969: 188; Nevalainen 1999: 388).

Some of the new prefixes extend beyond technical terms, and these are often processes that are borrowed earlier. So locative *en-* became productive in the 15th century and is widely used in the 16th century on native and non-native bases (Nevalainen 1999: 389) to form verbs such as *endanger*, *embody*, *encamp*, *ennoble*; *super-*, from Fr. loans *superlative*, *superstition*, also takes off in the 15th century and is frequent in Elizabethan times, appearing on nouns (*superstructure*), adjectives (*super-aerial*) and verbs (*superinvest*); *inter-*, from Lt. (*intercedere*, *intermedius*, *interregnum*) and Fr. (*enterfere*, *entercourse*) loans, leads to formations on native and non-native noun bases (*interdispensation*, *intermatch*); native and non-native verb bases (*intermention*; *intertwine*) and adjective bases (*interconciliary*).

Temporal prefixes tend to be introduced earlier and found more widely. *Re-*, from Fr. verbs *redress*, *regard* and Lt. *reducere* (and in contemporary lexicographers' renderings of Italian words such as *ristoppare*), becomes "freely prefixed" (OED, Simpson [ed.] 2000–) towards the end of the 16th century, primarily on non-native verbs (*re-elect*) but also native verbs (*regreet*). *Pre-*, from Lt. *preambulare*, already coins words in late Middle English; these are "numerous" from the 16th century onwards and include *pre-petition*, *pre-excellence* on nouns, and on verbs *preconceive*, *pre-close*, *pre-ordinate*, *pre-sift*. Formations after Lt. loans like *postponere* and Fr. *postcommunio*, *postposer* first appear in English in the late 14th century: examples on nouns include *post-accession*, *post-argument*, *post-pardon* and on verbs include *postscribe*, *post-place*.

"Attitudinal" prefixes (Nevalainen 1999) tend not to be restricted to technical terms. *Counter-*, from Fr. *counterbalance*, *countersign*, prefixes native and non-native nouns (*counterplot*, *countermotion*) and native and non-native verbs (*counterhit*, *counterfix*). The Latin version (*contraponere*) can be found on *contra-proposal*, *contra-civil* and *contra-distinguish*. *Anti-*, from Gk. (*antiithesis*), appeared exclusively in loan translations such as *antipope*, *antichrist* before 1600, but after that was generalized to other noun bases to produce *antideity*, *antiface*, *antihemisphere*, *anti-romance* and adjectival bases to produce *anticreative*, *antiliturgical*.

3.2 Suffixation

3.2.1 Noun suffixes

None of the new suffixes forming concrete nouns managed to usurp the ubiquitous native agentive *-er* suffix (Nevalainen 1999: 392; Görlach 1991: 172). They tend on the whole to be both semantically and formally restricted. *-ician* is added to arts or sciences in Lt. *-ica*, Fr. *-ique* or Eng. *-ic*, *-ics* to denote a person skilled in the art or science. *Musician* and *physician* are loans but in some cases it is not possible to tell if a word (e.g. *magician*) is formed in English. Some words like *geometrician* are formed by analogy on names not even ending in *-ic* (although there may be an adjective in *-ic*). *-eer* is added to English nouns in the early 17th century to form designations of persons (*pamphleteer*, *auctioneer*, *pulpiteer*) in imitation of earlier Fr. loans like *canonnier* (> *cannoneer*) with the Fr. agent suffix *-ier* (still evident in *bombardier*). It hardly appears on native bases, and when it does (as in *waistcoateer* 'a prostitute') it is not transparent. Concrete nouns ending in *-ant* may be Fr. participles borrowed before 1500 (*attendant*, *dependant*) later refashioned as Lt. *-ent* (*dependent*), or participles borrowed

directly from Lt. (*stimulant* 1728). There are some analogical formations (*anaesthesiant* 1879) but not many in Early Modern English.

Nouns such as *curate*, *senate* are English renderings of Lt. nouns *curatus*, *senatus* (including medieval Lt. nouns *aldermannatus* > *aldermanate*) and this pattern is used to generate words in English on other Lt. nominal stems (*syndicate* 1624, *electorate* 1675). Perhaps the most interesting development in this group of noun suffixes is the passive benefactive suffix *-ee*, for which there is no native equivalent. The first examples are from Anglo-French participles (*appellee*, *refugee*) but later words are coined with the suffix in English (*referee* 1549, *vendee* 1547). Many subsequent formations in English (*laughee* 1829) are listed as “nonce-words” but the suffix certainly seems to be alive in Present-day English (Mühleisen 2010).

Borrowed abstract noun suffixes are without doubt the most noticeable elements of the new “layer” of derivational morphology. This is due in part to the sheer numbers of complex nouns borrowed, resulting in a wide range of possible noun endings some of which are semantically general. There was already a choice of native abstract-noun forming suffixes in Middle English, particularly for the description of states or qualities as in *hetheness*, *hethenhood*, *hethenship* (Dalton-Puffer 1996: 126).

Gerundial *-ing* is the deverbal noun-forming suffix of choice in Middle English (on native and non-native bases), and the suffix continues to have near inflectional levels of productivity in Early Modern English (Görlach 1991: 172). It is rivalled by the new deverbal suffix *-ation*, and to a lesser extent *-ment* (Bauer 2001: 184); other suffixes forming abstract nouns on verbs are more restricted: *-ance/-ence* became “to a certain extent a living formative” (OED, Simpson [ed.] 2000–) after appearing in Fr. (*nuisance*, *parlance*) and Latin or refashioned-as-Latin loans (*providence*, *prudence*) and even coins some nouns on native bases (*clearance* 1563, *hindrance* 1436, *furtherance* 1440); *-ance* nouns could be refashioned as *-ancy* if the state/condition meaning was more prominent than the action/process: cf. *temperancy* 1526 vs. *temperance* 1340.

The suffix *-ure* (Fr. *scripture*, Lt. *aperture*) became “mildly productive” in Early Modern English on verbs ending in *-s* and *-t* (Nevalainen 1999: 398) as in *exposure* 1605; from the 17th century onwards *-al* from Lt. suffix *-alia* (via loans like *arrival* > Anglo-French *arrivaille*) coins words such as *denial* 1528. Derivations on native bases (*bestowal*, *betrothal*, *beheadal*) are all 19th century.

Already in the 15th century, *-ment* is used to coin words denoting the result or product of action or the action itself: *chastisement* 1340 may be a coined word, and items on Germanic bases like *hangment* 1440 certainly are. These are modelled on Fr. loans *garment*, *accomplishment* and Lt. loans *fragment* < *fragmentum*. Later EModE examples include *banishment* 1507 and *enhancement* 1577 on Romance bases and *amazement* 1595 and *atonement* 1513 on Germanic bases. Some of the latter are also prefixed with *em-*, *en-* and *be-* (*enlightenment* 1669, *bereavement* 1731). There are even some formations on adjectives (*merriment* 1574).

The borrowed suffix *-ation*, however, is considered the most productive deverbal noun-forming suffix after *-ing* and one of the most productive new suffixes from the Early Modern period. We will examine this suffix more closely to consider what it means to develop productivity in Early Modern English. The productivity of *-ation* is often attributed to the fact that it is “the only alternative available for verbs ending in *-ise*, *-ate*, and *-ify*” (Nevalainen 1999: 397). Yet some caution is required in treating

Early Modern words in *-ation*, even ones on base verbs ending in *-ize*, *-ate* and *-ify*, as confirmation of the emerging productivity of this suffix.

English formatives in *-ation* are considered to “show productivity from the beginning of the 17th century through to the 20th century, but always on Latin or French bases” (Bauer 2001: 181-182) with some well-known exceptions such as *starvation*. Synchronic morphologists (Kastovsky 1986: 589, 1992: 291) routinely distinguish between *-ation* words which are recognizable loans such as *communion*, *opinion*, *protection* where *-io/-io-n-em* has been added in Latin to the stem of a noun (*communis*), verb (*opinari*) or participle (*protegere*), and the more transparent cases, where Lt. loans such as *qualification* are formations on the past participial stem of verbs in *-are* (*qualificat-* from *qualificare*). The latter are often treated as English derivations. The general attachment of *-ation* to non-native bases makes it impossible to tell whether forms which contain the string *-ation* such as *recommendation* (a Fr. loan) are the result of borrowing or deverbal derivation in Early Modern English (Nevalainen 1999: 397).

Marchand (1969: 259) would like for convenience to treat all items on verb bases in *-ate* from 1500 as English derivations. So *education* 1540 would be treated as a derivation even though the OED shows this is a Latin loan. For many of these items the verb is back-derived from the borrowed abstract noun (see verb suffixes below). Sometimes there is not even a back-formed verb to hint at transparency for users as in *constellation*, *duration*, *ovation* (OED *-ation* article, cited by Marchand 1969: 261). Similarly, Marchand would like to classify *-ize + ation* words, many of which are Lt. nominalizations, either of Gk. verbs in *-ize* (*baptization*) or Lt. verbs in *-ize* (*moralization*) or Fr. verbs in *-iser* (*civilization*), as English derivations after 1600. We still find loans after 1600 though, such as *sacrification* 1694. The cut-off of 1600 seems to rather better for *-ify + -ation*: *amplification* 1546, *modification* 1492 and *verification* 1523 are Latin loans but *identification* 1644 and *beautification* 1640 are derivations on verbs in *-ify*. Interestingly, some early items previously presented by the OED as derivations are now shown as loans for example *pontification* 1500. More such cases are coming to light in the OED’s latest revisions with the benefit of new resources (Durkin 2002).

Finally, there is the question of how we should treat “Latinate coining”, where a noun such as *fecundation* is in fact formed in English, but on a verb base that exists only in Latin (*fecundare*). This is a well-known practice in Early Modern English, yet its extent has not been measured. In sum, the suffix *-ation* may not be as productive in Early Modern English as is commonly assumed. It might even be argued that this suffix never developed productivity in a quantitative sense. Bauer reflects that recent formations such as *lambadization* and *electronification* must be analogical formations (Bauer 2001: 80–81, 96). The OED in fact indicates that a subset of scientific words including *ossification* 1671 do not have a pre-existing English verb base. Tellingly, *-ization* and *-(i)fication* are listed as complex suffixes alongside *-ation*.

Similar considerations apply to borrowed noun-forming suffix *-ity*, typically found on non-native adjectival bases in *-able/-ible*, *-ic*, *-al* and *-ar* and rarely found on native bases (Nevalainen 1999: 398): *oddity*, the classic exception, is as late as 1713. Unsurprisingly, many of the Early Modern examples turn out to be direct loans from Latin such as *implacability* 1531, and not a formation from *implacable* (1552) (Marchand 1969). Lt. nouns in *-itas* are Englished to *-ity* often via Fr. *-ite*. Here too there is the Latinate coining (*carneity* 1691 is coined in English but the adjectival base *carneus* does not exist in

English) and here too there may be a case for complex suffixes (*-ability*, *-icity*) rather than a single *-ity* suffix.

The appearance of native suffix *-ness* on non-native bases and the consequent appearance of doublets such as *sincereness/sincerity*; *singularness/singularity*, *fatalness/fatality* (Marchand 1969: 335) is often used to draw attention to affix rivalry in Early Modern English (Nevalainen 1999: 398; Görlach 1991: 137; Romaine 1985; Riddle 1985). Sometimes the increasing productivity of *-ity* in Early Modern English is presented as claiming territory from *-ness* (Aronoff and Anshen 1998) but this is based on treating all *-ity* items as derivations, when in fact many of the rival Early Modern pairs concern an *-ity* loanword as in *absurdity* 1529 *absurdness* 1587 and *penetrability* 1609 *penetrableness* 1684.

Classical Latin words in *-acia* (*fallacia* > *fallacy*) or medieval Latin words in *-atia* (*legatia* > *legacy*) are Englished as words ending in *-acy*. The form is added to Lt. words in *-atus* (*advocatus* > *advocacy* 1413) or English adjectives in *-ate* (*accuracy* 1662, *privacy* 1534) from the 14th century already but is only “generalised” in the 16th century (Nevalainen 1999: 399).

The two best known non-native Early Modern English suffixes for forming abstract nouns with a condition /state/ collectivity meaning are *-age* (from loans such as *voyage*, *umbrage*, *plumage*) and *-ery* (from loans such as *pottery*, *bravery*, *machinery*). We see *-age* appear on non-native bases in *clientage* 1633, *orphanage* 1538 and non-native bases in *leafage* 1599, and *-ery* appears on non-native bases (*confectionery* 1545) and native bases (*brewery* 1658).

The suffix *-ism* is striking in that it comes from Gk. loans via Latin (*baptism*, *Atticism*, *Judaism*). From the 16th century it can be found on non-native bases (*modernism* 1737, *magnetism* 1616) and native bases (*truism* 1708). It can simply derive nouns of action (*plagiarism* 1621) but its primary uses are semantically narrower: it can denote the conduct of a class of persons (*patriotism* 1716), a system of theory or practice (*Quakerism* 1656), a doctrine or principle (*libertinism* 1641), or a peculiarity or characteristic (*witticism* 1677).

3.2.2 Adjectival suffixes

As with nouns, numerous adjectives were added to Early Modern English through morphological Anglicization. In many cases an inflectional ending is simply dropped (*content* < *content-us*). In others, a set of adjectival loanwords becomes associated with a modified Latinate ending. For example *-ary*, in Early Modern English appears predominantly in loans such as *voluntary* and *contrary* from Fr. *voluntaire* and Latin *contrarius* and very infrequently in a word coined in English (*complementary* 1628).

Especially prominent are adjectives in *-ate* formed from Lt. participles (*desolate* < *desolatus*, *separate* < *separatus*). Fr. adjectives can be adapted with this ending (*affectionate* < *affectionnè*) and so can other Lt. stems (*roseate* 1589 is from Lt. *roseus*); thus *-ate* cannot be considered a productive adjectival suffix.

The non-native adjectival suffixes that are productive in Early Modern English and later tend to have gotten off the ground in Middle English. Following Fr. loans such as *capable*, *agreeable*, deverbal *-able* (as noted earlier), which is highly general in meaning, occurs on native (*takeable* 1449, *breakable* 1570) as well as non-native bases (*praisable* 1350). Whilst new words are coined in this process in Early Modern English, borrowing

continues. The suffix is attached to nouns from the 16th century: *marriageable* 1575; but in some cases the base may be the noun or verb e.g. *rateable* 1503.

Deverbal *-ive* from Fr. (*adoptif*) and Lt. (*nativus*) loans is productively added to Fr. or Lt. verbs, but is formally restricted to those ending in *-s* or *-t* (*conducive* 1646, *depressive* 1620) as they are essentially analogical formations (Nevalainen 1999: 405); “ative” does become a “living form” as in *talkative* (1432) but there are few such examples. Denominal *-ous* (Fr. *dangerous*; Lt. *famosus*, *obliviosus*) is already used to coin words in English from the 14th century (*leguminous* 1656) although seldom on native bases (*timeous* 1470), possibly because denominal native adjectival suffixes (*muscled*, *heathery*) are widely used in Early Modern English (Nevalainen 1999: 400; Barber 1997: 234).

Lt. adjectives in *-alem* (*mortalem*) were borrowed early through French with *-el* (*mortel*) later refashioned to *-al* (*mortal*). The number of Lt. adjectives in *-alis* increased dramatically in medieval and modern Lt. (*cordialis*) also producing a suffix *-al* which could be added to any noun (*longitudinal* 1706; *constitutional* 1682). The *-al* ending could also be added to Lt. adjectives with endings such as *-eus* “to give them a more distinctively adjectival form” (OED, Simpson [ed.] 2000–); e.g. *funere-al* 1725. In late Lt. *-alis* nouns (*grammaticalis*) are formed on adjectives in *-ic-us* (*grammaticus*) hence the English *grammatical*, and so also *clerical*, *medical*. Somewhat later Lt. adjectives in *-icus* are rendered in English with an *-ic* ending (*poetic* < *poeticus*). Thus we find adjectives with both forms (*comic*, *comical*; *tragic*, *tragical*). The historical relationship and semantic differences are explored at length in Kaunisto (2007). Both suffixes occasionally act as independent formatives (*prelatical* 1614, *operatical* 1775) (Nevalainen 1999: 403) but the frequency of this group (Barber 1997 finds *-al/-ic/-ical* to be the most productive non-native adjectival affix in Early Modern English) is certainly complex.

Other adjectival suffixes are semantically narrower and consequently appear on a subset of bases. For instance, *-ese* (It. *Milanese*; Fr. *Chinois*) is added to national proper names only (*Japanese*); it is extended to other proper names much later (*Johnsonese* 1843). Similarly, *-ian* which comes from loans Fr. *Barbarien* > *barbarian* and Latin *Christianus* > *Christian* is associated with proper names such as *Cameronian* 1690, despite some Latinate coinings like *equestrian* 1656 on *equestri-s*. Whilst *-an* is added to Lt. adjectives in *-arius* (*agrarius* > *agrarian*) or English adjectives in *-ary* (*disciplinarian*), the complex form *-ian* is mostly associated with ideologies (*sublapsarian* 1656). There are some jocular formations on native bases in the 18th century (*nothingarian* 1776). Finally, *-ite*, which appears in Greek/Latin loans like *Israelite*, forms person nouns such as *Jacobite* 1400, *Wyclifite* 1580.

3.2.3 Verb suffixes

Before 1500 the only overt morphological processes available to form verbs were the native prefix *be-* (*bejewel*) and suffix *-en* (*deafen*), and the prefix *en-* (*embody*) which emerges from Fr. loans in Middle English (*endanger*). Deadjectival conversions “often compete” with *-en* suffixations, as in *slack* and *slacken* (Nevalainen 1999: 388; 406; 429). Conversion to verb was a much more common process, and so whilst the above verb-forming prefixes were not really in use after 1600, conversion continued and survived into Modern English.

Nevalainen (1999: 407) describes *-ize* as the most productive of the new verb-forming morphological processes of Early Modern English, a situation which continues into Modern English (Plag 1999). This may be partly to do with the fact that *-ize* appears in relatively fewer Lt. loan words than other borrowed suffixes. Its origins are Greek, from Gk. loans into Latin such as *baptize*. Because *-ize* does not appear in so many Lt. loans, most of the *-ize* words in English such as *popularize* (1593) are coined, although almost always on non-native bases with some exceptions (*womanize* 1593). The fashion for *-ize* verbs attracted controversy in the 16th century, yet they continued to fill up the hard-word dictionaries of the 17th century before their demise in the 18th century (Görlach 1991: 176–177).

The story of *-ify* is closer to other Latinate morphology in that most items are renderings of original Lt. verbs in *-ficare* as in *pacify* < *pacificare*; *horrify* < *horrificare*). The suffix is also absorbed through Fr. loans (*liquefy* < *liquefier*). Coined words such as *beautify* (1526) are quite rare in Early Modern English. Their addition to native bases is marked as “jocular” or “trivial” (OED, Simpson [ed.] 2000–) in words such as *truthify* 1647 and *speechify* 1723.

As we saw above, Lt. past participles in *-atus*, *-ata*, *-atum* were a source of English adjectives. Some of these adjectives were treated as verbs (*separate* 1432). Subsequently English verbs in *-ate* were formed directly on the Lt. participial stems as in *venerate* from *venerari*. In the 16th and 17th centuries some *-ate* verbs were even coined on Romance nouns (*capacitate* 1657 from *capacitas*; *fertilitate* 1634 from *fertilitas*), and Latin nominal stems (*camphorate* 1691 on *camphoratus*) (Nevalainen 1999: 407). These *-ate* verbs were stigmatized as “ynkpot termes” in the 16th century. The author of Thomas Wilson’s famous ynkehorne letter from the *Arte of Rhetorique* (1553) pleads “I obtestate your clemencie, to inuigilate thus muche for me”. Similar items were fabricated by Cockeram in his dictionary of 1623 (Görlach 1991: 176). The exact number of *-ate* verbs formed through back-formation of *-ation* nouns, as in *locate* (1652) from *location* (1592), is not known, but it is likely to be high throughout the period (Nevalainen 1999: 407; Görlach 1991: 176; Plag 1999). Given the limited productivity of the verb suffixes, it is unsurprising that they are considered to be in complementary distribution (Bauer 2001: 177). Rare “doublets” cited by Plag (1999: 228) (*dandify/dandyise*; *plastify/plasticize*) are 19th century.

The popular native adverb-forming suffix *-ly* had already emerged in Middle English. Highly generalized, in Early Modern English it is applied to adjectives (*bawdily*), including adjectives in *-ly* (*livelily*), a practice subsequently discouraged; participles (*shortsightedly*), numerals (*thirdly*), and even nouns (*agely*). However the suffix is less common in adverbs appearing as intensifiers than it is in Modern English (*exceeding well*) (Nevalainen 1997: 405).

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