ANGLICA

An International Journal of English Studies

31/2 2022

UNIVERSITY OF WARSAW

Anglica An International Journal of English Studies

ISSN 0860-5734

www.anglica-journal.com

DOI: 10.7311/Anglica/31.2

Publisher:
Institute of English Studies University of Warsaw
ul. Hoża 69
00-681 Warszawa

Nakład: 30 egz.

Typesetting:
Tomasz Gut

Cover design:
Tomasz Gut

Printing and binding:
Sowa – Druk na życzenie
www.sowadruk.pl
+48 22 431 81 40

TABLE OF CONTENTS

Anglica 31/2 2022
ISSN: 0860-5734
DOI: 10.7311/0860-5734.31.2.02

Veronika Volná
https://orcid.org/0000-0002-7296-0399
Charles University, Prague

Pavlína Šaldová
https://orcid.org/0000-0003-0043-7520
Charles University, Prague

The Dynamics of Postnominal Adjectives in Middle English*

Abstract: Middle English was a period of transition between the free word order of Old English, with functional variation of adjective form and position with respect to the head noun, and the fixed prenominal placement of single attributive adjectives in Modern English. Aided by the *PPCME2* of the Penn-Helsinki corpora, this corpus-driven study explores the range of adjectives attested frequently after the head noun, as well as their relative attraction to the position and, sampling the ME period with emphasis on variables in the corpus metadata, compares the frequencies of postnominally placed adjectives in various genres, capturing their declining overall frequency over time. These general tendencies are commented against the background of postpositives in PDE.

Keywords: adjective position, Penn-Helsinki corpora, Middle English, postnominal adjectives, genre

1. Introduction

In Middle English, noun postmodification by adjectives "was not infrequent" (Fischer 1992, 215), even though attributive adjectives were mainly prenominal (Raumolin-Brunberg 1994, 161). It has also been shown that the ratio of pre- and postnominal uses correlates with register (genre) characteristics, and that

* This research has been supported by the research grant GAČR (Grant Agency of the Czech Republic) No. GA19-05631S "Adjectival postposition in English."

postnominal adjectives are attested in 'learned and technical' text-types most frequently (for detailed accounts e.g. Moskowich 2009; Sylwanowicz 2016; Bator and Sylwanowicz 2020).

Taking into account the situation in PDE, where the range of adjectives appearing postnominally is restricted to a definable set of recurring items (Šaldová 2021), this study aims to identify adjectives frequently used in the postnominal position in ME texts (Section 4), determining their relative degrees of attraction to the post-head position (Section 5). As most previous studies focused on specific genres only, we would like to take a broader view of single adjectival postmodifiers in the Middle English period as recorded in the *Penn-Helsinki Parsed Corpus of Middle English* (*PPCME2* henceforth), with metadata information on its fifteen textual categories covering the period from 1150 to 1500. As the corpus metadata also provide information about the region of origin and original/translation, we hope to determine whether any of these variables can predict the frequency of the postnominally placed adjectives in ME texts (Sections 6 and 7 respectively).

2. Preliminaries

In Present Day English, the position of adjectives relative to other clause and phrase elements is strongly fixed, and even the order of adjectives modifying the same head within the NP is not arbitrary (e.g. Matthews 2014). The general rule is for a single adjective to precede the noun it modifies (*a happy child*); indefinite pronouns, on the contrary, are followed by the restrictor adjective (*something new*). Quirk et al. (1985, 418-419) observe that single adjectives placed post-nominally represent a minor type of postmodification in the sense that, unless an adjective phrase is heavy (i.e. modified or complemented), its appearance after the head noun is limited to but a handful of contexts, including institutionalized terminological expressions such as *heir apparent*, set coordinated phrases (*truth pure and simple*, *creatures great and small*), *a*-adjectives (*house ablaze*), and *-able*/*-ible* adjectives accompanied by the superlative, by *only*, or by the general ordinals.

Huddleston and Pullum (2002, 445-446) describe postnominal adjectives with the aid of four broad groups, excluding cases where the position of an adjective is motivated syntactically by the principle of end-weight, i.e. cases where the adjective is in coordination, is modified or complemented (*the instruments necessary for the operation*). A corpus-based survey using the written component of *The British National Corpus* (Šaldová 2021) indicates that the two groups of adjectives limited to the post-head use (*a child asleep*, *bars galore*) and Anglo-French legal terminological expressions originating in the Middle English period (*heir apparent*, *princess royal*) are quite infrequent (1.7% and 2.8% of postnominal adjective uses, respectively). The only two groups with substantial representation (95.5%) are adjectives with a lexicalized change in meaning in the post-head position (*the*

people present, *the students concerned*) and adjectives formed with *-able*/*-ible*, *-ed* and *-ing* affixes (*the only day suitable*, *stars visible*), amounting to 46.7% and 48.8% of all postnominal occurrences, respectively (Šaldová 2021). In other words, only instances ending in *-ble* and the de-participial forms are productive in the post-head position, while other adjective types appear only in contrastive antonymic patterns (Šaldová 2021).

This nowadays infrequent ordering is often believed to be largely the result of French influence dating back to Middle English, when adjectives which were postnominal in Old French were adopted along with their position relative to the modified noun (Fischer 1992, 214). However, this view is not shared by all scholars, as Lightfoot argues that French influence is not to blame, since "in contemporary French adjectives normally occurred prenominally" (Lightfoot 1979, 206). Moreover, adjectival postposition is well-attested in Old English (cf. Grabski 2020) and pertains to native (Germanic) adjectives as well as those originating from Old French and Latin. This ordering was, presumably, facilitated by free word order and the inflectional nature of the language, involving two forms of adjectives agreeing with nouns in number, case, and gender (Matthews 2014, 50).

Adjectival postposition in Old English was not only widespread, but also functional. Fischer's numerous studies on adjectival postposition in Old English include references to iconically motivated adjectival position, which can be observed especially in Old English texts, and can be traced to Middle English period, albeit to a lesser degree. As a rule, the post-head adjective in Old English had strong declension and was most often used to provide new information. Adjectives conveying known information would have a weak ending and appear prenominally (Fischer 2011). Furthermore, postnominal position was a common strategy for adding emphasis (new or extra information), reflecting the 'linear arrangement' as discussed in Bolinger (1952). (For PDE, cf. Bolinger 1952; 1967; or 'focus semantic value' in Blöhdorn (2009, 161-162)).

The levelling of endings (the overall decline of the inflectional system) and the simultaneous stabilization of word order led to the loss of the weak/strong distinction, which perhaps by itself would have made the distinction between pre- and post-modifying adjectives all the more valuable. However, the newly emerging determiner system provided new ways of expressing the distinction between the theme and rheme, rendering one of the principal functions of adjectival position useless. Fischer (2004) additionally notes that the possible confusion of adjectives with adverbs modifying the verb may have been another catalyst in the decline of postnominal adjectives.

Middle English was a transitional period between the free word order of Old English and the fixed positions required in Modern English (Fischer, De Smet and van der Wurff 2017, 90). The generally accepted view is that by the Middle English period, with the changes on both morphological and syntactic levels, word order became more fixed and the number of adjectives available to postposition gradually declined, anticipating the PDE status of postpositives as a 'minor' type of postmodification.

As "we can never be sure when uses are or become syntactically restricted" (Matthews 2014, 53), we are interested in identifying the range of the postnominally attested adjective types in the transitional Middle English period. Previous studies have shown that postmodification was possible, but premodification prevailed (e.g. constituting 92.3% of adjectival modifiers in prose texts (Raumolin-Brunberg 1994, 161)).

Several studies examined the positions of adjectives in specific registers (romances studied in Lampropoulou (2020); often with focus on scientific texts, e.g. in Moskowich (2009), or medical texts in Sylwanowicz (2016)), indicating that the post-head placement of an adjective is a complex issue correlating with a number of factors, often of extralinguistic nature (etymology, learned vs. non-learned text-types, and the technicality of phrases (Moskowich 2009)) and, as such, can be expected to appear in different genres with varying frequencies.

3. Postnominal adjectives in Middle English: the *PPCME2* dataset

To survey the range of single post-head adjective types, their frequencies and distribution across text-types, *the Penn-Helsinki PPCME2* is used. This 1.2 million-word corpus covering the Middle English period (1150–1500) features samples from 57 texts with a detailed genre classification. The corpus is meticulously annotated by hand, which gives reason to expect consistent tagging with low error rates in POS tags. In this trade-off between the size of a corpus and the accuracy of its tagging, we chose to favour the latter, as the possibility to rely on POS tags is especially useful in the initial phase of data collection, i.e. when retrieving all instances of single adjectives in the post-nominal position. Such a dataset then allows us to focus on a selected adjectives in postposition, especially on those with the highest frequency of occurrence.

Table 1. Size of the *PPCME2*, split into time periods

Period	Composition date	Manuscript date	Word count	Comment	Final word count
MX1	unknown	1150–1250	62,596		**62,596**
M1	1150–1250	1150–1250	195,494		**195,494**
M2	1250–1350	1250–1350	93,999		**111,012**
M23	1250–1350	1350–1420	17,013	joined w/ M2	
M24	1250–1350	1420–1500	35,591	removed	
M3	1350–1420	1350–1420	385,994		**485,988**
M34	1350–1420	1420–1500	99,994	joined w/ M3	
MX4	unknown	1420–1500	5,168	removed	
M4	1420–1500	1420–1500	260,116		**260,116**
Total			1,155,965		**1,115,206**

Table 1 shows the representation by word count of the respective time periods as they had been defined by the creators of the *PPCME2*. It is clear that the corpus is not balanced in terms of size across periods. For this reason, a decision was made to merge the underrepresented periods M23 and M34 with M2 and M3, respectively. The effect of varying size of the respective time periods in our corpus is further reduced once all results are normalized to instances per million words (ppm) or, due to the relatively low frequencies involved, instances per 10,000 words. Further, the time periods M24 and MX4 of the *PPCME2* corpus have been removed due to the disparity between their composition and manuscript dates, which would have, inevitably, diminished the significance of the results recorded in these periods.

In the retrieval of sequences of a N(oun) + an Adj(ective), morphological rather than syntactic tags were used to search the corpus in order to make the results more readily comparable to the findings of Šaldová (2021), where a syntactically tagged corpus had not been available. The following CQL query was used: [tag="(N.*)|(.*\+N.)"] [tag="(A.*\+VA.)|(ADJ)"]. The query was formulated to allow for the inclusion of passive and present participles (verbal or adjectival). These items are not numerous, however, and include mainly instances of *aforesaid* and *everlasting*, regarded as adjectives in PDE.

A total of 2,983 concordances were retrieved, which contained a number of false positives as well as instances of adjectival postposition relatable to more general tendencies in the language (most notably complex/heavy adjective phrases and supplementive clauses). Manual filtering narrowed the sample down by some 50%, resulting in the final sample of 1,456 N+Adj occurrences. The items which had to be discarded may be represented roughly by the categories listed below as (1a)–(1i):

(1a) object complements (*to couer His heuede and leue His body **bare***)
(1b) predicative use as a subject complement (*then was Anne **aferde** of þys angeles worde*)
(1c) genitive (*þat was Crystys **holy** apostull*)
(1d) dative (*ðat tu art gode **unhersum*** [disobedient])
(1e) supplementive absolute clauses (*hys lyppys wexyn blew*, *hys face **pale***, *hys een **ȝolow***); these instances may also be analyzed as an ellipsis of the verb *wexyn* from the preceding clause
(1f) end weight (adjective is the head of a complex postmodifying phrase) (*hurtynge of hooly thynges, or of thynges **sacred** to Crist, blod þat ran out of þe fyue wondys **principale** of hys body*)
(1g) adverbs (*on a day **long** befor þis tyme*)
(1h) following a word incorrectly identified as noun (*þingus þat weren not **profiȝtable***)
(1i) adjective modifying another noun (*on the morowe **certayne** men kepte the gatys of the brygge*)

One anticipated difficulty was that of duplicate results (recurring noun-adjective collocations among the concordances), which is most often the case of quotations from the Bible appearing in several different sermons or other religious texts. As such instances cannot be filtered out easily due to their left- and righthand contexts often not being identical, they were removed when sorting the results, and so, consequently, all the 1,456 concordances in the final sample originate from phrases or sentences which are unique within the given data set and do not represent duplicate occurrences.

4. Adjective types

The final sample consists of a large number of individual adjective lexemes occurring only once or twice in the post-head position (e.g. *shameful*, *shameless*, *singular*, *spontaneous*, *stable*, *steadfast*, *stern*, *subtle*, *sufficient*, *sundry*, *thick*, *timely*, *unworthy*). On the other hand, certain high frequency adjectives are represented as salient also in the post-head position. Table 2 lists the 26 most frequently recurring post-nominal single adjectives along with their absolute frequencies in the *PPCME2* (cut-off at 10 instances). They make up 6% of a total of 433 attested adjective types (following our manual lemmatization of the results), constituting 38% of the concordances in our sample. (In PDE, ten most represented lexemes account for 80% of postnominal occurrences (Šaldová 2021, 156)).

Table 2. The 26 most frequently occurring post-head adjectives in *PPCME2* (n = 558)

lemma	count						
almighty	120	*spiritual*	21	*fleshly*	13	*leof* (*beloved*)	11
great	46	*holy*	20	*abovesaid*	12	*perdurable*	11
good	42	*aforesaid*	19	*bodily*	12	*strong*	11
full	25	*alone*	17	*clean*	12	*fast*	10
everlasting	23	*deadly*	17	*dear*	11	*whole*	10
ghostly	22	*long*	16	*equal*	11		
dead	21	*right*	14	*free*	11		

As Table 2 indicates, the adjective types are varied both from the morphematic and semantic points of view. The most represented forms are *-ly* adjectives (99 instances). Interestingly, there is no pattern as yet, pointing to the dominance of the *-ble* forms in the post-head position, as we know it from PDE (28 instances ending in *-ble* were attested in the dataset). Neither is there a pronounced overall tendency for Romance adjectives to dominate (cf. Sylwanowicz 2016, 58).

These results indicate that in the ME period, unlike in PDE, the postnominal position is not reserved for a particular group of adjectives, namely adjectives with a specific morphematic structure or a lexicalized difference in meaning, but rather available for adjectives of various types (albeit with varying degrees of attraction of the individual lexemes to the grammatical pattern, cf. Section 5).

5. Attraction of specific adjectives to the postnominal position

To assess the interaction between specific adjectives and the postnominal position, a collostruction association analysis (following Stefanowitsch and Gries 2003) was applied to the most represented postnominal adjectives in the corpus (Table 3 below). A collocational analysis using the Fisher exact test (Stefanowitsch and Gries 2003, 218) was carried out for the 10 most frequent postnominal adjectives to determine the strength of attraction that a given adjective lexeme had with the postnominal position.

In order to calculate the test, ADJ+N queries were constructed to include all the spelling variants of the ten most represented adjectives obtained in Section 4, and additional efforts were made to include any other spelling variants that may not have been present in the results, with the help of the MED (*Middle English Dictionary*). This resulted in regular expressions such as "e?sp[iy]r[iy]tu[ea]e?ll?e?" for the lemma *spiritual*. Finally, the results were manually sorted in order to ensure that all of the adjectives returned by the query were of the same lemma. The full queries are listed in the Appendix.

As Table 3 shows, the collostruction association strengths for the postnominal position of the most represented adjectives range from the (relatively) weakest at p< 3.36E-04 for *holy* to the strongest at p< 3.01E-231 for *almighty* (i.e. the lower the number, the stronger the attraction of the given lexeme to the position). Disregarding the outlier *almighty*, the attraction to the postnominal position of *everlasting*, *spiritual*, *alone* or *aforesaid* is more pronounced, in relative collostruction strength, than is the case with *holy*, *full*, *dead* and *good*. The low attraction of *holy* to the post-head position, when contrasted with *almighty* from the same lexical field, suggests that factors other than semantics itself are involved (e.g. idiomaticity, phonological and morphological factors).

Table 3. The collostruction strength of the 10 most frequent postnominal adjectives

lemma	[N + lemma]	lemma in other constructions	Fisher test p<
almighty	120	83	3.01E-231
everlasting	23	25	2.74E-42
spiritual	21	38	2.69E-35
alone	17	84	1.31E-22
aforesaid	19	159	3.48E-21
great	46	2416	6.55E-17
good	42	3969	6.64E-08
dead	15	1035	4.01E-05
full	17	1296	4.29E-05
holy	20	1995	3.36E-04

Also worth noting is the fact that *alone* can still appear in the prenominal position at this stage (as it rarely does in PDE), attested by the single occurrence in (2a). Examples (2a) through (2h) illustrate the pre- and post-head uses of the frequent adjectives we tested:

(2a) oon **aloone** prophete of God (CMPURVEY,I,30.1499)
(2b) Salomon seith that he ne foond nevere womman **good** (CMCTMELI,220.C2.137)
(2c) hony of **euere-lastyngge** swetnesse (CMAELR3,45.592)
(2d) gloryfyed by your passyon in lyfe **everlastynge** (CMINNOCE,3.34)
(2e) be fulfeld more profitably of **spiritual** delices (CMAELR3,37.332)
(2f) This blisful regne may men purchace by poverte **espiritueel** (CMCTPARS,327.C2.1674)
(2g) hij laiden þe **dede** bodis of þi seruauntȝ mete to þe foules of heuen (CMEARLPS,98.4279)
(2h) So sir Pedyvere departed with the lady **dede** and the hede togydir (CMMALORY,208.3458)

The strongest attraction to the postnominal position of *almighty* correlates with the fact that this postnominal adjective collocates with only four head-nouns (Table 4), thus displaying the highest degree of fixedness to a head noun lexeme among the adjectives surveyed. The 43 instances of *almighty God* vs. 120 of *God almighty* in *PPCME2* can be compared to the proportion in PDE, with *almighty God* (77 hits) vs. *God Almighty* (60 hits) in the *British National Corpus*, as well as with no clear preference for either position in Google N-gram viewer. In addition,

the variety of collocating nouns is higher for *almighty* as a premodifier, where it collocates with *God* (43), *power* (3), *weldende* (1), *nule* (1), *fader* (1), [*Goddys*] *solf* (1), *jesu* (1), and *gastes* (1).

As the four adjectives in Table 4 selected for illustration show, the degree of combinability with a range of head nouns is of scalar character, ranging from the combinations on the verge of becoming fossilized (restricted to few head nouns from one lexical domain, i.e. *almighty*), to those which appear, for semantic reasons, to have no clear selectional preferences for their nominal collocates (*aforesaid*).

Table 4. Noun collocates of postnominal adjectives *aforesaid*, *almighty*, *everlasting*, and *Christian* in the sample (superscript values = number of occurrences where n >1)

Adjective	token/type	noun
aforesaid	19 / 15	maner[3] forme[2] Marchale[2] assyse Catysby causes cure frerys Kateryn Orlyaunce remnaunt resouns swellynge wirchyngis women
almighty	120 / 4	God[110] Father[6] Lord[3] Christ
everlasting	23 / 10	lyf[13] dyaþe[2] ȝates ȝeres dampnacioun erþe glorie ioie liuyer waie
Christian	5 / 5	man grace nonnes selue court

Aforesaid, with its numerous spelling variants and wide range of collocates, can be grouped together with its synonyms *aboueseid* and *be-forn-wretyn*, below as (3a) and (3b), constituting 141 instances, i.e. 9% of the entire sample. Such de-participial compound adjectives do not correlate with the lexical domain of the genre, as they function at the referential and text-organizing level (cohesion), specifying the referent of the NP (Carter and McCarthy 2006, 345). Although previous studies found classifying adjectives to prevail in the post-head position (Sylwanowicz 2016, 64), frequent postnominal phoric items such as *aforesaid* deserve further attention, both from the point of view of their functions as well as position within the NP.

(3a) to the whiche paiement truly to be made in the fourme **aboueseid** (CMREYNES,320.671)
(3b) hys bretheryn in þe worshepful town **be-forn-wretyn** (CMKEMPE,58.1317)

6. Effects of genre and period

Frequencies of adjectives in specific functions (attributive, predicative) vary in different registers (Biber et al. 2021, 504). Sylwanowicz demonstrates that "the frequency of attributive adjectives and their position in nominal phrases is largely dependent on the level of the source text" (2016, 61), with postposed adjectives dominating in

recipes from 'learned' writings. The overall relative normalized frequencies in *Middle English Medical Texts* examined in Sylwanowicz (2016, 60-61) show that not only do overall frequencies of adjectives differ in 'Remedy books' (24.7 per 10,000 words) and 'Specialized texts' (55), but so do the frequencies of post-head adjectives, with 9.8 per 10,000 words in 'Remedy books and 27.1 in 'Specialized books'.

The texts in the *PPCME2* are divided into fifteen separate categories according to the Penn-Helsinki classification of genre as follows: 'Bible', 'Biography, Life of Saint', 'Fiction', 'Handbook Astronomy', 'Handbook Medicine', 'Handbook Other', 'History', 'Homily', 'Philosophy', 'Philosophy, Fiction', 'Religious Treatise', 'Romance', 'Rule' (prose documents featuring guidelines such as rituals for the ordination of nuns), 'Sermon', 'Travelogue'.

The results of our analysis were recorded for each genre separately. However, for the sake of clearer visualization (Figure 1), those which might be considered sub-genres were merged into an overarching category, resulting in seven groups. In Figure 1, 'Romance' and 'Fiction' are represented by the category 'Fiction', while 'Bible,' 'Homily,' 'Sermon,' 'Religious treatise' and 'Biography, Life of Saint' are joined under the comprehensive category 'Religious.' The genre 'Handbook' contains non-fiction prose, most notably 'Medical' and 'Astronomical' texts.

To test the influence of genre and translation, a linear mixed model analysis (Bates et al. 2014) was conducted. In addition to genre and translation, we also tested the fixed effects of period and region. As random effects, the text source was included (Barr et al. 2013). The frequencies of adjectives in postnominal position were z-scored and extreme outliers with a z-score > 3 were excluded from the analysis (120 counts of *almighty*), resulting in a sample size of 1,336 observations, involving 432 lemmas and 55 text sources.

As an overall test of the influence of the fixed effects, a likelihood ratio test was conducted (Dobson and Barnett 2002; Forstmeier and Schielzeth 2011), and the full model was compared with a respective null model that lacked a specific fixed effects but was otherwise identical to the full model. The significance of individual fixed effects was tested by comparing the full model with a respective reduced model lacking the effect to be tested. Collinearity did not appear to be an issue, with maximum generalized VIF<1.5 (Field 2005; Fox and Monette 1992). The models were implemented in R (R Studio Team 2020) using the function *lmer* of the package *lme4* (Bates et al. 2014). Collinearity diagnostics were obtained with the package *car*.

The results suggest that genre had significant effects on the frequency of adjectives in post-nominal position (estimate=-0.08, standard error= 0.09, χ^2=12.46, p=0.05), while translation did not appear to have a significant effect (p=0.5). In addition, period was also shown to have a significant effect on the distribution of postnominal adjectives (estimate=0.047, standard error=0.05, χ^2=9.96, p=0.041), while region did not (p=0.17).

Figure 1 shows the z-scores of post-head single adjectives, with the highest values in the texts of the 'Travelogue' and 'Rule' genre categories. It must be noted,

however, that the 'Travelogue' category contains only one document, *Mandeville's Travels*, while being responsible for 73 (5%) of the 1,456 N+Adj pairs in the sample.

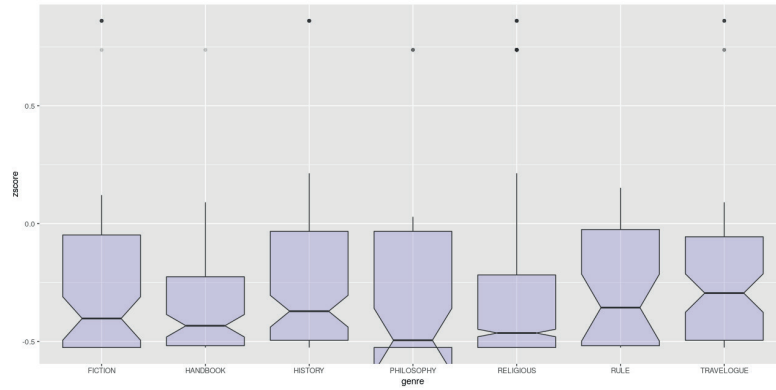

Fig. 1. The z-scores of N+ADJ for the fixed effect of genre (broader categories) in *PPCME2*

Table 5 provides a detailed break-down into all text-categories in the *PPCME2*, showing the total as well as relative frequencies of single postnominals.

Table 5. Absolute and relative frequencies of the N+ADJ construction in the *PPCME2* genres

Genre	N+ADJ	per 10,000 words
Handbook Astronomy	67	46.0
Biography, Life of Saint	64	20.1
Handbook Other	20	19.3
Handbook Medicine	8	11.7
Homily	238	13.8
Travelogue	72	13.2
Religious Treatise	533	13.5
Philosophy, Fiction	25	12.7
Philosophy	12	9.9
Fiction	9	9.3
Bible	50	6.4
Sermon	132	8.5
Romance	59	7.7
Rule	36	6.8
History	131	5.9
Total	1456	Average: 11.1

The genres display varying frequencies of bare postnominal adjectives, and, naturally, they differ in the adjectival lexemes represented. The various genres subsumed under the heading 'Religious' contain adjectives from the spiritual domain in high concentration. *Everlasting* in examples (4a) and (4b) is quite interesting, since no example of its post-head use is given in the OED ("*everlasting*", adj1), although our data indicate that almost 40% of its occurrences appear after the head noun and, as Table 3 shows, it is attracted to the postnominal position. It also stands to reason that specialized scientific terms should be found exclusively in scientific texts, for example *cercle equinoxiall* and *lyne meridional* in the subgenre of 'Astronomy' (examples 4c and 4d). The high concentration of adjectival postpositives in religious and scientific texts ('Astronomy' had the highest relative frequency of 46 occurrences per 10,000 words) can be related to extensive borrowing of terminology from French and Latin in these areas of interest. The reasons and effects are discussed in Moskowich (2009) and Sylwanowicz (2016) in detail.

(4a) to gloire & to blisse **þurchwuninde** [everlasting] (CMANCRIW-2,II.271.420)
(4b) dampnacioun **euerlastand** (CMEARLPS,68.3001)
(4c) evermo thys cercle **equinoxiall** turnith justly from verrey est to verrey west (CMASTRO,666.C2.111)
(4d) set the degre of the sonne upon the lyne **meridional** (CMASTRO,673.C2.381)
(4e) þat is to seye god **glorious**, god **victorious** & god ouer all thinges (CMMANDEV,21.500)

The 'Travelogue' genre (example 4e) contains one text only, so the author's individual preferences must be considered in addition to the effect of genre and topic, as postpositives can also serve as "indexicals of group membership" (Pahta 2004, 81; as quoted in Sylwanowicz 2016, 62). Such caution pertains to a number of texts with preferences for certain adjectives regardless of genre, notably *Gregory's chronicle* and *The Parson's Tale*. *Gregory's chronicle* (example 5a) contains four out of five instances of *royal* in the sample. *The Parson's Tale* (examples 5b and 5c) contains ten out of 11 instances of *perdurable*, as well as all 11 instances of *espiritueel* (or eleven out of twenty-one instances if the variant *spiritual* is to be included).

(5a) castelle **ryalle**; custarde **ryalle**; vyant **ryalle**; servyse **ryallys**
(5b) dampnacioun **perdurable**; joye **perdurable**; lyf **perdurable** (7x); goodes **perdurables**
(5c) fader **espiritueel** (2x); herte **espiritueel**; lyf **espiritueel** (2x); poverte **espiritueel**; thyng **espiritueel**; thynges **espiritueel** (2x) remove space; goodes **espirituels**; weyes **espirituels**

7. Development over time

Plotting the normalized frequencies of single postnominal adjectives in the corpus over the Middle English period, Figure 2 confirms a steady decline. This in also confirmed by the mixed linear model analysis, which shows the time period to have significant effects on the frequency of adjectives in post-nominal position (estimate=0.047, standard error=0.05, χ^2=9.96, p=0.041).

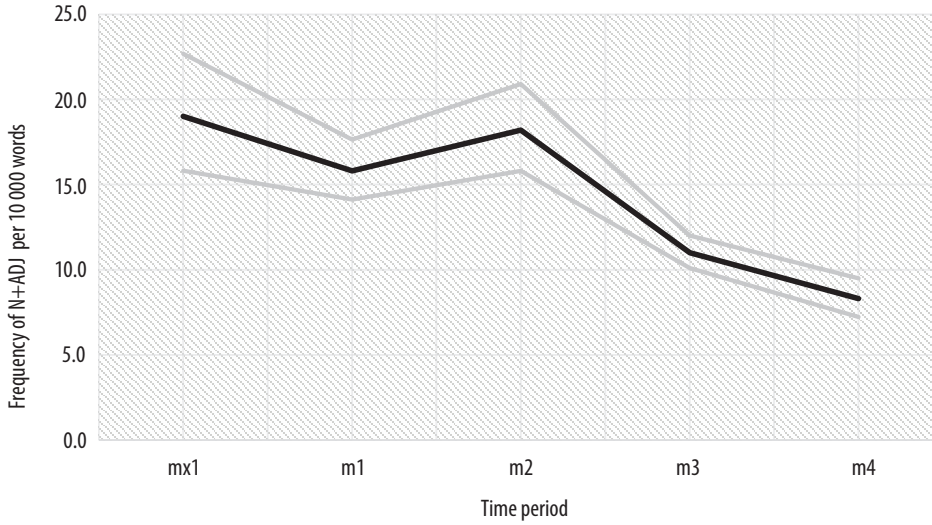

Fig. 2. Relative frequency (per 10,000 words) of the N+ bare ADJ construction by time period (1150-1500, cf. Table 1), with confidence intervals for $p \leq 0.05$

The noncnforming spike in M2 can be explained by looking at the documents representing this period in the corpus. M2 contains only four documents, three of which fall under the category of religious texts, notorious for their relatively frequent use of postnominal adjectives (Table 5). Although the frequencies for the individual periods have been normalized, in the case of too few texts per period the data can be especially sensitive to other variables, such as the effect of idiolect and genre. This issue is addressed with the aid of confidence intervals for $p \leq 0.05$.

The uneven (and often missing) representation of genres in the respective time periods does not allow us to plot the development for individual genres over time, although the correlations would be interesting to compare, as e.g. “there was no significant decline in postpositive adjectives, at least in … medical register” (Sylwanowicz 2016, 61).

8. Concluding remarks

Following previous research on the position of adjectives in ME and PDE, especially the correlations between the occurrence of adjectival postposition and genre, we used the tagged *PPCME2* corpus for the semi-automated retrieval of single postnominal adjectives, with the metadata information on time period, genre, original/translation and region. A linear mixed model analysis indicated that genre and time period had significant effects on the frequency of postnominal adjectives in the sample.

The list of the postnominal adjectives retrieved from the corpus shows that postposition in ME is quite varied, and not limited to a group of complex adjectival forms with de-participial suffixes and *-ble* forms, as is the case in PDE. Despite observations in literature that "postposition (…) was more characteristic of Romance adjectives (especially after Latin or French nouns), whereas Germanic adjectives preceded the noun" (Sylwanowicz 2016, 58), the range of adjective lexemes attested in the postnominal position is broad, containing both simplex Germanic adjectives (*great*, *good*, *free*, *dear*) as well as complex adjectives (*spiritual*, *perdurable* or *bodily*). When comparing the relative collostruction strength of the ten most represented postpositive adjectives in the corpus, however, stronger attraction to the postnominal position is found with frequently used complex forms such as *spiritual* or *everlasting*. Occurrences of *aforesaid*, a high frequency postmodifier with a phoric (textual) function, represent yet another specific type, being similar in function to the PDE postnominal *concerned*, *present* or *involved*, which lexicalized this anaphoric/deictic meaning in the postnominal position (in the sample such items are present, yet marginal, e.g. *þe act of his cessacion before þese lordis and oþir men present*).

The *PPCME2* data attest clearly the overall trend in decreasing frequency of the postnominal bare adjectives over the ME period. Its pace and degree within the individual text categories could not, however, be determined due to the limitations in corpus composition. Mapping the decreasing frequency and an expected narrowing of range of adjective types attracted to the postnominal position in the subsequent centuries should complement this study in the future.

Sources

Kroch, Anthony, and Ann Taylor. 2000. *The Penn-Helsinki Parsed Corpus of Middle English* (*PPCME2*). Department of Linguistics, University of Pennsylvania. http://www.ling.upenn.edu/hist-corpora/

Lewis, Robert E. et al. *Middle English Dictionary*. University of Michigan Press, 1952–2001. Online edition in *Middle English Compendium*. Ed. Frances McSparran, et al. Ann Arbor: University of Michigan Library, 2000–2018. http://quod.lib.umich.edu/m/middle-english-dictionary. [last accessed 16 May 2022].

RStudio: Integrated Development for R. RStudio, PBC, Boston, MA.
The British National Corpus, version 2 (BNC World). Distributed by Oxford University Computing Services on behalf of the BNC Consortium. [anonymized] [last accessed 12 January 2022]
The Oxford English Dictionary Online. March 2021. Oxford University Press. https://www.oed.com [last accessed 12 January 2022]

References

Barr, Dale J., Roger Levy, Christoph Scheepers, and Harry J. Tily. 2013. "Random Effects Structure for Confirmatory Hypothesis Testing: Keept it Maximal." *Journal of Memory and Language* 68: 255–278.
Bates, Douglas, Martin Maechler, Ben Bolker, and Steve Walker. 2014. "{lme4}: Linear Mixed-effects Models Using Eigen and S4." *R Package version* 1: 1–7.
Bator, Magdalena, and Marta Sylwanowicz. 2020. "Noun Phrase Modification in Middle English Culinary and Medical Recipes." *Academic Journal of Modern Philology* 10: 39–55.
Biber, Douglas, Stig Johansson, Geoffrey Leech, Susan Conrad, and Edward Finegan. 2021. *Grammar of Spoken and Written English.* Amsterdam & Philadelphia: John Benjamins Publishing Company.
Blöhdorn, Lars M. 2009. *Postmodifying Attributive Adjectives in English: An Integrated Corpus-based Approach.* Frankfurt am Main: Peter Lang.
Bolinger, Dwight. 1952. "Linear Modification." *PMLA* 67: 1117–1144.
Bolinger, Dwight. 1967. "Adjectives in English: Attribution and Predication." *Lingua* 18: 1–34.
Carter, Ronald, and Michael McCarthy. 2006. *Cambridge Grammar of English*. Cambridge: Cambridge University Press.
Dobson, Annette J., and Adrian G. Barnett. 2002. *An Introduction to Generalized Linear Models*. Boca Raton: Chapman & Hall/ CRC.
Field, Andy. 2005. *Discovering Statistics Using SPSS*. London: Sage Publications.
Fischer, Olga. 1992. "Syntax." *The Cambridge History of the English Language*. Vol. 2. Ed. Norman Blake. Cambridge: Cambridge University Press. 207–408.
Fischer, Olga. 2004. "Developments in the Category Adjective from Old to Middle English." *Studies in Medieval Language and Literature* 19: 1–36.
Fischer, Olga. 2011. "The Position of the Adjective in Old English." *Generative Theory and Corpus Studies. A Dialogue from 10 ICEHL*. Ed. Ricardo Bermúdez-Otero, David Denison, Richard M. Hogg, and Christopher McCully. Berlin & Boston: De Gruyter Mouton. 153–182.
Fischer, Olga, Hendrik De Smet, and Wim van der Wurff. 2017. *A Brief History of English Syntax*. Cambridge: Cambridge University Press.

Forstmeier, Wolfgang, and Holger Schielzeth. 2011. "Cryptic Multiple Hypotheses Testing in Linear Models: Overestimated Effect Sizes and the Winner's Curse." *Behavioral Ecology and Sociobiology* 65: 47–55.

Fox, John, and Georges Monette. 1992. "Generalized Collinearity Diagnostics." *Journal of the American Statistical Association* 87: 178–183.

Grabski, Maciej. 2020. "Three Types of Old English Adjectival Postposition: A Corpus-based Construction Grammar Approach." *Journal of English Linguistics* 48.2: 166–198.

Huddleston, Rodney, and Geoffrey K. Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.

Lampropoulou, Martha. 2020. "Semantic Remarks on the Placement of Adjectives in Middle English Based on a Case Study on *King Horn* and *Sir Gawain and the Green Knight*." *The Naxos Papers.* Vol I. *On the Diachrony of English.* Ed. Nikolaos Lavidas, Alexander Bergs, and Elly van Gelderen. Newcastle upon Tyne: Cambridge Scholars Publishing. 74–83.

Lightfoot, David W. 1979. *Principles of Diachronic Syntax.* Cambridge: Cambridge University Press.

Matthews, Peter. 2014. *The Positions of Adjectives in English.* Oxford: Oxford University Press.

Moskowich, Isabel. 2009. "'Of medicineȝ sedatyueȝ'. Some Notes on Adjective Position and Oral Register in Middle English Medical Texts." *Studia Anglica Posnaniensia* 45.1: 57–68.

Pahta, Päivi. 2004. "Code-switching in Medieval Medical Writing." *Medical and Scientific Writing in Late Medieval English*. Ed. Irma Taavitsainen, and Päivi Pahta. Cambridge: Cambridge University Press. 73–99.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language.* London: Longman.

Raumolin-Brunberg, Helena. 1994. "The Position of Adjectival Modifiers in Late Middle English Noun Phrases." *Creating and Using English Language Corpora.* Ed. Udo Fries, Gunnel Tottie, and Peter Schneider. Amsterdam: John Benjamins Publishing. 159–168.

Šaldová, Pavlína. 2021. "Postposition in English: In Search of Adjectives Available." *Linguistica Pragensia* 31.2: 137–160.

Stefanowitsch, Anatol, and Stefan Gries. 2003. "Collostructions: Investigating the Interaction of Words and Constructions." *International Journal of Corpus Linguistics* 8.2: 209–243.

Sylwanowicz, Marta. 2016. "And þan it wole be a good oynement restoratif... Pre-and Postnominal Adjectives in Middle English Medical Recipes." *Anglica. An International Journal of English Studies* 25.2: 57–71.

Appendix

Queries used to search for spelling variants (cf. Table 3)

everlasting	[word="[aæ]ll?e?-?m[ayi][hgcʒ]?h?tt?[iy]?ʒ?g?e?n?"]
great	[word="gr[eaæ]a?te?"]
good	[word="g[uo]o?de?"]
aforesaid	[word="a[fb]o[vr]e?s[ae][iy]?de?"]
full	[word="f[u]l?le?"]
everlasting	[word="e[uv]erlast[iya]n[dg]e?"]
dead	[word="dea?dd?e?"]
spiritual	[word="e?sp[iy]r[iy]tu[ea]e?ll?e?"]
alone	[word="all?[ao]o?nn?e?"]
holy	[word="[h]?[ao]i?ll?[yi]e?"]