



Register Variation in Word-formation Processes: The Development of *-ity* and *-ness* in Early Modern English

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ABSTRACT

This paper traces the development of two roughly synonymous nominalizing suffixes during the Early Modern English period, the Romance *-ity* and the native *-ness*. The aim is to assess whether these suffixes were favored in particular registers or followed similar paths of development, and to ascertain whether the ongoing processes of standardization and vernacularization may have affected their diachronic evolution. To this purpose, the type frequencies and rates of aggregation of new types of the two suffixes were analyzed in seventeen different registers distributed along the formal-informal and the speech-written continua. Results indicate that *-ness* tends to lose ground in favor of *-ity* between the sixteenth and the eighteenth centuries, a change which seems to have begun in formal written registers and spread towards ‘oral’ ones, probably aided by a general trend in written registers for the adoption of a more learned and literate style during the eighteenth century.

KEYWORDS: Derivational Morphology; Early Modern English; Nominalizing suffixes; Register variation; Standardization; Vernacularization.

1. INTRODUCTION

From Middle English (ME) onwards the English language underwent a process of massive borrowing, with new additions from the more prestigious French playing a crucial role. Extensive borrowing continued during the Early Modern English (EModE) period, not only

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from French but also from other languages, most notably Latin, thus reflecting the influence of important cultural movements of the time: the Renaissance and the rise of Humanism. This paper will focus on the EModE period, a crucial time in the expansion of the English vocabulary, not only as a result of large-scale borrowing but also of the highly productive use of word-formation processes, which was greatly affected by the foreign influences of the period and the growing demands of the developing standard language. Additions to the English word stock and affixal system during this period were not only motivated by reasons of prestige but also by the need to address the lack of technical vocabulary in English required in specialized fields of knowledge, such as medicine, astronomy, geography and philosophy, and thus turn English into a language suitable for all registers, as part of the ongoing processes of vernacularization and standardization at the various levels of language (Nevalainen, 1999: 358; Nevalainen & Tieken-Boon van Ostade, 2006: 301–303). As English began to supersede Latin and French as a vehicular language in a wider range of registers, it had to be shaped so as to satisfy the needs of such registers, and adjustments at the level of lexis (including borrowing and word formation) and morphosyntax were therefore necessary. As Nevalainen and Tieken-Boon van Ostade note, “standard English grammar and vocabulary both have a common core but may vary according to register” (2006: 303). Massive borrowing in ME led to a decline of the native affixal system inherited from OE (Romaine, 1985: 461–462), but word-formation patterns were still unregulated at the beginning of the EModE period, and freedom of choice in affix use gave place to a large number of doublets or parallel derivatives, such as *frequency* and *frequentness* (Nevalainen, 1999: 334).

This paper examines one such pair, namely two roughly synonymous suffixes, the Romance *-ity* and the native *-ness*, typically used in Contemporary English for the creation of abstract nouns derived from adjectives (e.g. *curious - curiosity; happy - happiness*), and to a lesser extent also from other word categories. Despite their apparent similarity, these two suffixes differ with regard to the kinds of bases they attach to (see, among others, Aronoff, 1976: 36–38; Marchand, 1969: 314, 334–335; Plag, 2003: 115–116), their semantics (Riddle, 1985; Romaine, 1985), and the registers in which they appear (Baayen & Renouf, 1996; Cowie, 1998: 219–224; Gardner, 2014: 141–173; Plag et al., 1999), something which is in part related to the more learned and prestigious connotations of the borrowed form *-ity* and to the fact that it almost exclusively combines with Romance words.

My aim is to compare the use and development of these two suffixes in several corpora containing a wide range of registers¹ distributed along the formal-informal and the speech-written continua. To this end, data have been extracted from *A Corpus of English Dialogues 1560–1760* (Kytö & Culpeper, 2006), the *Penn-Helsinki Parsed Corpus of Early Modern English (1500–1710)* (Kroch et al., 2004) and the EModE section of the *Corpus of Historical English Law Reports, 1535–1999* (Rodríguez-Puente et al., 2018). Research on the alternation between the two suffixes is not new, but despite the importance of register analysis in the development of languages, few investigations have explored the interplay between register and

suffix variation during the EModE period. Taking into account that “minor differences in register can correspond to meaningful and systematic differences in the patterns of linguistic change” (Biber & Gray, 2013: 104), I seek to ascertain whether the two suffixes developed similarly across different registers in EModE, and whether their development and spread may be related to the ongoing processes of vernacularization and standardization.

The initial hypothesis is that, as a learned, Romance form, *-ity* will be favored in formal written registers, especially in those which are historically connected to a tradition of writing in Latin and French, such as legal documents or religious writings, translations from Romance languages or informational registers addressed to specialist audiences, such as science or medicine (see Cowie, 1998: 223–224; Gardner, 2014: 144–173; Hundt & Gardner, 2017: 119). However, during a time in which the standard was being shaped and new fields of knowledge were emerging, variation at the register level is also to be expected.

The paper is structured as follows. Section 2 provides an overview of previous research on the history of the two suffixes. Section 3 outlines the structure and characteristics of the corpora used, as well as the methods of analysis. The main results obtained are presented in section 4, and finally section 5 offers some preliminary conclusions.

2. AN OVERVIEW OF *-ITY* AND *-NESS*

Several studies covering different areas of the diachronic development of derivational morphemes have broadened our knowledge of the history of *-ity* and *-ness*. Corpus research is available for ME (Dalton-Puffer, 1996; Gardner, 2014) and Modern English (Cowie, 1998; Palmer, 2009, 2015; Romaine, 1985; Säily 2011, 2014, 2016, 2018; Säily & Suomela 2009), and a number of investigations based on dictionaries have also helped illustrate the development of the two suffixes from Old English (OE), as well as their distribution and productivity in Contemporary English (Anshen & Aronoff, 1989; Aronoff & Anshen, 1998; Baayen & Renouf, 1996; Lindsay & Aronoff, 2013; Riddle, 1985).

Previous studies have shown that *-ness* was already established in the OE period and that by ME it was the most frequent and productive suffix in all regions, especially in the East Midlands (Dalton-Puffer, 1996: 128 *et passim*; Gardner, 2014: 71–76, 84–85, 113–115). In fact, it was one of the first native suffixes to combine with Romance words, something which for Romaine (1985) accounts for its successful spread: it can attach both to native and Romance bases, while examples of formations with Germanic bases and *-ity* are practically unattested. On the other hand, *-ity* (Latin *-itas/-itatem*) entered the inventory of English suffixes during the early ME period, adopted first through French loans in *-(i)te*, although eventually words in *-te* were Latinized to *-ity* (Marchand, 1969: 312–314). Like other foreign derivational morphemes, *-ity* was predominantly used with foreign bases, though it progressively gained productivity in terms of tokens and types towards the end of the ME period (Dalton-Puffer, 1996: 106–107;

Hundt & Gardner, 2017: 118–119), especially with adjectives in *-able*. Dalton-Puffer (1996: 75) notes that native suffixes like *-ness* and *-ung/-ing* experience a rapid decline during the period in favor of borrowed suffixes due to the influence of French and Latin as languages of prestige (see also Ciszek, 2008: 89). Similarly, Gardner (2014: 74–76, 84–85) observes a decrease in the productivity of *-ness* from the mid-thirteenth century to the late fifteenth century and a parallel increase in derivations with *-ity* (2014: 100–102). However, her data show that both suffixes reach their peak of productivity in the second half of the fourteenth century (2014: 74, 102). Romaine (1985) notes that during the EModE period there is a decline in the use of *-ness* derivatives and a parallel increase of *-ity* formations in three different translations of Boethius's *De Consolatione Philosophiae* (those produced by Alfred, Chaucer and Elizabeth I). For his part, Palmer (2015: 114–117) demonstrates that *-ness* was in relative decline in personal letters between 1401 and 1600 compared to several other borrowed derivatives, and that an increase in the productivity of *-ity* can be perceived as early as the sixteenth century.

After the EModE period, more divergent findings emerge. In her analysis of the EModE section of the *Helsinki Corpus* (HC) and *A Representative Corpus of Historical English Registers* (ARCHER), Cowie (1998: 189–195) finds no evidence of a continuous increase or decrease on the part of either suffix. Although in the second half of the seventeenth century *-ness* produces far more new types than *-ity*, from the eighteenth century onwards neither suffix shows a continuous developmental path. Lindsay and Aronoff (2013), however, point to an increase in the productivity of *-ity* during the seventeenth century in the *Oxford English Dictionary* (OED), which is also reflected in Säily's (2014, 2016, 2018) and Säily and Suomela's (2009) seventeenth- and eighteenth-century data from personal letters and trial proceedings. Aronoff and Anshen (1998: 244–245), based on evidence from the OED, conclude that *-ity* is more productive than *-ness* in the twentieth century. However, Biber et al. (1999: 321–325) observe that, although *-ity* is the most frequent suffix in all registers, fiction displays a preference for *-ness*, probably because words formed with *-ness* “derive from native adjectives denoting people's states of mind or character traits, which are the concern of much fictional narrative” (1999: 323). Conversely, according to Baayen (1993), *-ness* is more productive than *-ity* in Contemporary English, yet Plag et al. (1999: 224) show that this only holds true in the written medium. Some authors have also pointed out that the selection of one or other suffix depends on the type of base (Anshen & Aronoff, 1989; Baayen & Renouf, 1996; Lindsay, 2012; Marchand, 1969; Plag, 2003: 116) and may reflect a complex interplay of phonological, morphological, semantic and functional factors.²

What seems to be commonly agreed upon is that ever since *-ity* entered the inventory of deadjectival suffixes in ME, a certain degree of ‘rivalry’ has been at work between the two suffixes. The existence of such competition seems to be supported by the attestation of pairs such as *pureness* and *purity*, even though it is difficult to determine whether these doublets are exact synonyms in usage and meaning, even from a synchronic point of view (see Dalton-Puffer, 1996: 126–130; Riddle, 1985). Usually, well-established words would block competing

forms, but with the lack of a fixed standard in the sixteenth century, and in a climate which favored linguistic innovation, the principle of economy would be ineffective (see Görlach, 1991: 171–172). Blocking may also happen when two co-existing synonymous words develop different meanings, which according to Riddle (1985) was the case with *-ity* and *-ness*. She argues that the two suffixes were initially synonymous, but their coexistence triggered a process of lexical diffusion which led *-ness* to acquire the meaning component ‘embodied trait’ and *-ity* to indicate ‘abstract (or concrete) entity’. For Romaine (1985), it is not easy to establish a discrete meaning for each of the suffixes, since lexical diversification may happen at various levels in different *-ness* and *-ity* derivations formed with the same base. Rather, when there is competition between *-ness* and *-ity* formations, they often occupy different semantic spaces or specialize in different registers. Dalton-Puffer (1996: 129–130) and Cowie (1998: 259–261) find no evidence of the semantic distinction defined by Riddle (1985) before the fifteenth century or even in Contemporary English. For Cowie (1998: 259–261), although an entity meaning developed in words such as *rarity* but not *rareness*, the attribute meaning was not completely lost in *-ity* words, and she accounts for the difference between pairs such as *hyperreactivity* and *hyperreactiveness* in terms of register: both can describe a characteristic or attribute, but the word with *-ity* is more appropriate for such specialized terminology due to its learned character. Similarly, Nevalainen (1999: 398) notes that both suffixes are very productive in EModE and that they have “partly overlapping input ranges”, both being able to denote “abstract senses, conditions and qualities”, the latter being the prevailing sense with *-ness*. She also observes that the semantic range of *-ity* is slightly wider, as it can also have concrete connotations, and thus can appear in the plural (e.g. *capabilities*).

A discussion of the rivalry on a lexeme-by-lexeme basis is complicated, and perhaps a more thorough analysis would need to involve exclusively competing forms created from the same base. Nevertheless, as has been shown, the pair has served as an example of rival suffixes in a range of studies, and this is also the view adopted here.

3. SOURCES AND METHODOLOGY

Three corpora have been used for data retrieval: *A Corpus of English Dialogues 1560–1760*, the *Penn-Helsinki Parsed Corpus of Early Modern English* (1500–1710) and the EModE section (1535–1749) of the *Corpus of Historical English Law Reports, 1535–1999*, thus covering a wide variety of registers distributed along the formal-informal continuum and the speech-written continuum.

The *Corpus of English Dialogues* (CED) is a 1.2-million-word corpus of EModE speech-related registers divided into forty-year periods running from 1560 to 1760.³ It contains several types of dialogues, which can be divided into two broad categories: authentic dialogues or written records of real speech events (trial proceedings and witness depositions), and

constructed or fictional dialogue (drama comedy, didactic works and prose fiction; Kytö & Walker, 2006: 12). For my analysis I have considered only drama, trial proceedings and witness depositions, on the basis that they are the most ‘oral’ registers of those in CED according to extensive analysis carried out by Culpeper and Kytö (2010).

The *Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME) consists of over 1.7 million words of texts produced between 1500 and 1710, organized into three seventy-year subperiods. It includes the HC files plus two supplementary subdirectories with roughly one million words of additional samples. The corpus is subdivided into eighteen different subregisters,⁴ some of which overlap with those of CED. In order to address this methodological problem, I excluded the trial proceedings of PPCEME because this category contains both trial proceedings and witness depositions, whereas in CED a more accurate classification is provided by considering the two registers separately. Trial proceedings must be distinguished from witness depositions in terms of the degree of narratorial intervention (minimum in the former but considerable in the latter; Kytö & Walker, 2006: 12), as well as in the mode of narration: trial proceedings typically include transcripts in dialogue format, whereas witness depositions tend to appear in indirect speech (Culpeper & Kytö, 2010: 49–59). I also left out dramatic texts, some of which were also included in CED, as well as fictional texts, because they mix dialogues and narration, thus complicating the analysis of the results. As far as handbooks are concerned, the text *A Dialogue Concerning Witches and Witchcraftes* (1593) by George Gifford and *The Compleat Angler* (1676) by Izaak Walton were also removed. These are the only handbooks in conversational form included in PPCEME, the remaining ones being descriptive and instructional in character, thus resembling the educational treatises with which they were fused. Likewise, the thematically related and structurally similar groups of autobiographies and biographies were merged in a single group.⁵ Following the reduction in the number of texts, and the simplification of registers adopted for the present study, the resulting structure of PPCEME is illustrated in Table 1.

	1500–1569	1570–1639	1640–1710	Total
(Auto)biography	36,264	14,980	36,543	87,787
Bible	65,603	67,982	-	133,585
Diary	41,233	51,115	35,392	127,740
Educational treatise	64,348	53,520	61,933	179,801
History	35,855	31,900	36,044	103,799
Law	37,016	37,164	41,434	115,614
Letters, non-private	24,121	17,088	19,643	60,852
Letters, private	33,074	41,057	42,376	116,507
Medicine	19,125	21,673	-	40,798
Philosophy	32,091	22,429	29,313	83,833
Science	20,914	20,600	35,932	77,446
Sermon	30,713	31,546	31,676	93,935
Travelogue	44,032	45,330	32,798	122,160
Total	484,389	456,384	403,084	1,343,857

Table 1. Overall resulting structure of PPCEME.

Finally, my analysis also includes the EModE section of the *Corpus of Historical English Law Reports, 1535–1999* (CHELAR), a half-million-word corpus containing law reports, a subtype of legal text with a significant role in the interpretation of parliamentary and statute law (Fanego et al., 2017). Law reports thus complete the legal section of PPCEME, which hitherto only contained statutes, adding another formal, written register to the list of those analyzed.⁶

Although the samples in CED, PPCEME and CHELAR are recorded in the written medium, it can be said that some texts are closer to the spoken language than others. In order to facilitate the analysis of results, the seventeen registers considered for this study have been arranged into subcategories following the classification established by Culpeper and Kytö (2010: 17–18), who distinguish two major groups of texts: (1) speech-related and (2) writing-based and writing-purposed. The former can be further subdivided into three subgroups: (1) **speech-like texts** (e.g. personal letters and diaries), which are defined in terms of a scale consisting of features of communicative immediacy; (2) **speech-based texts** (e.g. trial proceedings and witness depositions), based on real-life speech events; and (3) **speech-purposed texts**, designed to be articulated orally, either reproducing real-time interaction (drama) or as monologues (sermons). However, as noted by Culpeper and Kytö (2010: 18), the subcategories of speech-related texts, as well as the dichotomy speech-related vs. writing-based and writing-purposed texts, do not constitute clear-cut sets, but rather interrelated and overlapping groups. Besides differing in their degree of ‘speechlikeness’, the texts in the three corpora can also be situated along a formal-informal continuum. The registers in the three corpora, as conceived of within such a framework, are represented in Figure 1 (for a similar framework, see Rodríguez-Puente [2019: 41–43]).

		Informal	Formal
Speech-related	Speech-like	Diaries Letters, private	
	Speech-based	Trial proceedings Witness depositions	
	Speech-purposed	Drama	Sermons
Writing-based and writing-purposed		(Auto)biography Travelogue	Bible Educational treatise History Law (statutes and law reports) Letters, non-private Medicine Philosophy Science

Figure 1. Distribution of registers in CED, PPCEME and CHELAR according to the dimensions of (in)formality and their speech-like vs. written characterization.

The examples of nouns formed by the addition of *-ity* and *-ness* were extracted from the corpora with *WordSmith Tools* (Scott, 2012) by searching for all the word forms containing one of the two endings in their different spellings, which were obtained from wordlists from the corpora themselves and the *OED*. Following Säily and Suomela (2009: 90), words which contained the suffixes etymologically and entered the language bearing them (e.g. ME *dignity* < Latin *dignitāt-em*) were included in the study, on the assumption that even the base and affix of long established words can serve as the input for new formations, and also because of the difficulties to ascertain with historical data whether a word emerges as the result of word-formation processes in English or is modelled after, or borrowed from, French and/or Latin (Durkin, 2009: 152).

For the analysis of the results, two different measures have been taken into account: frequency of types and rate of aggregation of new types. These two measures have been generally considered better indicators of productivity in diachronic corpora than token frequency, hapax legomena or type/token ratio (TTR).⁷ Type counts constitute a reliable measure, since a productive suffix produces many different words or types. An analysis of aggregation of new types along the lines of Cowie and Dalton-Puffer (2002) and Palmer (2015) has also been preferred over counts based on TTR and hapaxes. Diachronic corpora are too small in size for a measure based on hapaxes to be reliable (Palmer, 2015: 109) and the TTR, besides being strongly conditioned by token frequency, does not take into account the new types that are introduced from one subperiod to the other. A more elaborate approach to measuring the productivity of derivatives over time thus consists of analyzing the rate of aggregation of new types to observe diachronic changes in type frequencies. Assuming that the data from the first corpus subperiod provides the ‘starter lexicon’, all the new types used for the first time in subsequent periods are counted. The assumption is that if high rates of new types are added over a period of time, a suffix is likely to be productive over that period. It

must be noted, however, that the notion of new types in this analysis refers to neologisms in the corpus, though not necessarily neologisms in English.

More complex models of statistical significance testing, such as the permutation test successfully used by Säily (2011, 2014, 2016, 2018) and Säily and Suomela (2009), have not been applied here. Even though I acknowledge the value of statistical analyses in testing the significance of the variable currently under examination, the application of statistical tests to the data obtained goes beyond the scope of the present study and will be left for further research.

4. RESULTS

The corpora provided a total of 9,527 tokens: 4,799 noun formations with *-ity* and 4,728 with *-ness*. The diachronic distribution of types and tokens of the two suffixes in the three corpora is displayed in Figures 2 to 4.

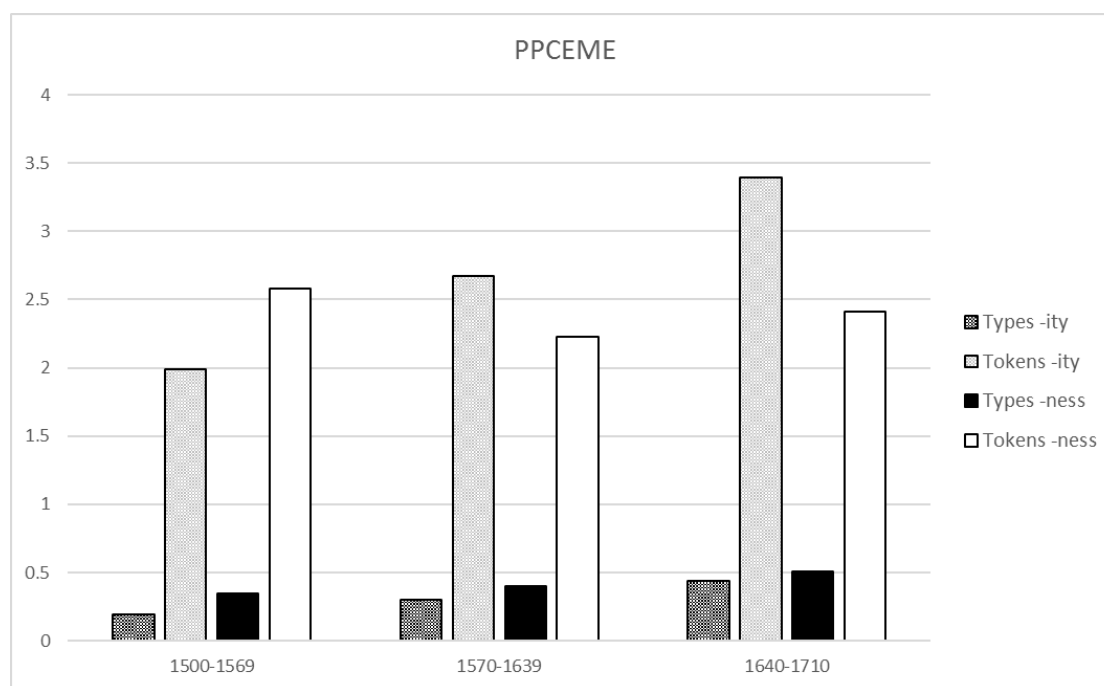


Figure 2. Diachronic distribution of types and tokens with *-ity* and *-ness* in PPCEME (n.f./1,000 words).

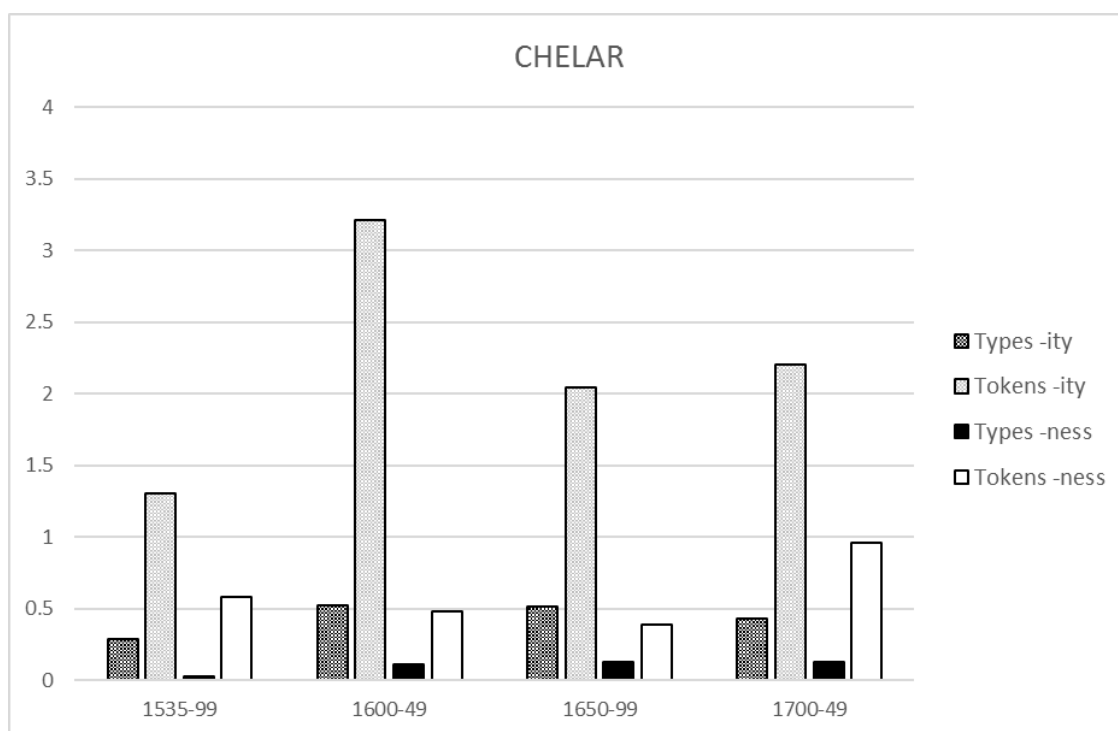


Figure 3. Diachronic distribution of types and tokens with *-ity* and *-ness* in CHELAR (n.f./1,000 words).

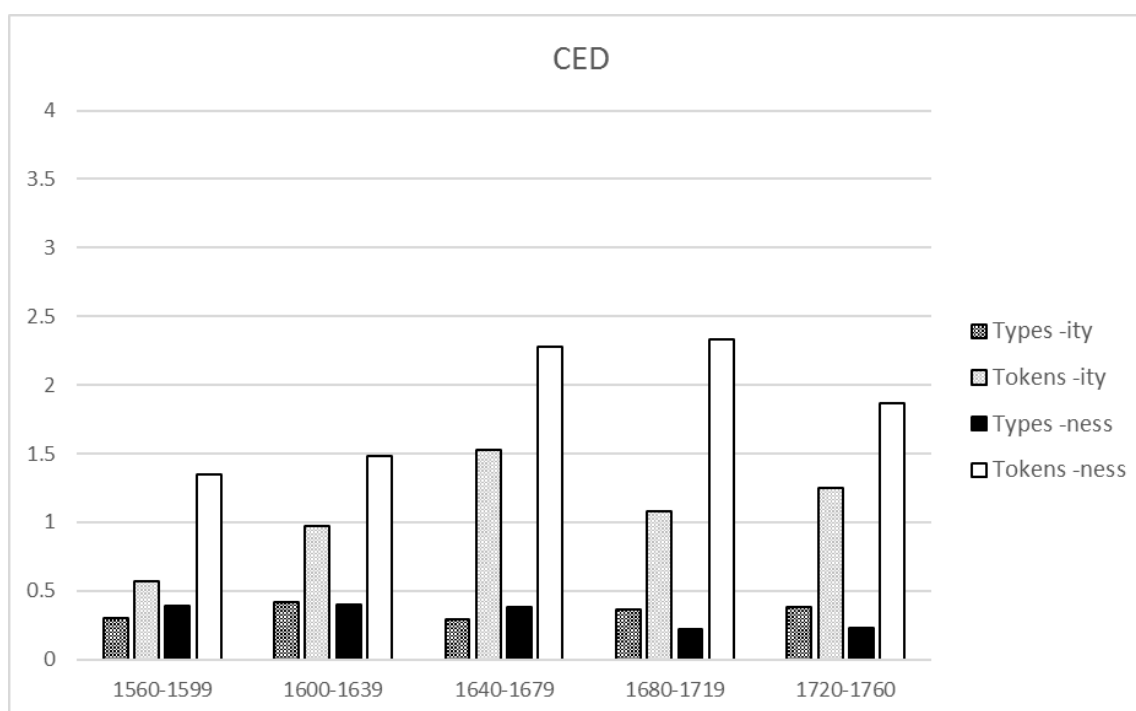


Figure 4. Diachronic distribution of types and tokens with *-ity* and *-ness* in CED (n.f./1,000 words).

These figures indicate that the two suffixes were in full development during the period examined. The suffix *-ity* grows in type and token frequency from the sixteenth to the eighteenth centuries in the three corpora, thus maintaining an increasing tendency which had already begun during the late ME period (Dalton-Puffer, 1996: 106–107; Hundt & Gardner,

2017: 118–119). Most derivatives in *-ity* are formed from adjectives of Romance origin, the only exception being *scarcity*, which alternates with *scarceness* in a similar sense. The suffix is particularly productive with adjectives in *-al* (*actuality*), *-ous* (*callosity*) and *-able/-ible* (*applicability*, *sensibility*), although in many cases the noun enters the language earlier than the adjective (e.g. *generosity* [1475] and *generous* [1574]).

The suffix *-ness*, for its part, presents a different picture. It combines with both native and Romance bases, sometimes producing polysyllabic and complex words, such as *dissolubleness*, *incombustibleness* and *malleableness*, which coexist with synonymous derivatives in *-ity* (*dissolubility*, *incombustibility*, *malleability*). Despite its versatility, the growth of *-ness* is not as marked as that of *-ity*. Type frequency increases in the samples from PPCEME and CHELAR, yet decreases in those from CED. Although a closer inspection of the individual registers is necessary, a priori these results seem to suggest that during this period *-ity* was gaining ground, arguably at the cost of *-ness*, especially in those texts of a more oral character, such as the ones represented in CED. The decline of *-ness* reflected in the CED samples is in line with observations from the late ME period (Ciszek, 2008: 89; Dalton-Puffer, 1996: 75; Gardner, 2014: 74–76, 84–85, 100–102; Palmer, 2015; Romaine, 1985), yet contrasts with the data obtained by Cowie (1998: 189–195), who notes that *-ness* is more productive than *-ity* in the second half of the seventeenth century. In my seventeenth-century data, *-ness* produces more types than *-ity* only in subperiod 1640–1679 of CED and in PPCEME. In law reports, though, *-ity* dominates throughout the whole period. Therefore, stylistic distinctions among registers again seem to be at work here.

For a more fine-grained analysis, consider Tables 2 and 3, the former illustrating the diachronic distribution of types across registers in PPCEME, the latter displaying the rate of aggregation of new types.

	1500–1569		1570–1639		1640–1710	
	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>
(Auto)biography	0.55	0.60	1.06	1.53	1.39	1.14
Bible	0.06	0.39	0.14	0.39	-	-
Diaries	0.09	0.21	0.19	0.31	1.04	0.76
Educational treatise	0.80	1.33	1.23	1.47	1.04	1.03
History	0.36	0.64	1.12	0.90	1.22	0.86
Law	0.59	0.27	0.80	0.24	0.55	0.16
Letters, non-private	0.62	0.70	1.75	1.17	1.47	0.71
Letters, private	0.30	0.60	0.34	0.68	0.54	0.68
Medicine	0.83	1.56	1.56	1.56	-	-
Philosophy	0.90	1.24	1.33	1.87	2.31	1.36
Science	0.23	0.57	0.14	0.24	0.91	0.94
Sermon	0.61	1.23	0.85	1.29	1.79	1.57
Travelogue	0.06	0.34	0.90	0.61	0.88	0.79

Table 2. Diachronic distribution of type frequency of *-ity* and *-ness* in PPCEME (n.f./1,000 words).

	1570–1639		1640–1710	
	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>
(Auto)biography	0.80	0.93	1.06	0.76
Bible	0.11	0.08	-	-
Diaries	0.17	0.23	0.81	0.56
Educational treatise	0.76	0.87	0.53	0.54
History	0.87	0.62	0.72	0.55
Law	0.37	0.13	0.26	0.09
Letters, non-private	1.46	0.70	0.81	0.20
Letters, private	0.24	0.51	0.30	0.42
Medicine	1.24	1.10	-	-
Philosophy	0.62	1.15	1.26	0.51
Science	0.09	0.09	0.83	0.86
Sermon	0.57	0.69	1.07	0.88
Travelogue	0.83	0.55	0.39	0.60

Table 3. Rate of aggregation of new derivatives with *-ity* and *-ness* in PPCEME (n.f./1,000 words).

Table 2 shows that in the earliest subperiod the native suffix *-ness* is preferred over *-ity* in all the registers analyzed except statutes, a very formal writing-based and writing-purposed type of text with a long tradition of writing in Latin and French in which nominalizations in general abound. In fact, from the early sixteenth to the first half of the eighteenth centuries, the statutes sampled in PPCEME as well as the law reports in CHELAR (see Table 4) show higher rates for the Romance suffix *-ity*, which also produces more derivatives than *-ness*. Although closely related to legal documents, public letters do not turn their preference towards *-ity* until the second half of the sixteenth and the early seventeenth centuries, when the dominance of *-ity* also spreads to other (semi)-formal writing-based and writing-purposed registers, namely history, medicine and travelogues. A preference for *-ity* derivatives and Romance vocabulary in general would have been expected in public letters as early as the beginning of the sixteenth century, as is the case with statutes and law reports. According to Nevalainen and Raumolin-Brunberg (2011), official correspondence and legal language were the successors of fifteenth-century Chancery English, and have usually been described as representatives of the evolving standard norm at the beginning of the sixteenth century, although they soon lost their norm status and became a specialized language (Nevalainen & Raumolin-Brunberg, 1994). The three types of documents had relatively similar functions and were produced exclusively by learned male writers or, in the case of official letters, by women assuming typical masculine social roles, such as Queen Elizabeth (see Nevalainen & Raumolin-Brunberg, 2003: 110). However, on closer inspection, we see that many *-ness* derivatives attested in public letters denote qualities, often with subjective connotations (e.g. *bitterness*, *doubtfulness*, *kindness*, *willfulness*), which are absent in the more objective language of statutes and law reports, where most *-ity* nouns correspond to specialized terms typical of legal jargon (e.g. *annuity*, *equity*,

liability, moiety, penalty). In turn, the most common *-ness* derivatives in legal language are *business, highness* and *witness*.

The Romance suffix *-ity* continues to spread to other registers during the late seventeenth and early eighteenth centuries, becoming the dominant form even in informal speech-based registers, such as diaries. The only exceptions are private letters and scientific texts, although in the latter case the difference in type frequency between the two suffixes is minimal. The rate of aggregation of new types with *-ity* is also higher than that of *-ness* during the last subperiod, except in educational treatises, private letters, science and travelogues (see Table 3). Unfortunately, medical and biblical texts are not represented in the last section of PPCEME, and hence we are left without evidence for their evolution regarding the use of the two suffixes in question.

	1535–1599		1600–1649		1650–1699		1700–1749	
	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>
Types	0.29	0.03	0.52	0.11	0.51	0.13	0.43	0.13
New types	-	-	0.27	0.09	0.15	0.07	0.07	0.07

Table 4. Frequencies of types and new derivatives of *-ity* and *-ness* in CHELAR (n.f./1,000 words).

Not surprisingly, medicine and philosophy, two new, emerging disciplines, present the highest type richness for both suffixes in the earliest subperiod, which is also relatively high in subsequent subperiods. They also display elevated rates of aggregation for the two suffixes, an indication that new specific technical vocabulary was being introduced to adapt the vernacular to these two fields of study. Words like *callosity, carnosity, fumosity, nodosity, profitableness, insensibleness*,⁸ *unctuosity, voracity* and *wateriness* occur exclusively in medical texts, where pairs of competing Romance and native formations are also abundant (e.g. *infirmité - sickness*). *Diuturnity, douceness, equanimity, improbity, plenteousness, pravity* and *restority* are attested only in philosophical texts.

In turn, the rate of (new) types in science remains quite low in the early periods but then peaks in the second half of the seventeenth century, when the type richness of both suffixes is high. It has, however, been noted that nominalizations in general become more abundant in medical and scientific writing from the seventeenth century onwards (Tyrkkö & Hiltunen, 2009), in accordance with a shift from an involved, author-centered to an informational, object-centered style (Atkinson, 1999: 76–77, 110–140; Biber & Finegan, 1997), in which Romance elements are more frequent. In fact, the medical and scientific texts examined by Cowie (1998: 221–222) provide the largest number of neologisms with *-ity* in several subperiods from ARCHER, whereas *-ness* derivatives decrease steadily from 1850 onwards in the two registers. On closer inspection, I suspect that the low frequency of derivatives in science during the early periods may relate to the subject matter of the samples included. The texts from the first two subperiods are concerned with the field of geometry, where *-ness* derivatives are used for the

description of qualities typical of lines and forms, such as *equalness*,⁹ *deepness*, *greatness*, *groundliness*,¹⁰ *thickness* and *wideness*. Conversely, one of the texts from the last subperiod deals with micrography, and another with electricity and magnetism. Derivatives with *-ness* in these describe a wide variety of qualities (*fixedness*, *minuteness*, *springiness*, *watchfulness*) and are particularly abundant for the description of colors (*blackness*, *blueness*, *greenness*, *redness*, *yellowness*, *whiteness*) and light (*clearness*, *darkness*, *lightness*).

Biblical texts and sermons also present striking results. In the Bible, not only does the Romance suffix score far lower than the native one, but *-ity* also displays the lowest type frequency and the lowest rate of aggregation from the early sixteenth to the mid-seventeenth centuries. In sermons *-ness* is more frequent and produces more types than *-ity* in the earlier section of PPCEME, but *-ity* then takes the lead from the mid-seventeenth century onwards. The biblical texts in PPCEME are translations from Latin and sermons typically contain full passages from the Bible. Given their characteristics, a high rate of *-ity* derivatives and borrowed vocabulary in general would have been expected, as was the case in the late ME and EModE religious writings examined by Gardner (2014: 141–173) and Palmer (2009: 166–256). Hundt and Gardner (2017: 119) account for the high frequency of *-ity* words in religious writings in terms of the extensive use of nouns denoting abstract qualities typically discussed in this particular register (e.g. *chastity*, *poverty*), which are normally absent from legal documents or scientific texts. Palmer also finds that borrowed (especially Latinate) suffixes are more common in formal registers such as poetry or religious writing, not only due to their distinct prosodic qualities but also for semantic reasons. The majority of the derivatives in the sermons and biblical texts in PPCEME, in fact, are *-ness* derivatives denoting embodied attributes typically used to describe Christian vices and virtues, such as *blessedness*, *evilness*, *perfidiousness*, *prophaneness*, *righteousness* and *unmercifulness*. However, numerous (near) synonymous pairs of Romance and native derivatives are also attested (*divinity* - *godliness*, *felicity* - *happiness*, *purity* - *pureness*, *tranquility* - *quietness*). Perhaps the dominance of *-ness* formations in earlier periods was motivated by an attempt to reach a larger audience, regardless of their social level or their degree of literacy. By the beginning of the eighteenth century, many *-ity* words were still considered learned (Cowie, 1998: 195–196) and in general words from the classical languages would pose difficulties for those with no classical education. For the first time, translations of the Bible into English were allowed in England, and religious discourse would thus need to pave its way in all social spheres. In the last subperiod, sermons turn to *-ity* derivatives,¹¹ perhaps simply because *-ity* was spreading in general during this period in other registers as well, or perhaps due to idiosyncratic variation or differences in subject matter among the particular sermons sampled in PPCEME. In Cowie's (1998: 223–224) data from roughly the same period (1650–1700), sermons are seen to be the most productive register of those in ARCHER in terms of the introduction of new derivatives with *-ness*, which is in accordance with the development of a more involved, charismatic and plain style observed in sermons from the seventeenth to the twentieth century (Claridge & Wilson, 2002).

The public written texts addressed to non-specialized audiences represented in PPCEME, namely (auto)biographies, (non-dialogic) educational treatises/handbooks and travelogues, also reverse their preference, from *-ness* to *-ity*, over the course of the period, although in educational treatises the difference in type frequency between the two suffixes is minimal in the last subperiod. In the case of travelogues and educational treatises, however, the rate of aggregation of *-ness* formations is higher in the final subperiod. Educational treatises stand out in terms of their creativity in the introduction of *-ness* derivatives which are not attested in other registers, such as *barbariousness*, *ferventness*, *gallantness*, *newfangledness*, *whewishness* (1500–1569), *laxativeness*, *pensiliness*, *privateness*, *sluttishness* (1570–1639), *clownishness*, *costiveness*, *imperiousness*, *timorousness* and *unbecomingness* (1640–1710).

Diaries, which together with private letters are the most oral documents sampled in PPCEME, also display tendencies similar to other registers, turning towards *-ity* over the EModE period. Private letters, on the contrary, are unique among the registers of PPCEME in that they maintain their preference for native *-ness* derivations throughout the whole period and also produce more new derivatives with this suffix (see Table 3). These results match those obtained by Cowie (1998: 221) from ARCHER, which nevertheless also reflect a peak in *-ity* derivatives in letters between 1750 and 1850. Yet apart from this, *-ness* is the preferred suffix in this register until the end of the twentieth century. This may relate to their oral, dialogic, involved character (Biber & Finegan, 1989, 1997). As noted by Romaine (1998: 18), personal letters “are among the most involved and therefore oral of written genres”. This also holds true for diaries and other ego-documents (Elspass, 2012: 157). However, the diaries in PPCEME develop differently from letters, shifting their preference towards *-ity* from the second half of the seventeenth century. It must be borne in mind that diaries are a very heterogeneous register, since they are highly dependent on the particular style and format adopted by the writer, who may choose to convey the narration with sketchy notes and a repetitive style or, on the contrary, use a stylish, learned and elaborate discourse (Rodríguez-Puente, 2019: 223–235). Moreover, sociolinguistic variation may also be crucial in these two registers, in which male and female writers of several social strata are represented (see especially Säily, 2014, 2016, 2018 and Säily & Suomela, 2009), whereas sermons, the other speech-related register in PPCEME, were produced exclusively by learned male writers.

In order to see how other speech-related registers developed as far as our suffixes are concerned, consider Tables 5 and 6, which display the distribution of types and rates of aggregation respectively in the three registers selected from CED.

	1560–1599		1600–1639		1640–1679		1680–1719		1720–1760	
	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>
Drama comedy	0.35	0.58	0.58	0.50	0.52	0.86	0.88	0.65	0.94	0.59
Trial proceedings	0.75	0.65	0.76	0.97	0.41	0.29	0.28	0.11	0.20	0.11
Witness depositions	0.16	0.26	0.40	0.42	0.17	0.34	0.22	0.37	0.51	0.45

Table 5. Diachronic distribution of type frequency of *-ity* and *-ness* in CED (n.f./1,000 words).

	1600–1639		1640–1679		1680–1719		1720–1760	
	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>	<i>-ity</i>	<i>-ness</i>
Drama comedy	0.37	0.35	0.25	0.56	0.44	0.31	0.37	0.20
Trial proceedings	0.48	0.76	0.25	0.19	0.13	0.06	0.08	0.07
Witness depositions	0.37	0.27	0.08	0.14	0.07	0.11	0.34	0.22

Table 6. Rate of aggregation of new derivatives with *-ity* and *-ness* in CED (n.f./1,000 words).

A quick overview of the data indicates that the registers in CED follow a line of development quite similar to those in PPCEME; whereas *-ness* is more common in the earliest subperiod, except in trial proceedings, *-ity* becomes the preferred suffix by the beginning of the eighteenth century, also aggregating more new forms than *-ness* in the three registers. The division of CED in subperiods shorter than those of PPCEME allows for a very accurate analysis: the first register to move towards *-ity* (both in type frequency and rate of aggregation) is trial proceedings from 1640s onwards, then drama from 1680s, and finally witness depositions from 1720s onwards. Therefore, although the two suffixes fluctuate in frequency in apparently random turns between 1560 and 1640, from the mid-seventeenth century onwards the three registers clearly turn their preference towards the Romance element.

The results for drama are in line with Cowie's data (1998: 221) from roughly the same period of ARCHER, which moreover reflect a shift back to *-ness* from the mid-eighteenth century onwards. As far as trial proceedings and witness depositions are concerned, a note of caution is necessary: the two registers are subject to much sociolinguistic variation (see also Säily, 2016: 141–144). First, both high and low strata of society are represented in the dialogues recorded; second, the degree of scribal or editorial intervention can be considerable, to the extent of transforming the texts into an interpretation of a speech event, rather than a clean record of it (Archer, 2012: 148). An overview of the *-ity* derivatives in the two registers seems to confirm these suspicions: one can hardly imagine witnesses of a low social rank using words like *annuity*, *(il)legality*, *indemnity*, *magnanimity*, *partiality*, which are more likely to have been produced by judges or public officials. Derivatives with *-ness*, on the other hand, do not present any remarkable features, apart from the fact that the most common ones (*business*, *witness*) were also among the most common formations with the native suffix in the legal documents examined.

5. DISCUSSION

Although the statistical significance of the data presented in this study is yet to be tested, the results thus far allow for some preliminary explanations. In light of the available data, it seems clear that there was a change in the use and productivity of the two suffixes during the EModE period: whereas *-ness* was the most productive suffix initially, it lost ground progressively and was finally superseded by *-ity* in practically all registers towards the late seventeenth and early eighteenth centuries.

As is well known, the standardization process of English involved a change within the written language that rendered it less oral and more literate in nature, so that it would ‘fit’ for the many functions of standard language. Extensive research by Biber (2001) and Biber and Finegan (1989, 1992, 1997) on the development of registers from the seventeenth to the twentieth centuries has consistently demonstrated that styles tend to become more literate over time, the eighteenth century being particularly notable in this respect, something which is reflected in the co-occurrence of a set of linguistic features along several dimensions of style originally established by Biber (1988). McIntosh (1998) also accounts for the change towards “more polite and more ‘written’ (less oral)” style in the eighteenth century in terms of gentrification, the cleaning-up and modernization of English (1998: 23), standardization and the culmination of the prescriptivist period which encouraged formality, precision and abstractness as opposed to “redundancy, sloppiness and concreteness of speech” (1998: 23–24).

Moreover, considering that in the standardization process, innovations tend to diffuse from “their original genre of writing to others” and that “official documents, associated with power and authority, play a role in establishing the form word as part of the standard” (Rissanen, 2000: 120), it may be argued that the general shift towards a preference for *-ity* over the course of the EModE period was favored by the dominance of this suffix in the most authoritative and formal writing-based and writing-purposed registers represented in the corpora: statutes and law reports. Both statutes and law reports, official, authoritative documents, display a higher type richness and aggregation rate for *-ity* than for *-ness* from the early sixteenth to the early eighteenth centuries and, together with trial proceedings, they are the only registers in which the Romance suffix predominates over the native one during the sixteenth century. The spread of *-ity* continues through written texts (history, medicine, public letters and travelogues) towards the late sixteenth and mid-seventeenth centuries, and finally reaches (in)formal and unofficial speech-related registers (diaries, drama, sermons, trial proceedings and witness depositions) towards the mid-seventeenth century. Although *-ness* was not ousted from the system, its productivity was somehow threatened during the late EModE period by its competing Romance counterpart, perhaps motivated by a change from above, that is, a change which emerges from written registers “(at least partly) based on conscious decisions of what is functionally necessary and stylistically appropriate for a given

genre” (Claridge, 2017: 189). Legal language and official correspondence have usually been described as representatives of the evolving standard norm at the beginning of the sixteenth century, as successors of Chancery English in the fifteenth century, “[o]ne of the first centres of focussing [i.e. to have supralocal impact] to promote linguistic standardization in particular registers” (Nevalainen & Tieken-Boon van Ostade, 2006: 303). It is arguable, however, whether these official documents served as stylistic models to other registers. Developments driven by specific registers may remain confined to these environments (e.g. *herewith*, *the aforementioned*) or may spread and be integrated in the emerging standard (e.g. *provided that*, *except*; see Nevalainen & Tieken-Boon van Ostade, 2006: 304).

Perhaps the general reversal towards *-ity* derivatives seen in the data presented here simply reflects a preference for Romance vocabulary and word-formation processes in general, which would better suit the polite, flowery style which developed during the eighteenth century. However, the language of law has proved to be crucial in the standardization of spelling and also the development of syntactic features and vocabulary (Rissanen, 2000: 128). Thus, whereas legal language might not have served entirely as a model for the change, a desire to imitate its embellished and polished style may well have aided the process.

6. CONCLUSION

The present study has shown that the development of *-ity* and *-ness* did not proceed in the same way in all register levels during the EModE period. Although *-ness* was the preferred form by the sixteenth century, *-ity* progressively gains ground and becomes the dominant form by the late seventeenth and early eighteenth centuries in all the registers analyzed, except private letters. This observed line of development has been related to the processes of vernacularization and standardization in several ways. I have argued that the shift in tendency may respond to the general shift observed in various registers towards the development over time of a highly literate style, this generally promoted by standardization, which had its culmination in the prescriptivist period of the eighteenth century. The process may have been favored by the influence of authoritative, formal documents as the driving force promoting linguistic standardization of particular registers, for which it may have served as a stylistic model during a time when the vernacular was being adopted by, and adapted to, a wider range of written and spoken registers. It has also been seen that the data may be subject to idiosyncratic variation or to issues relating to subject matter or format of the texts examined. So, although corpora aim at balanced sampling, it is also the case that register categories encompass various types of texts, produced by different authors, at particular times and under specific circumstances. Although further research should seek to test the statistical significance of the data obtained, the results presented here have helped to shed new light on the importance of register variation at the level of lexis.

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NOTES

- 1 Following recent research (especially Biber & Conrad [2019] and related publications by Biber and associates), the term *register* is used here to refer to “text varieties that are defined by the situational characteristics of a text and which, as a result, typically share similar linguistic profiles” (Gray & Egbert, 2019: 1–2). For a discussion of this and other related concepts, such as *genre* and *text type*, see, among others, Biber and Conrad (2019), Claridge (2012), Diller (2001), Lee (2001) and Taavitsainen (2016).
- 2 See Säily (2014: 30–31) and references therein.
- 3 For the full structure of CED, see Kytö and Walker (2006).
- 4 See <https://www.ling.upenn.edu/hist-corpora/PPCEME-RELEASE-3/index.html>.
- 5 Important distinctions will undoubtedly be found between the two registers, especially regarding linguistic features which represent different degrees of involvement (see Biber, 1988: 89 *et passim*). However, for the analysis of nominalizing suffixes, the two registers can be fused without any methodological problems arising.
- 6 For further information on the structure of CHELAR, see <http://www.usc-vlcg.es/CHELARv2.html>.
- 7 See especially Baayen (1989, 1992, 2009).
- 8 The word *insensibleness* (1548) in PPCEME antedates the first recorded example in the *OED* (1656). The derivative *insensibility* is not recorded in PPCEME, though it appears in the dramatic texts from CED.
- 9 In alternation with *equality* in the same text.
- 10 Presumably derived from the now obsolete adjective *groundly* ‘well-founded or established, solid, firm’ (*OED*, s.v. *groundly*), although not recorded in the *OED*.
- 11 Unfortunately, PPCEME does not contain samples of biblical texts in subperiod 1640–1710, so it is not possible to know whether tendencies are reversed in the later part of the period in this particular register too.

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- are Bamberg, Freiburg, Heidelberg, Helsinki, Lancaster, Leicester, Manchester, Michigan, Northern Arizona, Santiago de Compostela, Southern California, Trier, Uppsala, Zurich.
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