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 (Görlich 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 (izl, is/, 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; Görlich 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 utopians 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 Glenvill’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, prines, 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.
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 hearte 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 easlier and more brief in John Hart’s Orthography of 1569, famouset and difficulset 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 uninflated 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:

<table>
<thead>
<tr>
<th>Period</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>late 15th</td>
<td>drink, drank, drunk</td>
</tr>
<tr>
<td>end of 16th to 19th</td>
<td>drink, drunk, drunk</td>
</tr>
<tr>
<td>17th to 19th</td>
<td>drink, drank, drunk</td>
</tr>
</tbody>
</table>

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 thyme 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 became 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 (inautious, 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, dis-angularise; 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 inaidable, inarguable, and inavailable, but items with Latinate bases were later revised to in- (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, disthron, dethrone, unthron, 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, subconsulary, subrenal, and subdecimate; trans-, also from Fr. loans like trespasser and Lt. transfere, forming verbs on verb bases (transplace) and some noun bases (transfashion); and circum-, from Lt. circuminvolvere and circonscribe, appearing on native and non-native verbs (circumbind, circumgyre, circumclose). The intensifying prefix hyper- appears in hyperconformist, hyper-angelical, and hyper-magnetic on analogy of Gk. words like hyperbole, hyperborean. The quantitative prefixes are late 16th or 17th century: multi-, from Lt. multiplex, multifarious and Fr. multiply, multitude, is applied to noun and adjective forms to form multivariety, multilateral; mono-, from Fr. (monarch, monosyllable) and Gk. (monocus, 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 biconya, bimmium appears principally on non-native adjectives such as bicapsular; tri- appears on noun and adjective bases trigram, tricentrall; 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, postcerellar, pre-chemical are all 19th century and later. The prefixes pan- (from Gk. pandemic, panoply) and poly- (from Gk. Polygamy) do form words in Early Modern English (panpharmacon, pantheology, Panglyphic; Polya-coustic) 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 (*regret*). *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. *postcommunion, postposer* first appear in English in the late 14th century: examples on nouns include *post-accession, post-argument, post-pardon* and on verbs include *postcribrate, 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. (*antithesis*), 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 (> cannoner*) 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 *hethenness, 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, *furthance* 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 formative 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 sacrificeation 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 lambadazation 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 < affectionné) 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. orLt. verbs, but is formally restricted to those ending in -s or -t (conductive 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. famousus, obliviousus) is already used to coin words in English from the 14th century (leguminous 1656) although seldom on native bases (timeous 1470), possibly because denominative 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. funereal 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. Milanesed; 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 (agriarius > agrarian) or English adjectives in -ary (disciplinar-ian), 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 capacity; fertilitate 1634 from fertility), 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).

4 References


