

FUNCTIONAL TRANSPOSITION OF *AFTER* FROM A DIACHRONIC PERSPECTIVE

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Abstract. The paper aims at tracing the origin of the preposition, adverb, and conjunction *after*, starting with the first examples registered before 850; distinguishing the primary and transposed categories; and reconstructing the process of functional transposition in general. The analysis is undertaken on the basis of the examples, which have been manually selected from the HCET and the CLMET and have undergone the following PoS tagging, and the statistical data retrieved from the COHA and the BNC. It is proved that *after* emerges as the preposition and transposes into the adverb and conjunction. The preposition, which predominates throughout Old English, loses its position in favor of the adverb in the second half of the Middle English period. Later, it stabilizes the correlation, which remains more or less consistent up to now. The adverb reaches its peak in Early Modern English, then it starts rapid declension, and now its quantity is close to null. The conjunction, being neglected up to the middle of the Early Modern English period, starts its increase and is at the peak in Present-Day English. It testifies that functional transposition, which is undeservingly disregarded in linguistics, is still remaining in progress for fundamental and newly-coined lexical units.

Keywords: preposition, conjunction, adverb, functional transposition, diachronic analysis

INTRODUCTION

The parts of speech (hereinafter – PoS) theory is nowadays referred to in terms of synchrony, with much attention paid to numerous newly-coined words, whereas lexical units which have been functioning in the language since the Old English period and are considered extensively studied are often left aside. PoS overlapping, especially that of prepositions, adverbs, and conjunctions, is taken for granted and is widely discussed from a synchronic perspective (Heaton, 1965; O’Dowd, 1998; Old, 2003; Tyler and Evans, 2003; Fontaine, 2017), but it has not been comprehensively researched in diachrony, being predominantly described in terms of studying other phenomena (Akimoto, 1999; Cappelle, 2004; Elenbaas, 2007). The focus

on neologisms and words that are currently shifting from one PoS to another and the lack of up-to-date diachronic research on the functional transposition of fundamental lexical units indisputably prove the topicality of the research. It is supported by the natural feasibility to apply the findings of the research to the analysis of other similar units which are still undergoing the processes of functional transposition and institutionalization. The lexical unit *per*, for example, can easily substantiate this assumption, being in the very process of functional transposition. Only *The Merriam Webster Dictionary* and *The American Heritage Dictionary of the English Language* define *per* as an adverb, whereas the rest deny this idea. However, all dictionaries refer to it as a preposition. Regarding the actual use of *per*, *The British National Corpus* does not treat it as an adverb, but *The Corpus of Contemporary American English* registers *per* as an adverb in more than 7 per cent of cases. It testifies that the preposition *per* is now transposing into the category of the adverb, being under the process of institutionalization by the dictionaries.

Nevertheless, at the modern stage of English language development, the phenomenon of functional transposition is not at the forefront of core research. Firstly, it is explained by the fact that the PoS system is well-established and generally acknowledged (Kovbasko, 2020), and there exist numerous approaches that 'provide productive patterns for creating new lexical units' (Lipka, 1992: 120). Secondly, the phenomenon of functional transposition lies in the scope of diachronic research and is quite challenging, as it must be described considering that 'any transition to another PoS is accompanied by a decrease or increase of original part of speech's features and, in turn, by taking on the features of the other parts of speech' (Komarek, 1999: 198). It means that the development of any lexical unit should be traced back to its origin and must receive as close attention as possible at every stage of its evolution. Thirdly, due to a number of various approaches and designations toward PoS shifts, the problem seems to be dramatically complicated. Moreover, these approaches are predominantly focused on open word classes and leave closed word classes in peaceful oblivion. Fourthly, overlapping between open-closed or closed-closed word classes, which is the core of functional transposition, 'constitutes a major problem for lexicographers, grammarians, theoretical linguists, and foreign language learners' (Adamska-Salaciak, 2008: 339). Such overlapping is based on (a) absence of morphological or/and syntactic markers, i.e. identical morphological form; (b) extremely similar semantics, especially if one examines the primary semantic category of locality and/or temporality; (c) similar linguistic functions. So, the triad *form-meaning-function* does not settle a problem of PoS overlapping, which is an inherent part of functional transposition, so it is suggested to apply the diachronic approach to study functional transposition. I hypothesize that the diachronic approach is a cornerstone in the functional transposition theory, making it possible to identify the initial/source PoS, trace its institutionalization into the target PoS, and describe the scenario of its evolution. The aim of the paper is to perform the most significant step in the algorithm of functional transposition analysis, i.e. diachronic analysis (Kovbasko, 2022), representing it in the frames of the exploratory and critical instance case study of *after*, which belong

to the categories of the preposition, adverb, and conjunction. ‘A case study,’ as offered by Yin (2014: 16), ‘is an empirical inquiry that investigates a contemporary phenomenon (the case) in-depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident’. Following this, the findings support the theory of functional transposition in the case of other lexical units which currently overlap within the categories of adverbs, prepositions, and conjunctions, as well as lay the groundwork for further analysis of the extralinguistic factors which determine the transposition of *after* or any other ambiguous lexical unit from one category into another.

THEORETICAL BACKGROUND

One could hardly conceive of a more studied and elaborated problem in linguistics than that of parts of speech, word classes or word categories. Nevertheless, in the 21st century, there is no clearly defined and unanimously confirmed approach to the principle of their classification (Kovbasko, 2020), and this has spawned a number of viewpoints on PoS shifts, viz. *transposition* (Bally, 1932; Vinay and Darbelnet, 1958; ten Hacken, 2015); *transfer* (Tesniere, 1959); *zero-derivation* (Kurilowicz, 1962; Marchand, 1969; Lipka, 1992); *conversion* (Sweet, 1900; Kruisinga, 1932; Bauer, 1983; Quirk et al., 1985; Langacker, 1999; Valera, 2017); *transition* (Komarek, 1999); *categorical flexibility* (Robert, 2004); *transcategorization* (Halliday and Matthiessen, 1999; Ježek and Ramat, 2009; Simone and Masini, 2014; Ramat, 2019). Being grounded on the same phenomenon and sharing the idea of PoS shifts, each approach involves the nuances that must be perceived.

The prime notion of *transposition* was introduced and formulated by Bally (1932: 116) as a process when ‘a linguistic sign can change its grammatical value and yet retain its semantic value by adopting the function of a lexical category (noun, verb, adjective, adverb) to which it did not previously belong’. The hallmark of Bally’s theory is the ability of lexical units to exploit morphological markers in the process of transposition. Developing the concept within the frame of structural syntax, Tesniere (1959: 369) interpreted the process as *transfer*, emphasizing the significance of syntactical markers while transferring lexical units, but adding that the transferred word conserves the morphological characteristics of the category that it has before undergoing transfer. As the change of functions can be generally observed at the syntactic level, the subsequent interpretations and approaches have been unanimous in recognizing the possibility to apply both morphological and/or syntactical markers in the process of transposition (Lipka, 1971; Block-Trojnar, 2013; ten Hacken, 2015). It causes another problem because the notion of transposition comes too close to *conversion*, which is traditionally interpreted as ‘a matter of the same form and different word-class’ (Valera, 2004: 20). Conversion, however, admits the possibility of a minor change in form, especially in the case of acquiring certain morphological markers in a new paradigm. This interpretation brings functional transposition closer to *zero-derivation* (Jespersen,

1954; Marchand, 1969; Adams, 1973), as both processes are characterized by the absolute formal identity of units and should be historically institutionalized in the language. Marchand (1967: 16) describes transposition as the use of a word in another than its normal function by contrast with derivation, which entails a change of word-class or lexical class. Thus, to be treated as zero-derivation, functional transposition must conform to the overt analog criterion, when 'one word can be derived from another word of the same form in a language (only) if there is a precise analog in the language where the same derivational function is marked in the derived word by an overt (nonzero) form (Sanders, 1988: 165) and serve as a word-formation means. This shows the necessity to differentiate between zero-derivation and functional transposition, as the latter fails to follow the overt analog criterion, though it accounts for the existence of two/three morphologically and semantically parallel forms in the language. Moreover, functional transposition is not a word-formation process or means but a functional use of a lexical item as a representative of the transposed word class. To some extent, this understanding is aligned with the idea of *transcategorization* as 'a diachronic process consisting in a categorical shift of a lexical item without any superficial marking' (Ježek and Ramat, 2009: 395). Nevertheless, a new problem arises as to what should be treated as a 'superficial marking' because, according to Halliday and Matthiessen (1999: 242), the phenomenon of transcategorization implies the possibility of 'some etymons to be transferred to another class by some means, syntactic and/or morphological'.

To break this cycle, I offer to define functional transposition as a diachronic-synchronic functional process and its outcome, which presupposes the ability of lexical units, by means of grammaticalization and lexicalization and without application of any morphological and/or syntactical markers, to acquire and realize functions inherent to other word classes, and, in this way, remain within its original semantic and word category. Such comprehension of this specific kind of categorical shift allows to split it off the notions of traditional transposition, transfer, conversion, and zero-derivation, which are word-formation processes, as well as of transcategorization, which may apply some morphological and/or syntactic markers. Of course, the presence of morphologically and semantically parallel forms accentuates 'the chicken-and-egg problem', which in the case of individual lexical units may be explained in terms of 'bidirectionality' (Leech, 1981: 224), but which must be strictly and completely settled by means of diachronic analysis in case of the identical functional forms of one and the same lexical unit. Therefore, to illustrate the most significant aspects of functional transposition, the lexical unit *after*, whose morphological form and semantic components are identical for the preposition, adverb, and conjunction, has been chosen.

METHODOLOGY

In order to give full coverage of the functional transposition process in the English language, specify the initial PoS category *after* belongs to, and trace the development

of *after* as the preposition, conjunction, and adverb, it has been decided to apply the empirical diachronic analysis. The monumental periodization of the English language into Old, Middle, and Modern English (Hogg, 1992; Baugh and Cable, 2002) seems not sufficient enough to study the evolution of functional transposition, as any grammatical process requires a thorough and nuanced analysis which can provide an extensive review of each change and shift. To achieve this, 16 historical scopes are distinguished in the paper, see Table 1.

Table 1 Key historical scopes of the English language in studying functional transposition

No	Time span						
1	–850	5	1150–1250	9	1500–1570	13	1780–1850
2	850–950	6	1250–1350	10	1570–1640	14	1850–1920
3	950–1050	7	1350–1420	11	1640–1710	15	1920–1990
4	1050–1150	8	1420–1500	12	1710–1780	16	1990–2020

This periodization represents the traditional division into Old English (hereinafter – OE), Middle English (hereinafter – ME), and Modern English (hereinafter – ModE). A detailed subdivision into 16 scopes is justified by the necessity to divide each classical period into the equal and balanced subperiods, which is achieved due to the number of texts and words under research. Another reason is to provide a progressive analysis of the *after* development, which would cover as many steps as possible. The span of 100 years, which is used for manuscripts written before 1350, is explained by the necessity to collect a reasonable number of manuscripts and lexical units under study. The span of 70 years is applied to balance the previous periods and is the most preferable size for the analysis because this time span is enough for the change to be institutionalized in the language. Therefore, classical periods are not divided into shorter time spans because they would fail to represent a balanced picture.

The first 4 historical scopes (–850–1150) cover the generally acknowledged Old English period; the next 4 scopes (1150–1500) represent Middle English; the remaining 8 scopes (1500–2020) constitute Modern English, which is subdivided into Early Modern English (1500–1710), Late Modern English (1710–1920), and Present-Day English (1920–2020).

Diachronic analysis has been performed on the examples which are selected from *The Helsinki Corpus of English Texts: Diachronic and Dialectal* (HCET) and *The Corpus of Late Modern English Texts* (CLMET) and are analyzed by applying PoS tagging, and the statistical data, retrieved from *The Corpus of Historical American English* (COHA) and *The British National Corpus* (BNC).

The HCET is a compilation of Old, Middle and Early Modern English texts (c. 1.5 million words) and covers the period –850–1710.

The CLMET represents formal, written British English (over 15 million words), varying in genres and styles for the period 1710–1920.

The COHA is the largest diachronic corpus of English, which contains over 475 million words and makes it possible to examine all the changes in the PoS categories during the period 1920–1990.

The BNC is a 100-million-word collection of British English from the late 20th and early 21st centuries (1990–2020).

Hence, the design and procedure of the research is as follows: 999 examples from the OE texts, 1097 examples from the ME texts, and 1223 examples from the Early Modern English texts are manually extracted, analyzed and tagged as corresponding to PoS; 39 582 examples from the Late Modern English texts have been automatically tagged by means of the corpus toolbox *Lancsbox*; the compiled statistics on 582 305 examples are retrieved from the COHA and BNC. The obtained data is represented in percentage correlations in accordance with 16 historical scopes and 3 PoS, which are specified in relevant tables, and the interrelation between prepositions, adverbs, and conjunctions at each stage of their development and transposition is discussed. On the basis of the overall data, the corresponding figure, which represents the process of functional transposition of *after* in the English language, is constructed.

RESULTS AND DISCUSSION

1 OLD ENGLISH PERIOD

The first stage of the OE period (–850) is characterized by the limited number of manuscripts available for research, which makes each example extremely valuable. Another problem is that the illustrative material was a translation from Latin; moreover, it was made into different language varieties, for instance, the Northumbrian dialect, the West Saxon dialect etc. In case dialectal differences do not make it possible to affiliate the lexical unit under study, it is appropriate and reasonable to analyze the source manuscript. The examples are followed by word-for-word reconstructions, as being translated literarily they do not represent the interdependence between PoS, which is the focus of the research.

The analysis of the manuscripts registered before 850 testifies that *after* was unexceptionally used as a preposition, e.g.:

[1] ... *hwæt his gastae godaes aeththa yflaes aefter deothdaege doemid uueorthae*. [... what his spirit good or evil after deathday judgment takes place.] (HCET: Anonymous: Bede's Death Song: line 6)

[2] *Ic Abba geroefa cyðe & writan hate hu min willa is þæt mon ymb min ærfe gedoe aefter minum dæge*. [I, Abba, publicly declare and write bidding how my will is that man concerning my property after my days.] (HCET: Anonymous: Documents 1 (HARMER 2: line 3)

Sometimes, it is impossible to trace the affiliation of the lexical unit to the PoS categories, i.e. the preposition, conjunction or adverb. The case is of ultimate

significance because the example can either prove or refute the hypothesis concerning the initial affiliation of *after* to the PoS category and its further development. The sample of such analysis is showcased in Table 2, where a fragment from *Caedmon's Hymn* is represented in Latin (source language), translations into the Northumbrian and West Saxon dialects renditions ('eorðan' and 'ylda' recensions), and Modern English literal translation.

Table 2 Latin, Modern English, Northumbrian, and West Saxon versions of the poem *Caedmon's Hymn*

Latin		Modern English	
qui primo filiis hominum caelum pro culmine tecti dehinc terram custos humani generis omnipotens <i>creavit</i>		who first for the sons of men heaven for a roof above next , the earth, the keeper of the human- race the all-powerful <i>created</i> .	
Northumbrian rendition	West Saxon rendition (-eorðan- recension)	West Saxon rendition (-ylda-) recension	
He aerist <i>scop</i> aelda barnum <u>heben til hrofe,</u> <u>haleg scepen</u> Tha <u>middungeard</u> moncynnæs uard, eci dryctin, æfter <i>tiadae</i> firum <u>foldu</u> , frea <u>allmectig</u> .	He ærest <i>sceop</i> eorðan <u>bearnum heofon to hrofe,</u> <u>halig scyppend;</u> þa middangeard <u>moncynnæs weard,</u> ece <u>drihten, æfter teode firum</u> foldan, frea ælmihtig.	He ærest <i>gescop</i> ylda <u>bearnum heofon to hrofe,</u> <u>halig scyppend;</u> <u>middangearde moncynnæs</u> <u>weard,</u> <u>ece drihten, æfter tida firum</u> <u>on foldum, frea ælmihtig.</u>	

The fragments under study are distinctive due to several factors. Firstly, in the source Latin text, just one verb *to create* (*creavit*) is used, whereas in the Northumbrian and West Saxon ('eorðan' recension), two verbs *to create* appear, viz. *scop/sceop* and *tiadae/teode*, respectively. This is proved by ModE translations of the poem 'Caedmon's Hymn', where the expression *æfter tiadae/teode* is translated as *made afterwards*. This translation describes the modern use of *æfter* as an adverb, which is equivalent to the Latin original word *dehinc*. By contrast, in the West Saxon rendition (the 'ylda' recension), only one verb *to create* (*gescop*) is found; and the units *tiadae/teode* are represented as *tida* (*time*). In this case, *æfter tida* means *after time*, where *after* is the preposition; however, the phrase itself implies the adverbial meaning of *afterwards*, which also corresponds to the Latin word *dehinc* found in the source text.

Referring to the fact that all OE renditions of *Caedmon's Hymn* bear an extreme resemblance to the original, it seems that there are no reasonable grounds for an additional verb to appear in them and transform the preposition into the adverb. Thus, it strongly suggests that while translating the Latin adverb *dehinc*, it is more reasonable to use a prepositional phrase *after time* because, at that time, the English language lacked a corresponding adverb (*afterwards*, for instance, appeared later), and the unit *æfter*, being the preposition, requires a noun phrase (hereinafter – NP) complement. This is proved by other examples registered before 850, which

showcase the use of the preposition *æfter*. Summarizing the discussion above, it is concluded that the primary PoS category for *æfter* is the preposition, and it forms the basis for further functional transposition of this lexical unit.

The next stage (850–950) is crucial for functional transposition analysis because the examples of *æfter* as an adverb, see [3], and a conjunction, see [4], are registered:

[3] ... *ete swa manige snæda swa he mæge, gedrince þæs drences scenc fulne æfter and eal þæt fæc ete sceapen flæsc & nan oþer.* [... eat as many morsels as he can, drink those drinks cups full after and all that time he ate sheep flesh and none other.] (HCET: Anonymous: Laeceboc: line 1374)

[4] *Ac he onfunde ðeah Godes ierre on ðam hearme ðe his bearne æfter his dagum becom.* [As he found out though God's anger on the pain his offspring after his days experienced.] (HCET: Alfred: Alfred's Cura Pastoralis: line 275)

Functional transposition of the preposition *æfter* in [3] is possible due to a *discursive* dependent, represented by a simple sentence as a part of the compound one. Analyzing the fragments with the conjunction *æfter*, the functional transposition of the preposition into the category of the conjunction starts by omitting the NP complement *þæm*, see [4], which makes it possible to combine two sentences. This pattern of functional transposition is not common at that time (850–950); however, it is much more promising because the number of *æfter þam* constructions is almost 60 per cent of all prepositions *æfter*.

This hypothesis is proved true by the analysis of the examples in 950–1050. It shows that the number of *æfter þam/ðan* constructions declines and equals just 20 per cent, whereas the number of *æfter* functioning as a conjunction increases. Similar growth is observed in the case of a total number of *æfter*.

[5] *God cwæð ða to Abrame, æfter ðan þe Loth wæs totwæmed him fram.* [God said then to Abraham, after that when Lot parted him from.] (HCET: Aelfric: The Old Testament: line 531)

[6] *We gehyraþ æfter ðisse æscan drihten andswariendne and þone weg his eardunge þus tæcendne:* [We hear after this demanded Lord answered and then way his dwelling thus showed:] (HCET: Aethelwold: The Benedictine Rule: line 187)

[7] ..., *hopað to þæm ecum þe þær æfter cumað,* [..., hope to the eternity that there after comes,] (HCET: Alfred: The Meters of Boethius: line 72)

Sentence [5] showcases the OE preposition *æfter* as a part of the construction *æfter þam/ðan*; in [6], *æfter* functions as the conjunction, introducing the subordinate clause. The adverb *æfter*, see [7], represents the earliest non-grammaticalized example of a modern construction *thereafter*. *Thereafter* is formed due to grammaticalization of *æfter*, which loses its NP complement and transposes from the category of the preposition into the adverb.

Grammaticalization of the already transposed unit *after* gets widespread during the last stage (1050–1150) of the OE period. The process is marked by the upsurge of various constructions with *after*, which form new adverbs in the language, e.g.:

[8] ... *he efterþon segde þa swetestan stefne singendra & blissendra of heofonum to eorðan niðer astigan.* [... he afterwards said the sweetest sound and joy from heaven to earth descended.] (HCET: Anonymous: Chad: line 128)

[9] *& sona þæræfter sende se cyng him & se arcebiscop Cantwarbyrig to Rome ...* [& soon thereafter send the king him & the archbishop of Kent to Rome ...] (HCET: Anonymous: Chronicle MS E (Late): line 874)

This method of adverb formation is the result of functional transposition because this process launched the usage of *after* as an adverb. It is worth mentioning that the emergence of new lexical units with *after* leads to the reduction of the general number of constructions with *after* and its frequency as the adverb. Apart from the traditional usage of *after* as a preposition in [10], it is registered as an adverb in [11] and a conjunction in [12].

[10] *Ac Adam gestrinde æfter Abeles slege oðerne sunu,* [*But Adam engendered after Abel's murder another son,*] (HCET: Aelfric: Aelfric's Letter to Sigeward ('On the Old and New Testament'): line 151)

[11] ..., *né næfre wind on ne bleów náne tid dæges ne ær ne æfter.* [..., not never wind on not blew no time of day not before not after.] (HCET: Anonymous: Adrian and Ritheus: line 17)

[12] *Gyme eac swyn, þæt he æfter sticunge his slyhtswyn ...* [Keep each swine, that he after stabbing his swines for killing ...] (HCET: Anonymous: Laws (Late): 84)

This testifies that the functional transposition of *after* from the category of the preposition into the adverb and/or conjunction starts in the first half of the OE period; however, this period is an intermediary stage for the functional transposition of *after* because neither adverbs nor conjunctions are fully institutionalized in the language. The authors, in their turn, are inclined to use *after* in combination with an NP complement, i.e. as prepositions. The statistical data on the functional transposition of *after* in OE is presented in Table 3.

The statistics, represented in Table 3, showcase that initially (before 850) *after* functions as a preposition. Over time, it undergoes functional transposition and starts being used as an adverb and a conjunction. At the next stage, the frequency of the conjunction and adverb *after* slightly grows. It is substantiated by the grammaticalization of the already transposed lexical unit *after*, which transforms into an inseparable part of new word forms. In 1050–1150, the adverb *after* tended to function as a part of other adverbs, and this lowers its frequency as an independent unit. A gradual change of word order and the emergence of

new adverbs exert pressure on the frequency of the conjunction *after*, which also decreases.

Table 3 Correlation of *after* as the preposition, adverb, and conjunction in Old English

PoS	-850	850-950	950-1050	1050-1150
<i>Preposition</i>	100%	85.7%	86.1%	93%
<i>Adverb</i>	–	9.8%	8.8%	4.5%
<i>Conjunction</i>	–	4.5%	5.1%	2.5%

2 MIDDLE ENGLISH PERIOD

The beginning of the ME period (1150–1250) is predominantly characterized by several changes in the usage of different morphological forms of *after*, for instance, a significant frequency reduction of *æfter*, which dominates throughout OE, and a corresponding frequency growth of *after*, which is registered in more than 70 per cent of all examples. According to the study, all the forms are both instrumental in new adverb formation and function independently as prepositions, conjunctions, and adverbs, e.g.:

[13] *Denne æfter þam þe þa manfulle beoð isceofene wepende on þ ece fyr,*
[Then after that the wicked people are pushed weeping on the eternal fire,] (HCET: Anonymous: Bodley Homilies (12): line 56)

[14] *Modred þeone wende; to-ward Winchastre. And heo hine underuengen; mid alle his monnen. And Arður after wende; mid alle his mahte.*
[Modred then went toward Winchester; and they him received; with all his men. And Arthur after went; with all his might.] (HCET: Layamon: Layamon's Brut: line 1075)

[15] *ant æfter godd hare anes zong, hwider-se he eauer turned.* [and after God hears only song, whither so he ever turns.] (HCET: Anonymous: Hali Meidhad: line 350)

Sentence [13] showcases the use of *æfter* in combination with *þam/ðan*, i.e. as a preposition. In [14], *after* functions as an adverb without a complement and can be reconstructed from the previous utterance. In [15], *æfter* is a conjunction which links two simple sentences.

The diachronic analysis testifies a reduction in the use of the constructions like *æ/e/after+þam/ðan*, which, over the previous stages, comprise a significant percentage of the total number of prepositions *after* and this, to some extent, cuts down the frequency of prepositions in the language. Moreover, this tendency enhances the role of functional transposition of the preposition *after* into the category of adverbs and partially conjunctions. It shows that speakers started

to comprehend and actualize their own cognitive potential and functional capacity of language units. First of all, it allows using *after* as an adverb without an NP complement in case there is a corresponding antecedent.

At the next stage (1250–1350), the OE morphological form *æfter* completely disappears and the letter ‘a’ is fixed at the beginning of a word, e.g.:

[16] *Horn makede Arnoldin þare King, after king Aylmare,* [Horn made Arnold there King after King Aylmare,] (HCET: Anonymous: King Horn: line 1494)

[17] *Pre daies after he ne et no bred.* [Three days after he not ate no bred.] (HCET: Anonymous: The Romance of Sir Beues of Hamtoun: line 586)

[18] *And after Godrich haues wrouht, þat haues in sorwe himself brouth,* [And after Godrich has acted, that have in sorrow himself brought,] (HCET: Anonymous: Havelok: line 1615)

The tendency to language economy is preserved and even enhanced, causing the growth in adverbs frequency compared to prepositions and conjunctions. This is explained by non-grammaticalized forms of the constructions *after+word / word+after*, which still exist in ME. In ModE, a number of these constructions have been grammaticalized and now are represented by one word, e.g.:

[19] *þe nexte ȝer þer after.* [The next year thereafter.] (HCET: Gloucester, Robert: The Metrical Chronicle of Robert of Gloucester: line 263)

Thus, a significant growth of adverbs *after* takes place due to the development of functional transposition and unsettled spelling rules observed in the first half of the ME period. The last factor is observed in the second half of the ME period (1350–1500) as well, when the lexical unit *after* was represented by at least 5 different spelling variants, e.g.:

[20] *falsnes & disceyt shold passe vnponysshid, ham awardid, aftir þe Custume of þe Citee,* [falseness and deceit should pass unpunished, them awarded, after the Custom of the City,] (HCET: Anonymous: Judgements, London: line 65)

[21] *Suld he neuer aftur ber cron,* [Should he never after bear crown,] (HCET: Anonymous: Cursor Mundi: line 795)

[22] ... *as we ben tawte in seyn Petre þat was pope next aftyr Crist.* [... as we been taught in saint Peter that was pope next after Christ.] (HCET: Anonymous: English Wycliffite Sermons (I/S16): line 75)

On the other hand, this period is characterized by some unification of the words with *after*, which previously were written separately, but now start functioning as hyphenated compounds in [23] or as closed compounds in [24]:

[23] *and þer-after we mowe cleerlier knowe what worde wil best acorde to ...* [and thereafter we be able clearly know what word will best accord to ...] (HCET: Anonymous: The Cloud of Unknowing: line 503)

[24] *For alle bodely þing is sogette vnto goostly þing and is reulid þerafter,* [For each earthly thing is subjugated to ghostly thing and is ruled thereafter,] (HCET: Anonymous: The Cloud of Unknowing: line 847)

The examples showcase that spelling varies even within the same text. This process of standardization and the growth in the number of the adverb *after* (about 20% of the total number) testify that functional transposition and further institutionalization of the adverb *after* have been successful.

Analyzing the conjunction *after*, it is worth noting that the process of its functional transposition from the category of the preposition has succeeded due to the cognitive potential of speakers and resulted in omitting the complement *þam/ðan/that* which follows *after*. This tendency is rooted in the previous stages of OE; however, since the second half of ME, it has come en masse. Despite the presence of the formal complement *that*, the lexical unit *after* starts being used as the conjunction, e.g.:

[25] *Moises and Aaron fledden to the tabernacle of the boond of pees; and aftir that thei entriden in to it, a cloude hilide the tabernacle,* [Moses and Aaron ran away to the tent of meeting; and after that they entered into it, a cloud covered the tent,] (HCET: Anonymous: The Old Testament (Wycliffe): line 1278)

In [25], *after* is used with a complement *that*, but, in fact, it functions as the conjunction, linking the sentences *thei entriden in to it* and *a cloude hilide the tabernacle*.

Moreover, there are numerous cases when constructions with double *þat* are used by analogy to double negation, like ‘two negatives in English destroy one another, or are equivalent to an affirmative’ (Horn, 2010: 111), e.g.:

[26] *And after þat þat water haue rested, be it þrowe away and put yn anoþer,* [And after that that water have rested, throw it away and put in another,] (HCET: Anonymous: The Cyrurgie of Guy de Chauliac: line 447)

If two *þat* are omitted while reconstructing [26], it results in the sentence where *after* functions as the conjunction.

In the second half of ME, these processes determine functional transposition and institutionalization of *after* from the category of the preposition into that of the conjunction. The frequency ratio between prepositions, adverbs, and conjunctions is represented in Table 4.

Table 4 Correlation of *after* as the preposition, adverb, and conjunction in Middle English

PoS	1150–1250	1250–1350	1350–1420	1420–1500
<i>Preposition</i>	84.6%	81.5%	69.9%	74.2%
<i>Adverb</i>	9.2%	12%	21.6%	19.8%
<i>Conjunction</i>	6.2%	6.5%	8.5%	6%

Therefore, the second half of the ME period is characterized by a considerable growth of transposed adverbs *after*. It is substantiated by the actualization of speakers' cognitive potential, which results in the lexicalization of *after* and their ability to refer to the antecedent. Functional transposition of *after* into the category of the conjunction is not so significant, which is proved by figures in Table 4. Despite the presence of a complement *that*, which defines *after* as the preposition, the number of *after that* constructions, where *after* functions as the conjunction, grows.

3 MODERN ENGLISH PERIOD

The abovementioned tendencies are preserved and enhanced in the first stage (1500–1570) of the Early Modern English period. The only exception is the morphological form of the lexical unit under study, which has finally acquired its modern spelling *after*. Another considerable peculiarity of the period is the functioning of the adverb *after* in the meaning of *then*, used for enumeration or representation of the sequence of activities, e.g.:

[27] *and after master Horne mad a sermon, and after the clarkes song Te Dewn laudamus in Englys, and after bered with a songe, and a-for songe the Englys pressessyon, and after to the place to dener;* (HCET: Machyn, Henry: The Diary of Henry Machyn: line 614)

Actualization of this function has considerably expanded the usage of the adverb *after* in the language. The frequency of the conjunction *after* remains at the same level as in the previous period; however, the number of *after that* constructions, in which *after* is formally the preposition, but functions as the conjunction, has increased, e.g.:

[28] *... one of them sodenly lost his spech and died within an houre after that he sickened,* (HCET: Turner, William: Book of Wines: line 132)

[29] *For after that the children of God had gone in vnto the doughters of men and had begotten them childern,* (HCET: Tyndale, William: The Old Testament (Tyndale): line 258)

In both cases, the transformation of the sentences and omission of a complement *that* let us interpret *after* as the conjunction. High frequency of these

structures in discourse testifies that speakers comprehend the feasibility of functional transposition from the category of the preposition into that of the conjunction. Nevertheless, following the classical grammatical traditions, which highlight an obligatory presence of a complement after the preposition, speakers use a desemantized *that* which bears neither meaning nor reference to the antecedent but is just a formal marker of the preposition. Such a marker is essential for grammatically correct usage of the preposition *after* which functions as the conjunction. It must be mentioned that these constructions have formed the basis for the main stage of functional transposition of the preposition *after* into the category of the conjunction since the late ME, whereas the earlier use of *after that* constructions, where *after* is the conjunction, is sporadic and *that* usually points to the antecedent.

A landmark feature of the second stage (1570–1640) of the Early Modern English period is the use of *after* in the meaning of *later* for the subsequent events in [30], as well as enumeration/sequence of activities in [31]:

[30] ... *and made choise of Edward Churchman one of our men, to fetch the same, whom we neuer saw after*, (HCET: Covert, Robert: A Trve and Almost Incredible Report of an Englishman: line 142)

[31] ... *and praied with Mr Rhodes, and priuatly in my Closett: after medetation, I went to supper: after, I had reed of the bible, after to lector, and then to bed* (HCET: Hoby, Margaret: Diary of Margaret Hoby: line 64)

As the diachronic analysis showcases, these two functions of the adverb *after* have the most significant impact on the growth of its frequency.

In this period, the process of functional transposition of the preposition *after* into the conjunction within the frames of an *after that* construction is near to its completion. It is testified by a considerable growth of conjunction frequency in general and a reduction in the frequency of constructions with the formal marker *that*, e.g.:

[32] *I meane all such words or things, as either are hard to them in the learning of them, or which are of some speciall excellency, or use, worthy the noting: or which after that they have beene a certaine time in construction*, (HCET: Brinsley, John: Ludus Literarius: line 460)

[33] *And Simon beate them bothe, and made them both give of; and after that, Simon would not shrinke for a bluddi nose with any boye*, (HCET: Forman, Simon: Autobiography and Personal Diary of Dr. Simon Forman: line 233)

In [32], there is a formal marker *that* which represents the use of *after* as the conjunction. In [33], the marker *that* points at a temporal antecedent and functions as a fully-featured complement. Due to the abovementioned factors, the frequency correlation between prepositions, adverbs, and conjunctions *after* has significantly changed in favor of the latter.

The end of the Early Modern English period is characterized by a considerable growth of the adverb *afterwards* and standardization of spelling, for example, *afternoon*, etc. As a result, new forms have established a foothold in the language. It is beyond controversy that the tendency projects direct influence on the general number of adverbs *after*, partially displacing them from the discourse, e.g.:

[34] *Did you see their Horses afterwards?* (HCET: Anonymous: The Trial of Lady Alice Lisle: line 233)

Analyzing [34], there is every reason to suppose that in OE the author would have used the adverb *after* instead of *afterwards* in ME. It ought to be noted that the process of functional transposition from the preposition to the conjunction has actually ended. An *after that* construction in which *that* is a formal marker of the preposition category disappears from the language. Further on, this construction functions only in those cases when *that* is a genuine marker of an antecedent, e.g.:

[35] ... *he seem'd to be troubled, and said, Has my friend left me, then I shall die shortly. After that he spake but once or twice till he died:* (HCET: Burnet, Gilbert: Biography of the Earl of Rochester: line 1118)

In [35], *that* is a genuine marker of an antecedent which points to the moment when the speaker is pronouncing a key phrase. Therefore, at the end of the Early Modern English period, functional transposition of the preposition *after* into the category of the conjunction was completely institutionalized in the language.

Apart from the linguistic factors which determine the process of functional transposition of *after*, its institutionalization is facilitated by various extralinguistic factors, like the 'shift from the Renaissance literature traditions, genres, styles, and forms to Neo-Classical literature and its influence on the rise of the novel' (Golban, 2011: 36). The research shows that the literary style change, shift from monologic to dialogic speech, from poetry to prose etc., directly influence the frequency of different PoS. The number of adverbs *after* which are previously registered in monologic speech, both in poetry and epistolary style, starts diminishing. On the other hand, the percentage of conjunctions *after* which become an inevitable part of dialogic speech and serve for representing grammatically complex structures grows; however, they are not frequently used over the previous periods. Summarizing the discussion, the overall correlation of the PoS under study is represented in Table 5.

Table 5 Correlation of *after* as the preposition, adverb, and conjunction in Modern English

PoS	1500– 1570	1570– 1640	1640– 1710	1710– 1780	1780– 1850	1850– 1920	1920– 1990	1990– 2020
Preposition	64.7%	49.7%	56.4%	69.7%	71.6%	72.4%	64.7%	68.5%
Adverb	27.2%	32.4%	16.3%	6.1%	5.6%	3.9%	0.7%	0.5%
Conjunction	8.1%	17.9%	27.3%	24.2%	22.8%	23.7%	34.6%	31%

The findings of the diachronic research over 1500–2020 showcase several predominant tendencies. Firstly, during the late 16th and early 17th centuries, the final institutionalization of functional transposition of the preposition *after* into the category of the conjunction is observed. In terms of numbers, the transposed category of the conjunction is not less than 20 per cent of the total number of units. Secondly, there is a dramatic decrease in the frequency of the adverb *after*, which does not exceed 1 per cent over the last two stages. Against the background of these changes, the frequency of the preposition *after* has not undergone any considerable shifts.

The comprehensive quantitative diachronic research on the functional transposition of *after* and its stage-by-stage development in the English language is represented in Figure 1, where the y-axis represents the percentage of each PoS in comparison with other PoS under study during each of 16 historical periods which are indicated on the x-axis.

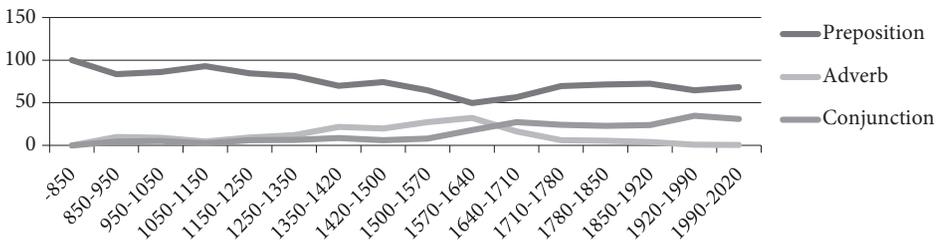


Figure 1 Functional transposition of *after* in English

The study proves that functional transposition is not a synchronic phenomenon, taking into account the statistical divergences between PoS under study at the time of their emergence and today. On the other hand, it is not purely diachronic, as it requires the analysis of linguistic and extralinguistic factors at different synchronic stages to explicate the driving forces which make people neglect using a lexical unit from one PoS in favor of another. It testifies that synchrony and diachrony are intertwined in the very nature of functional transposition; however, they represent it from different perspectives.

CONCLUSIONS

The research proves that the category of the preposition is the initial PoS and serves as the basis for further functional transposition. The preposition *after*, as opposed to the adverb and conjunction, functions in the language before 850. The process of functional transposition starts at the beginning of the OE period when the preposition loses its position in favor of both the adverb and conjunction, though the level of its representativeness remains extremely high throughout

OE and up to the second half of the ME period. Since the period of 1350–1420, the preposition *after* has, to a certain extent, stabilized its place and become firmly established in the language. It means that the main functions of *after*, especially those based on the primitive notions of temporality and locality, will not decay; nevertheless, some fluctuations are possible.

Functional transposition of *after* into the category of the adverb starts in 850–950. The figures show a direct correlation between the adverb and preposition categories, due to which growth of the former leads to the decline of the latter and vice versa. Final institutionalization of the adverb takes place in the first half of the ME period, and it reaches its peak at the beginning of Early Modern English (1570–1640). Further on, the use of the adverb *after* starts declining, being triggered by two main factors: firstly, the revival of the preposition category, which is used to diversify discourse and introduce new or explicative information into it; secondly, a constant growth of the conjunction, which could not compete in frequency with the preposition, but was extensively used. At the present stage, there are no preconditions for an absolute decay of the adverb, taking into account the process of language standardization and tendencies toward language economy.

Referring to the functional transposition of *after* into the conjunction, it is worth mentioning that the process is more extensive in comparison with transposition into the adverb. The conjunction is transposed in the first half of the OE period, along with the adverb. However, the scale of transposition has been significantly limited up to the second half of the ME period. Institutionalization of the transposed category is observed in the middle of the Early Modern English period, and it partially coincides with the decrease of the adverb *after*. The findings testify that the frequency of the conjunction is at its peak at the current stage of the language development. The crucial factors for the subsequent development of the conjunction *after* are extralinguistic factors which can influence the structure of discourse and sentences and, as a result, the frequency of *after* in discourse.

Therefore, further research in the field must be focused on linguistic and extralinguistic factors which specify the use of *after* as the preposition, conjunction, and adverb in discourse. Special attention must be paid to the extralinguistic factors which dominate at the most important stages of the lexical unit development in Old, Middle, and Early Modern English, respectively. Another point of critical importance is the analysis of other lexical units that have undergone functional transposition and currently represent the categories of the preposition, adverb, and conjunction.

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