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Further and Farther: Competition or Functional Differentiation?

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ABSTRACT

In this thesis, we examine the kind of relationship that holds between *further* and *farther* by means of a comparative corpus analysis covering the period from 1570 to 1920. From a diachronic standpoint, both forms have shown more functional overlap than differentiation, their current division of labor having only gained prominence since the 18th century. Taking into account their syntactic and semantic properties, this study explores how *further* and *farther* could have developed their present-day differentiation in the course of their history. Our aim is not only to account for the preference of one form over the other in different syntactic environments, but also to draw attention to their underlying semantics. Arguing against the long-held prescriptive claims suggesting a distinction between the two forms based on a figurative-physical contrast, we instead acknowledge the important role that frequency plays in form choice.

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1 INTRODUCTION

1.1 Further *and* farther *in reference grammars*

A division of labor between *further* and *farther* with regard to their present-day usage has been long maintained in the prescriptive tradition. Going as far back as the 19th century, Cobbett (1883 [1818]: 49) implies that *further* is more flexible in that it is not only the comparative degree of *far* but also serves an additive function in the discourse, while *farther* is used exclusively to express distance. Along similar lines, Garner (2003: 340) maintains that both comparative forms have undergone differentiation, with *further* “[i]n the best usage” now referring to figurative distance and *farther* to physical distance. Garner (2003: 340) concedes, however, that this distinction is not always observed in practice, as reflected in his explanatory notes in (1)–(2) below.

- (1) After popping in to say hello to Sue’s dad, we walked **further** [read *farther*] up Main Street to the Maritime Museum. (Garner 2003: 340)
- (2) But the employees at One Marine Midland Center take the spirit of giving a step **farther** [read *further*]. (Garner 2003: 340)

On the other hand, Fowler (2009 [1926]: 171) points out from a more descriptive perspective that this kind of differentiation is far from established in Present-Day English, with language users essentially opting for *further* for all purposes and for *farther* where physical distance is concerned. Similarly, Quirk et al. (1985: 458–9) argue against a clear-cut distinction between *further* and *farther* on the basis of whether they express abstract or physical relations. Instead, Quirk et al. (1985: 459) posit that *further* and by extension *furthest* denote both relation types as indicated in (3)–(4) below. In contrast, *farther* is mostly restricted to expressions of physical distance. Additionally, Quirk et al. (1985: 459) suggest that the fact that *furthest* is favored over *farthest* in (4) with reference to a

physical relation is largely motivated by commonality considerations (i.e. by *furthest* typically being the more frequent form in that particular context).

(3) Nothing could be **further** from the truth. [expressing an abstract relation]

(Quirk et al. 1985: 459)

(4) My house is **furthest** from the station. [expressing physical distance]

(Quirk et al. 1985: 459)

On a separate note, Quirk et al. (1985: 523) also seem to hint at the potential interchangeability of both adjectival and adverbial *further* and *farther* in their capacity as ‘space adjuncts’ in (5)–(6) below.

(5) They are **further/farther** ahead/downstream than we are. [adjectival space adjuncts] (Quirk et al. 1985: 523)

(6) He went **further/farther** up the mountain/through the wood than I did.

[adverbial space adjuncts] (Quirk et al. 1985: 523)

1.2 *Various uses of further: Evidence for differentiation?*

From the above accounts, it is reasonable to assume that some sort of functional division of labor between *further* and *farther* is at work in Present-Day English. This is most pronounced in three additional uses that seem to be exclusively associated with *further* in the literature. First, Quirk et al. (1985: 459) maintain that the most common use of *further* is not as the comparative form of *far* but in the sense of ‘more’, ‘additional’, or ‘later’ as demonstrated in (7)–(9) below. A similar position is echoed in Downing & Locke (2006: 485) where the three aforementioned senses are supplemented with that of ‘other’.

(7) Any **further** questions? [‘more/additional/other’] (Quirk et al. 1985: 459)

(8) That’s a **further** reason for deciding now. [‘additional/other’] (Quirk et al. 1985: 459)

- (9) The school will be closed until **further** notice. [‘later’] (Quirk et al. 1985: 459)

Additionally, Huddleston & Pullum (2002: 353, 556) state that *further* in the context of the NP serves as a ‘quantifying attributive’ that can modify plural heads (e.g. *questions* as in (7)), count singulars (e.g. *reason* as in (8)), and non-count singulars (e.g. *notice* as in (9)).

Leech & Svartvik (2003: 208), on the other hand, see prenominal *further* as a postdeterminer that serves a deictic function by relating additional referential information. In this sense, *further* belongs to a class of so-called ‘general ordinals’ (with *next*, *last*, *other*, etc.), which may precede or follow ordinal numbers (e.g. *a further three questions*, *three further questions*) (Leech & Svartvik 2003: 209). Similarly, on the basis of a synchronic corpus study, Breban & Davidse (2003) conclude that *further* is an adjective of comparison that introduces new instances of a known type with its postdeterminer use (see also Breban 2010: Chapter 3 for a summary of the study’s main findings). In view of this, *further* in the context of the NP has a textual rather than descriptive or propositional meaning, with its postdeterminer status in Present-Day English being the result of subjectification (Breban 2010: Chapter 4).

Second, using the Longman Spoken and Written English (LSWE) corpus, Biber et al. (1999: 133) point out the use of *further* as a ‘linking adverbial’ (also ‘connective adjunct’ in Huddleston & Pullum 2002: 778) as illustrated in (10)–(11) below.

- (10) **Further**, these atoms interact with each other and with their environment in unknown ways. [linking adverbial use] (Biber et al. 1999: 133)
- (11) Mr. Justice Hirst said that the criteria in determining whether an overseas company had established a place of business in Great Britain were summarised in Palmer’s *Company Law*, 24th edn (1987) page 1658.

Further, a visible sign or physical indication was not essential. [linking adverbial use] (Biber et al. 1999: 876)

Linking adverbials serve the purpose of connecting two clauses by adding to the preceding unit of discourse (Biber et al. 1999: 875). Additionally, they are noted for being flexible (e.g. occurring clause-initially, pre-verbally, and post-verbally) and sometimes for being prosodically and orthographically separated from the rest of the clause (Biber et al. 1999: 876). For this reason, Huddleston & Pullum (2002: 777) classify linking *further* as a member of the larger category ‘pure connectives’ along with *moreover*, *besides*, and *also*.

Third and finally, Huddleston & Pullum (2002: 582) touch upon the minor use of adverbial *further* as a degree marker (much like intensifiers *really*, *utterly*, and *actually*) that can split infinitival *to* from its bare verb (e.g. *to further delay the meeting*).

1.3 Further *and* farther: *Historical functional overlap*

It is easy to assume with the different meanings that *further* has come to acquire due to subjectification that the functional differentiation between the two forms has always been in place. However, a survey of the *Oxford English Dictionary* (*OED*) reveals otherwise. First, with regard to their present-day usage, the *OED* largely concurs with the division of labor detailed earlier, yet acknowledges the fuzziness of the distinction:

In standard English the form *farther* is usually preferred where the word is intended to be the comparative of *far*, while *further* is used where the notion of *far* is altogether absent; there is a large intermediate class of instances in which the choice between the two forms is arbitrary.

Summarizing the *OED*'s etymological account, Fowler (2009 [1926]: 171) notes that *farther* is essentially a respelling of *further*, one which is more assimilated to the base *far* and substitutes for the now-obsolete regular comparative *farrer*. Second, in their various meaning clusters, *further* and *farther* have diachronically shown complete functional overlap from as early as the 14th century, with their separate *OED* entries conflated below for illustration. As adjectives, *further* and *farther* share the following senses:

- (a) Obsolete: 'prior, former; front'
 - (12) Gif ane horse slayes ane man passand before him, with his **farther** feete. ['front' (1609, *OED* s.v. *further* adj.)]
 - (13) Of the two **farther** maners Panecius dyd declare in thre bookes. ['prior/former' (1534, *OED* s.v. *farther* adv. & adj.)]
- (b) 'More extended, going beyond what already exists or has been dealt with; additional, more'
 - (14) Without any **farther** delay, the King sent them away. ['more extended/additional/more' (1582, *OED* s.v. *further* adj.)]
 - (15) There is one **farther** Objection made by those who have answered this Book. ['additional/more' (1710, *OED* s.v. *farther* adv. & adj.)]
- (c) 'More distant, remoter'
 - (16) They would . . . goe foorth into a **farther** countrey. [expressing physical distance (1611, *OED* s.v. *further* adj.)]
 - (17) To hinder them from a **farther** prospect. [expressing figurative distance (1651, *OED* s.v. *farther* adv. & adj.)]

Perhaps most revealing above is the use of adjectival *farther* as a postdeterminer in the context of the NP in (15) and as a space adjunct with reference to figurative distance in (17), two senses long held to be exclusively associated with *further* in Present-Day English. Note also that this kind of

functional overlap between *further* and *farther* is not only restricted to their adjectival use; the same is also attested for their adverbial function, as demonstrated in their combined senses below:

- (d) ‘More forward; to or at a more advanced point of progress’
- (18) Hither to shalt thou come, but no **further**. [spatial construal (1535, *OED* s.v. *further* adv.)]
- (19) Some Creatures cast their Eggs as Chance directs them, and think of them no **farther**. [temporal construal (1711, *OED* s.v. *farther* adj. & adv.)]
- (e) ‘To a greater extent; more’
- (20) Men who pretend to believe no **further** than they can see. [degree modifier (1734, *OED* s.v. *further* adv.)]
- (21) Sit downe For thou must now know **farther**. [degree modifier (1616, *OED* s.v. *farther* adj. & adv.)]
- (f) ‘In addition, besides, moreover’
- (22) And, **further**, God is the only end that can . . . satisfy the soul with bliss. [linking adverbial (1875, *OED* s.v. *further* adv.)]
- (23) Nay **farther**, the common Motive of foreign Adventures was taken away. [linking adverbial (1719, *OED* s.v. *farther* adj. & adv.)]
- (g) ‘To or at a greater distance’
- (24) Island disjoyned no **further** than a ship in one day may saile unto. [space adjunct (1630, *OED* s.v. *further* adv.)]
- (25) He would catch Her beauty **farther** than the falcon spies. [space adjunct (1820, *OED* s.v. *farther* adj. & adv.)]

As can be seen above, *farther* had all the meanings that *further* continues to have today. Indeed, the latest *OED* examples show that adverbial *farther* can be used in a temporal (non-spatial) sense in (19), as a degree modifier in (21), or as a linking

adverbial in (23). Curiously, all the above meanings of *further* and *farther* – with the exception of (a) – remain in use. In practice, however, some sort of functional differentiation between the two forms seems to operate in Present-Day English. In this study, we aim to examine how this differentiation could have come about in terms of actual language usage (keeping in mind the *OED* evidence detailed above).

1.4 *Research motivation and objectives*

The current inquiry into *further* and *farther* is inspired by the fact that the two forms have received very little attention in the literature. Aside from the usage notes discussed earlier, the different senses of *further* and *farther* have not been systematically investigated. In this thesis, we will confront the few usage claims in reference grammars and the *OED* (which are based on a rather limited set of observations) with comprehensive corpus data. Moving away from the largely synchronic point of view that has dominated much of the literature, we will approach the present topic by means of a diachronic corpus analysis of the two forms from Early to Late Modern English. With this study rooted in the usage-based theory of language change (see e.g. Langacker 1987, 1991; Croft 2000; Tomasello 1998, 2002; Bybee 2010), our aim is twofold. First, against the backdrop of existing literature, we will test for a possible competition or a division of labor between *further* and *farther* in the corpus data from 1570 to 1920. Second, we will account for the functional differentiation between the two forms that appears to be at work in Present-Day English. More specifically, the thesis concerns itself with three main lines of research inquiry, which can be summed up as follows:

- How are *further* and *farther* charted in the corpus data in terms of frequency, and how did their distribution evolve from 1570 to 1920?

- What kind of relationship exists between *further* and *farther* in the light of diachronic corpus evidence? What possible pathways have led to the present-day functional differentiation between the two forms?
- How can the syntactic and semantic development of *further* and *farther* be accounted for, and how does it inform their diachronic relationship?

To address the above questions, the remainder of the thesis is organized as follows. Section 2 describes the extraction and sorting of data and the coding scheme used for corpus analysis. Section 3 includes a detailed quantitative and qualitative analysis of the data and an overview of corpus results. Finally, Section 4 closes with a summary of key findings and conclusions and suggestions for further research.

2 METHODOLOGY

2.1 *Data extraction and sorting*

This comparative study of *further* and *farther* is based on two part-of-speech (POS) tagged corpora covering the period from 1473 to 1920. For the purposes of this analysis, we have chosen to focus on the diachronic competition between the two forms from 1570 to 1920, a period characterized by both data richness and a marked frequency variation in the corpora. First, for the data between 1570 and 1700, we have accessed the Early English Books Online (EEBO) corpus. Divided by decade, EEBO contains c. 525 million words from more than 125,000 titles.

Second, for the data between 1710 and 1920, we have used the Corpus of Late Modern English Texts, version 3.0 (CLMET3.0), which encompasses c. 34 million words of running text by native British authors covering the period from 1710 to 1920. Comprising a wide range of public-domain texts compiled from a number of online archiving projects, CLMET3.0 is further divided into three 70-year sub-periods: 1710–1780, 1780–1850, and 1850–1920 (see De Smet 2005 for more information on the corpus architecture). Both EEBO and CLMET3.0 are tailored for diachronic studies of the English language, particularly the investigation of the different mechanisms of syntactic and semantic change.

Taking into account variant spellings in EEBO, we have retrieved all occurrences of the word forms *further* and *farther* and their variations using the regular expressions `\bf(u|o|v)r(th|d|h)er\b` (*further*, *furder*, *furher*, *forther*, *forder*, *forher*, *fvrther*, *fvrder*, *fvrher*) and `\bfar(th|h|d)er\b` (*farther*, *farher*, *farder*) respectively in which all forms appear separated before and after by a word boundary. Paralleling the structure of CLMET3.0 to allow for cross-period comparison, we have combined the 13 decades in EEBO into one 70-year and one 60-year periods (note that there is no data available in either corpus for the decade 1700–1710). On the other hand, due to orthography standardization, the simple

regular expressions `\bfurther\b` and `\bfarther\b` for *further* and *farther* respectively in CLMET3.0 have proved to be sufficient. A full breakdown of generated query hits and selected data points across newly formed and existing periods in both corpora is given in Table 1 below.

Period	<i>Further</i>		<i>Farther</i>	
	Total query hits	Selected instances	Total query hits	Selected instances
1570–1640	44,452	200	9,224	200
1640–1700	80,235	200	29,226	200
1710–1780	1,407	200	1,468	200
1780–1850	1,949	200	770	200
1850–1920	2,882	200	533	200
Total		1,000		1,000

Table 1

Total query hits and selected observations of further and farther across five periods in EEBO and CLMET3.0

To ensure representativeness across corpus data spanning four and a half centuries, we have randomized all extracted observations (per 10 years in EEBO before merging the decades into two periods as previously noted and per 70 years in CLMET3.0) and then selected 200 instances to analyze for every period listed above for a total of 1,000 data points each for *further* and *farther*. Moreover, we have normalized all absolute frequencies per one million words to reflect both (sub-)corpus size and the total number of hits in each period. For this, we have calculated the normalized frequencies for every decade in EEBO and then taken their average over seven and six decades for the periods 1570–1640 and 1640–1700 respectively. The frequency normalization for CLMET3.0, on the other hand, has been carried out using its existing 70-year division.

2.2 Data noise

While the vast majority of all observations have been found relevant for the present study, the corpus data has still required some manual sorting to eliminate

both irrelevant instances and any potential printing errors. In view of this, we have considered the types of forms indicated below as data noise and consequently excluded them from the analysis:

- The verbal use of *further* and *farther* in the sense of ‘advance’, ‘promote’, or ‘forward’ as in (26)–(27) respectively:

(26) [H]e would have no selfish interest to **further**: . . . [verbal *further* (1838, CLMET3.0)]

(27) [T]he Keeper, . . . Studied Night and Day how to **farther** it and bring it to Perfection. [verbal *farther* (1700, EEBO)]

- Instances of *further* and *farther* followed by *more* in which they form two-word sequences operating in lieu of *furthermore* and the now-obsolete *farthermore* as in (28)–(29) respectively:

(28) Peter also erred: he **further more** also erred in manners . . . [*further* as part of a two-word sequence (1670, EEBO)]

(29) [T]hey must not be too much vvorne out, . . . **Farther more** they must be even and smoothe, . . . [*farther* as part of a two-word sequence (1598, EEBO)]

- Instances of *farther* where it appears to be a printing error (a misspelling of *father*) as in (30a, b):

(30) (a) “Holy **farther**,” said Hippolita, “it is your office to be no respecer of persons: . . . [*farther* as a printing error (1764, CLMET3.0)]

(b) How then can any one dare to say that such a man as my **farther** is a work of the devil? [*farther* as a printing error (1884, CLMET3.0)]

2.3 Coding scheme

For the purposes of the present study, we have analyzed all selected observations of *further* and *farther* in the corpora on the basis of two parameters: syntactic

scope and semantic interpretation. On the syntactic level, attention has been paid to the items that *further* and *farther* modify in the corpus data. Additionally, the semantic nuances of the two forms have been teased out to identify the possible readings they allow in different contexts. The syntactic and semantic labels that we have assigned to the data will be clearly defined in the next subsections.

2.3.1 *Syntactic scope*

This parameter aims to investigate whether the uses of *further* and *farther* have developed along similar lines from Early to Late Modern English and the different syntactic environments with which the two forms have become more or less associated during the time. Accordingly, the parameter takes as its values the syntactic categories over which both adjectival and adverbial *further* and *farther* appear to have scope in the corpus data. These comprise regular nouns (in a premodifying (31a, b) or postmodifying (32a, b) capacity) or nominal gerunds serving as NPs (attested only with *further*) (33), adjectives (34a, b), verbs (35a, b), adverbs (36a, b), and PPs (37a, b).

- (31) (a) [B]ut yet for some other **further** approbation (as I thinke) the thing is not hetherto sent from thence, . . . [noun premodifier (1581, EEBO)]
 (b) [A]nd did, as it were, assure himself that he had some **farther** meaning in this, . . . [noun premodifier (1773, CLMET3.0)]
- (32) (a) [T]he Scripture notes three things **further** concerning Angells, worth obseruing: . . . [noun postmodifier (1618, EEBO)]
 (b) I have nothing **farther** to add upon him, . . . [noun postmodifier (1768, CLMET3.0)]
- (33) Colin saw that he regarded her refusal, . . . as a **further** clenching of the reply to his addresses. [nominal gerund modifier (1865, CLMET3.0)]

- (34) (a) It is **further** observable, that he calleth them my little children, . . .
[adjective modifier (1656, EEBO)]
- (b) I do not think my self any **farther** concern'd for the Success of what I have Written, than as it is agreeable to Truth. [adjective modifier (1710, CLMET3.0)]
- (35) (a) The Siege of Paris showed the utility of free balloons, and occasions arise when their use might be still **further** extended. [verb modifier (1902, CLMET3.0)]
- (b) But for the present, with this invisible tenet of the Visible Church, wee will trouble our selves no **farther**. [verb modifier (1638, EEBO)]
- (36) (a) [T]he Limes, Cypresses, and Plane-trees reach the 79th degree of latitude, and the Pines and Poplars must have ranged even **further** north than this. [adverb modifier (1877, CLMET3.0)]
- (b) To spreade and sowe **farther** abrode. [adverb modifier (1578, EEBO)]
- (37) (a) [F]or if you put **further** to seaward, then the streames run too stiffe towards the straight, . . . [PP modifier (1598, EEBO)]
- (b) I crept **farther** into the Wood to rest my Limbs, but my Thoughts kept me waking all Night. [PP modifier (1720, CLMET3.0)]

In the light of the above examples, four important observations need to be made. First, the previous fine-grained distinction between noun premodifiers and postmodifiers as well as between nouns and their gerundive counterparts will be collapsed in the discussion of corpus results (see Sections 3.2 and 3.3 below). Second, in the sequence [*further/farther* + adverb/PP] illustrated in (36)–(37) above, it is not always clear whether *further/farther* is the head of the sequence with the adverb/PP functioning as a postmodifier, or the adverb/PP is the head of a sequence modified by *further/farther*. We have opted for the latter interpretation since the former implies that the whole sequence is dependent on the preceding

verb, thereby vastly augmenting the class of verb modifiers (at the expense of those of adverb and PP modifiers) in the reported results. Third, both the ambiguity of the head-dependent status of the sequence [*further/farther* + preposition] and the nonomissibility of *further/farther* in that context suggest that such constructions as *further on* and *farther up* in (38a, b) below may be adverbs in their own right. Fourth, the two forms have been coded as having zero scope in the corpus data when they occur predicatively (39a, b), clause-initially as linking adverbials (40a, b) (Biber et al. 1999: 133), or as one part of comparative-correlative (*the . . . the . . .*) constructions (41a, b) (see e.g. Culicover & Jackendoff 1999; Cappelle 2011).

- (38) (a) So, **further on**, he says, “masculine nose,” – maschio naso.
[ambiguous head-dependent status (1846, CLMET3.0)]
- (b) [T]he feare of which had caused some alreadie to passe by this Towne to Gudda, the Port of Mecca, one hundred and fifty leagues **farther up**, . . .
[ambiguous head-dependent status (1625, EEBO)]
- (39) (a) I believe he had never been **further** than the billiard-saloon looking for them. [predicative use (1874, CLMET3.0)]
- (b) [T]hey convey it and carry it up into some higher room that is **farther** from the Earth, and neerer to Heaven, . . . [predicative use (1639, EEBO)]
- (40) (a) And **further** her Maiesties pleasure is, that all matters, . . . [linking adverbial use (1570, EEBO)]
- (b) And **farther**, in the same Speech, I’ve heard that guilty Creatures at a Play, Have, . . . Been so struck to the Soul, . . . [linking adverbial use (1731, CLMET3.0)]
- (41) (a) Frankly, had I been the King, **the further** they had gone the better should I have been pleased. [comparative correlative (1894, CLMET3.0)]

(b) Now those who with such egernesse do follow wrong paths, **the farther** they go on, the more they go astray. [comparative correlative (1600, EEBO)]

2.3.2 *Semantic interpretation*

The goal of this parameter is to explore the kind of relationship between *further* and *farther*, its diachronic evolution from Early to Late Modern English, and the rate at which the different senses of the two forms have emerged (or disappeared) and strengthened (or weakened) based on corpus evidence. Semantically, we have coded *further* and *farther* for all the possible readings they take depending on the types of categories they modify in the corpus data. As demonstrated below, these meanings naturally cross-cut the syntactic distinctions outlined in the previous section.

Further and *farther* may exhibit an ‘additive’ sense along the lines of *additional* or *more*, *also*, and *besides* when they occur as noun modifiers (42a, b), verb modifiers (43a, b), and linking adverbials (44a, b) respectively (Quirk et al. 1985: 459; Huddleston & Pullum 2002: 777–8). Moreover, they can be used in a ‘continuative’ sense to imply a sort of temporal contour with situations that allow a ‘durative’ interpretation at the VP level (see e.g. Vendler 1967; Depraetere & Langford 2012: 139–43). This ‘continuative’ reading is most notably associated not only with verbs (45a, b) but also with deverbal nouns (46a, b) in the corpus data. A combination of the ‘additive’ and ‘continuative’ senses above – in which both readings are felicitous in the given context – is also attested with the verb-modifying uses of *further* and *farther* (47a, b).

(42) (a) [T]he Prince had his Sheeld and Launce ready, . . . wherefore without any **further answer**, he sharply charged them, . . . [noun modifier with an ‘additive’ sense (1618, EEBO)]

- (b) Ivanhoe distinguished himself in the service of Richard, and was graced with **farther** marks of the royal favour. [noun modifier with an ‘additive’ sense (1819, CLMET3.0)]
- (43) (a) Human actions are not only agreeable or disagreeable, beautiful or deformed, . . . but are **farther** distinguished in our feeling, . . . [verb modifier with an ‘additive’ sense (1751, CLMET3.0)]
- (b) I haue noted him in such places as I thought conuenient, and would haue **farther** augmented him but that I thought it not good to be to curious in an other mans woork. [verb modifier with an ‘additive’ sense (1577, EEBO)]
- (44) (a) They also be great sléeppers, and sléeeping often: yet eating little, . . . **Further**, such be white of skinne, with some rednesse mixed: . . . [linking adverbial with an ‘additive’ sense (1571, EEBO)]
- (b) But I gave him for answer, that I would treat no where but on board my own ship; and **farther**, that it was now too late, . . . [linking adverbial with an ‘additive’ sense (1773, CLMET3.0)]
- (45) (a) I would hear him no **farther**; but withdrew in a confusion too visible, . . . [verb modifier with a ‘continuative’ sense (1748, CLMET3.0)]
- (b) Whereof after Atlas had vnderstandinge, he desisted from **farther** attemptinge the conqweste of Constantinople, . . . [verb modifier with a ‘continuative’ sense (1571, EEBO)]
- (46) (a) Rawlins kept the kniues in his sleeue all night, . . . but the next day when he perceiued the coast cleare, and that there was no cause of **farther** feare, he somewhat comforted himselfe, . . . [deverbal-noun modifier with a ‘continuative’ sense (1622, EEBO)]
- (b) [M]y respectful esteem for a gentleman whose **farther** acquaintance I should look upon as a peculiar obligation. [deverbal-noun modifier with a ‘continuative’ sense (1731, CLMET3.0)]

(47) (a) [T]o remind me of what I have gone through, and how great God's goodness has been to me (which, I hope, will **further** strengthen my good resolutions, . . . [verb modifier with possible 'additive' and 'continuative' senses (1740, CLMET3.0)]

(b) And now, having explained the substance of the Doctrine . . . I **further** clear what belongs to this Subject, in the Solution of several Queries about the Soul . . . [verb modifier with possible 'additive' and 'continuative' senses (1685, EEBO)]

Besides the senses outlined above, we have identified a 'space adjunct' reading with the noun-modifying (postdeterminer) (48a, b) and verb-modifying (49a, b) uses of *further* and *farther* in the corpus data (Quirk et al. 1985: 523). Additionally, we have distinguished between three 'space adjunct' senses based on the types of distance they denote: physical distance (48a, b), figurative distance at the VP level (49a, b), and figurative distance at the word level (50a, b). The figurative distance at the VP level involves the metaphorical spatial construal of *further* and *farther* with 'movement' and 'displacement' verbs, which express the manner of motion (e.g. *run, walk, jump, fly*) and the path of motion (e.g. *come, go, enter, exit*) respectively (see Talmy 1985, 2000: 213–88; Berthele 2004 for the detailed motion verb classification). On the other hand, the figurative distance at the word level relates to the metaphorical space adjunct use of *further* and *farther* with all non-motion verbs. To put it differently, in the former figurative sense, it is the whole VP in which the two forms are embedded that is metaphorical, whereas in the latter *further* and *farther* are metaphorical in their own right.

(48) (a) Marcus Varro, in the **further** Province of Spain, . . . did oftentimes give out very friendly speeches of Casar: . . . [noun-modifying 'space adjunct' expressing physical distance (1655, EEBO)]

(b) The **farther** extremity of the room was concealed by a curtain, . . .
[noun-modifying ‘space adjunct’ expressing physical distance (1834,
CLMET3.0)]

(49) (a) But oh! my sweet creature, carry your thoughts a little **further**. [verb-
modifying ‘space adjunct’ expressing figurative distance at the VP level
(1751, CLMET3.0)]

(b) For Faith being a Doctrine of piety as well as truth, . . . if not, it ended
in personall impiety and went no **farther**. [verb-modifying ‘space adjunct’
expressing figurative distance at the VP level (1648, EEBO)]

(50) (a) That no man should let what is unjustifiable or dangerous appear
under his hand, . . . nor pry any **further** into secrecy, . . . [‘space adjunct’
expressing figurative distance at the word level (1670, EEBO)]

(b) [B]ut William, who looked **farther** into the consequences of this affair
than either his wife or his aunt, believed it necessary . . . [‘space adjunct’
expressing figurative distance at the word level (1761, CLMET3.0)]

As is the case with the ‘additive’ and ‘continuative’ sense combination
noted above, the ‘space adjunct’ reading can simultaneously admit ‘continuative’
(51a, b) and ‘additive’ (52a, b) interpretations with the verb-modifying and noun-
postmodifying uses respectively. The final semantic label that we have applied to
further and *farther* is that of ‘scalar’, a rarely attested sense typically associated
with the classes of zero-scope and adjective modifiers (53a, b) in the corpus data.
In this regard, ‘scalar’ *further* and *farther* function as ‘boosters’ along the lines of
the adverbial intensifiers *far* and *more* (Quirk et al. 1985: 590–1).

(51) (a) I explained to her that we must walk a little **further** to get to a cab-
stand, . . . [verb modifier with possible ‘space adjunct’ and ‘continuative’
senses (1860, CLMET3.0)]

(b) [N]ot being able to advance any **farther**, they were constrained to retire for the first time. [verb modifier with possible ‘space adjunct’ and ‘continuative’ senses (1684, EEBO)]

(52) (a) [F]rom whence the coast reacheth Southwest: not ful seauen miles **farther**, there runneth into the sea a riuer called Pizagua, . . . [noun postmodifier with possible ‘space adjunct’ and ‘additive’ senses (1598, EEBO)]

(b) Look at the bitch at the other end of the field, backing him like a statue, while the old dog still creeps on. Not a step **farther** will he move: . . . [noun postmodifier with possible ‘space adjunct’ and ‘additive’ senses (1855, CLMET3.0)]

(53) (a) [W]e can never have any firme trust in him **farther** then hee offers himselfe to be trusted; . . . [zero-scope modifier with a ‘scalar’ sense (1635, EEBO)]

(b) I am no **farther** critical than every author must necessarily be who makes a careful study of his own art. [adjective modifier with a ‘scalar’ sense (1829, CLMET3.0)]

3 CORPUS RESULTS

In what follows, we will examine the syntactic and semantic properties of *further* and *farther* from 1570 to 1920 by means of a quantitative and qualitative analysis of the corpus data. To this end, Section 3.1 starts off with a systematic diachronic investigation of the frequency distribution of *further* and *farther* on the basis of corpus evidence, while Sections 3.2 and 3.3 are dedicated to the discussion and interpretation of the results for the two analytical parameters. All corpus results are presented below in frequency tables with data visualization.

3.1 Frequency analysis

The frequency distribution of *further* and *farther* follows a somewhat consistent pattern in EEBO and CLMET3.0, with the corpus data showing *further* as the more frequent form in four of the five periods between 1570 and 1920. The one exception comes from the period 1710–1780, during which *farther* is marginally more dominant than *further*, owing to the former’s sharp rise (61.1%) and the latter’s precipitous drop (46.2%) in frequency from the preceding period. In Table 2 and its accompanying visual representation, the normalized frequencies of *further* and *farther* in both corpora are charted. All the values listed below are normalized per one million words and rounded off to the nearest hundredth.

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	259.58 (82.9%)	249.37 (74.2%)	134.25 (48.9%)	172.70 (71.7%)	228.36 (84.4%)
<i>Farther</i>	53.51 (17.1%)	86.92 (25.8%)	140.07 (51.1%)	68.23 (28.3%)	42.23 (15.6%)
Total	313.09 (100%)	336.29 (100%)	274.32 (100%)	240.93 (100%)	270.59 (100%)

Table 2
*Normalized and percentage frequencies of further and farther
across the five periods*

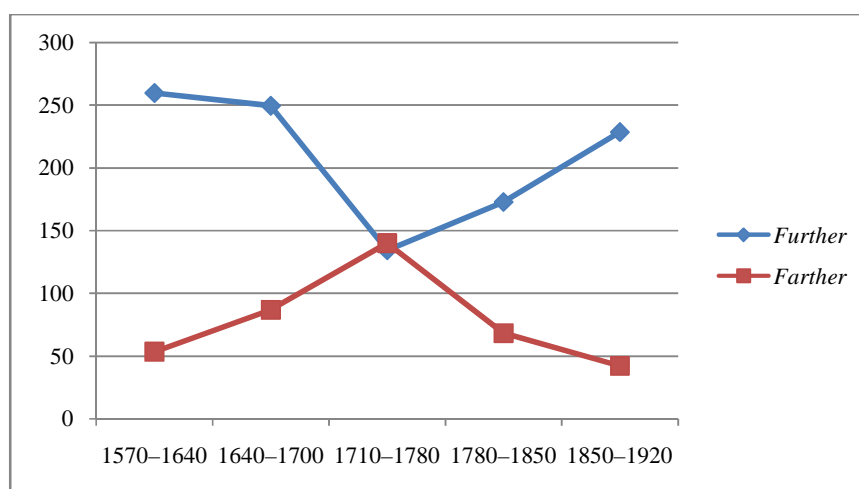


Figure 1

A line chart with markers showing the normalized frequencies in each period

The above data shows that the frequency behavior of *further* and *farther* reflects two opposing trends in the corpora. First, from 1570–1640 to 1640–1700 and 1710–1780, the frequency of *further* rapidly declines, whereas that of *farther* points to steady increases. Second, the periods 1780–1850 and 1850–1920 see a pattern shift for *further* and *farther*, with the former rising in frequency and the latter dropping sharply. For the purposes of this research, we aim to account for these frequency shifts by investigating whether they correlate with any syntactic and semantic developments of *further* and *farther* in the corpus data. Moreover, we will diachronically examine the kind of relationship that holds between the two forms, leading up to the functional differentiation that has come to characterize their behavior in Present-Day English.

3.2 Syntactic analysis

As pointed out in Section 2.3.1 above, both *further* and *farther* demonstrate an ability to occupy a wide range of syntactic environments and modify different lexical and grammatical items in the corpus data, including nouns, adjectives, verbs, adverbs, and PPs. Meanwhile, in their capacity as predicative adjectives,

linking adverbials, or one part of comparative-correlative constructions, *further* and *farther* appear to lack scope altogether. The syntactic reach of the two forms is also downright ambiguous in non-PP-introducing constructions such as *further up* and *farther off*, which might serve an adverbial function as a whole.

In order not to clutter the tabular or graphical representations, we have decided to zoom in separately on the different categories that *further* on the one hand and *farther* on the other modify in the corpus data. Before delving into the analysis, keep in mind that the earlier distinction between noun premodifiers and postmodifiers as well as between nouns and their gerundive counterparts is collapsed here for both forms. As a start, Table 3 and Figure 2 below provide a quantitative overview of the syntactic scope of *further* across all five periods in the corpora.

Scope	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
Noun	82.39 (31.7%)	97.76 (39.2%)	73.17 (54.5%)	87.21 (50.5%)	109.62 (48%)
Adjective	1.18 (0.5%)	2.38 (1%)	0.67 (0.5%)	1.73 (1%)	1.14 (0.5%)
Verb	126.55 (48.8%)	115.56 (46.3%)	49.01 (36.5%)	60.44 (35%)	73.08 (32%)
Adverb	2.47 (0.9%)	0 (0%)	0.67 (0.5%)	2.59 (1.5%)	9.13 (4%)
PP	10.69 (4.1%)	2.59 (1%)	2.68 (2%)	6.04 (3.5%)	9.13 (4%)
Zero	36.30 (14%)	29.56 (11.9%)	7.38 (5.5%)	12.96 (7.5%)	11.42 (5%)
Ambiguous	0 (0%)	1.52 (0.6%)	0.67 (0.5%)	1.73 (1%)	14.84 (6.5%)
Total	259.58 (100%)	249.37 (100%)	134.25 (100%)	172.70 (100%)	228.36 (100%)

Table 3
*Normalized and percentage frequencies of the syntactic categories
 modified by further across the five periods*

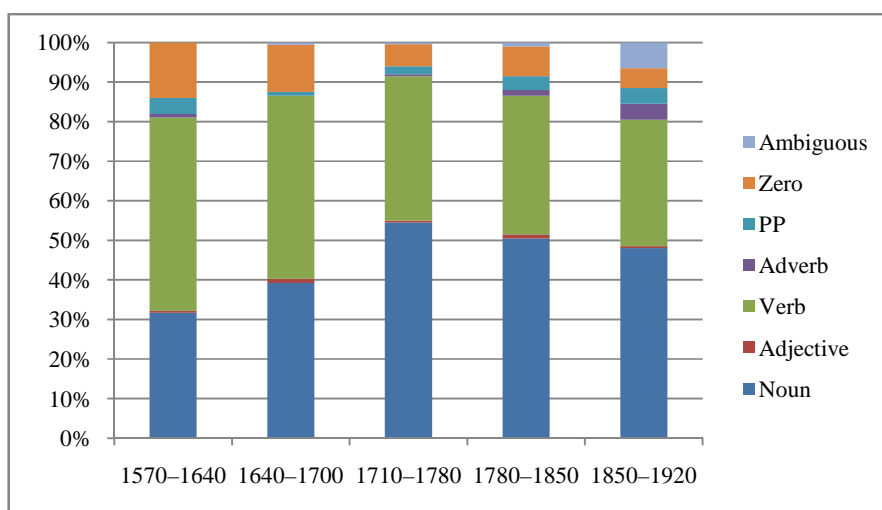


Figure 2
*Percentage frequencies of the different word classes
 that further modifies in each period*

In the light of the above data, four observations should be addressed. First, the very low frequency counts for *further* modifying adjectives, adverbs, and PPs and having an ambiguous scope do not provide sufficient grounds for statistical significance testing; consequently, these categories will not be subject to further investigation. Second, it is interesting to note that the most significant changes in the syntactic environments of *further* coincide with its steep decline in frequency between 1640–1700 and 1710–1780. Third, the corpus data reveals that *further* as a noun modifier grows in frequency from the late 16th century to account for over half of all uses by 1710–1780. While the noun-modifying use of *further* drops slightly in frequency over the following two periods, its rise from 1570–1640 to 1640–1700 and 1710–1780 has proved to be statistically significant ($p = 0$, $v = 0.19$).¹ Fourth, the steady drops in frequency of the verb-modifying (across all five periods) and zero-scope (between 1570–1640 and 1710–1780) uses of *further*

¹ Absolute frequencies for the chi-square test:
 1570–1640: 64 nouns, 136 other; 1640–1700: 79 nouns, 121 other; 1710–1780:
 109 nouns, 91 other

denote strong and moderate statistical significance at the 0.002^2 ($v = 0.13$) and 0.015^3 ($v = 0.12$) levels respectively.

With all this in mind, let us now contrast the syntactic behavior of *further* with that of *farther*. The different types of categories over which *farther* appears to have scope in the corpus data are laid out in Table 4 and Figure 3 below.

Scope	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
Noun	12.79 (23.9%)	25.07 (28.8%)	50.42 (36%)	21.84 (32%)	9.71 (23%)
Adjective	1.28 (2.4%)	4.76 (5.5%)	1.40 (1%)	1.70 (2.5%)	0.63 (1.5%)
Verb	23.67 (44.2%)	39.79 (45.8%)	65.14 (46.5%)	27.64 (40.5%)	13.10 (31%)
Adverb	1.55 (2.9%)	2.51 (2.9%)	0.70 (0.5%)	3.07 (4.5%)	5.07 (12%)
PP	1.91 (3.6%)	2.87 (3.3%)	11.21 (8%)	6.14 (9%)	4.43 (10.5%)
Zero	9.32 (17.4%)	10.86 (12.5%)	5.60 (4%)	4.09 (6%)	3.17 (7.5%)
Ambiguous	2.99 (5.6%)	1.06 (1.2%)	5.60 (4%)	3.75 (5.5%)	6.12 (14.5%)
Total	53.51 (100%)	86.92 (100%)	140.07 (100%)	68.23 (100%)	42.23 (100%)

Table 4
*Normalized and percentage frequencies of the categories
modified by farther across the five periods*

² Absolute frequencies for the chi-square test:
1570–1640: 97 verbs, 103 other; 1640–1700: 92 verbs, 108 other; 1710–1780: 73
verbs, 127 other; 1780–1850: 70 verbs, 130 other; 1850–1920: 64 verbs, 136
other

³ Absolute frequencies for the chi-square test:
1570–1640: 28 zero, 172 other; 1640–1700: 24 zero, 176 other; 1710–1780: 11
zero, 189 other

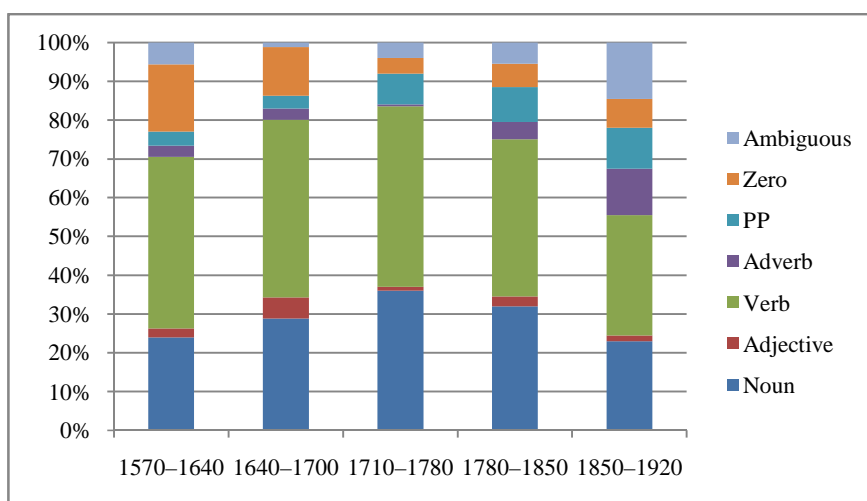


Figure 3
*Percentage frequencies of the different word classes
 that farther modifies in each period*

As can be seen above, *farther* and *farther* exhibit some differences with regard to their syntactic development in the corpus data. First, with the exception of its adjective- and PP-modifying uses, *farther* generally shows a larger cross-period frequency variation than does *farther*. Second, the initial gain in frequency of *farther* as a noun modifier from 1570–1640 to 1710–1780 succeeded by an equally offsetting drop over the next two periods indicates moderate statistical significance ($p = 0.03$, $v = 0.10$).⁴ In this regard, noun-modifying *farther* follows a pattern similar to that of its *farther* counterpart, albeit with a lesser degree of variation. Third, the uptick in frequency of *farther* with an ambiguous scope from 1710–1780 to 1780–1850 and its subsequent frequency boost in 1850–1920 have proved to be highly statistically significant ($p = 0$, $v = 0.17$).⁵ Fourth, the rise in

⁴ Absolute frequencies for the chi-square test:
 1570–1640: 50 nouns, 150 other; 1640–1700: 58 nouns, 142 other; 1710–1780:
 72 nouns, 128 other; 1780–1850: 64 nouns, 136 other; 1850–1920: 46 nouns, 154
 other

⁵ Absolute frequencies for the chi-square test:

frequency of *farther* as an adverb modifier between 1780–1850 and 1850–1920 is of strong statistical significance at the 0.006 ($\nu = 0.14$) level.⁶ As noted earlier, the instances of *farther* with an ambiguous or adverbial scope, on the other hand, are too few to derive any conclusions. Fifth, with a trend comparable to that of its *further* counterpart, verb-modifying *farther* sees significant drops in frequency from the 18th century ($p = 0.006$, $\nu = 0.13$).⁷ Lastly, the observations of zero-scope *farther* sharply decline from 1570–1640 to 1710–1780 ($p = 0$, $\nu = 0.17$),⁸ propelled by the diminishing clause-initial use of *farther* in the corpus data (see Section 3.3 below for the diachronic investigation of the ‘linking adverbial’ sense of the two forms).

Using the above data, three general tendencies can be identified. First, *further* appears to be strongly favored over *farther* in the context of the NP. This favoring effect gets progressively stronger with each period, culminating in 1850–1920 in which 48% of all instances of *further* pre- or postmodify nouns, compared to 23% of those of *farther*. As it turns out, the attested frequency distribution is far from coincidental ($p = 0$, $\nu = 0.26$),⁹ suggesting that *farther* has effectively ceded part of its noun-modifying use to *further* from Early to Late Modern English. This is even more salient when investigating which form is preferred in noun-modification contexts in 1850–1920, which Table 5 and Figure 4 below

1710–1780: 8 ambiguous, 192 other; 1780–1850: 11 ambiguous, 189 other; 1850–1920: 29 ambiguous, 171 other

⁶ Absolute frequencies for the chi-square test:

1780–1850: 9 adverbs, 191 other; 1850–1920: 24 adverbs, 176 other

⁷ Absolute frequencies for the chi-square test:

1710–1780: 93 verbs, 107 other; 1780–1850: 81 verbs, 119 other; 1850–1920: 62 verbs, 138 other

⁸ Absolute frequencies for the chi-square test:

1570–1640: 35 zero, 165 other; 1640–1700: 26 zero, 174 other; 1710–1780: 9 zero, 191 other

⁹ Absolute frequencies for the chi-square test (1850–1920):

further: 96 nouns, 104 other; *farther*: 46 nouns, 154 other

clearly show to be *further* in nearly 92% of the cases. While noun-modifying *farther* rises in conjunction with the form's overall frequency between 1570–1640 and 1710–1780, it loses ground to its *further* counterpart over the next two periods. This may in turn tie in with Breban's (2010: Chapters 3–4) claim that *further* has developed a postdeterminer use in NPs as a result of subjectification (refer to Section 3.3 below for the semantic side of the argument).

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	82.39 (86.6%)	97.76 (79.6%)	73.17 (59.2%)	87.21 (80%)	109.62 (91.9%)
<i>Farther</i>	12.79 (13.4%)	25.07 (20.4%)	50.42 (40.8%)	21.84 (20%)	9.71 (8.1%)
Total	95.18 (100%)	122.83 (100%)	123.59 (100%)	109.05 (100%)	119.33 (100%)

Table 5

Normalized and percentage frequencies of the noun-modifying uses of further and farther across all five periods

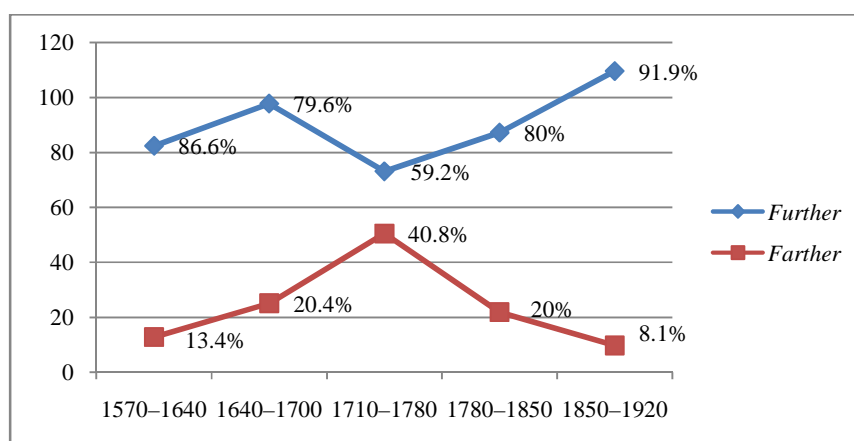


Figure 4

Normalized and percentage frequencies of further and farther as noun modifiers in each period

Second, by conflating the classes of verb, adverb, and PP modifiers, 55% of all observations of *farther* – as opposed to 39% of those of *further* – are found

to associate with the resulting sequence [*further/farther* + verb/adverb/PP] in 1710–1780 ($p = 0.001$, $v = 0.16$),¹⁰ a pattern that persists over the following two periods with only slight variation. Using normalized frequencies to adopt the perspective of verbal, adverbial, and prepositional contexts, however, reveals an opposite trend. Table 6 and Figure 5 below demonstrate that – concurrent with their frequency distribution – it is actually *further* that is strongly favored in the three contexts combined in all periods except 1710–1780.

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	139.71 (83.7%)	118.15 (72.3%)	52.36 (40.5%)	69.07 (65.2%)	91.34 (80.2%)
<i>Farther</i>	27.13 (16.3%)	45.17 (27.7%)	77.05 (59.5%)	36.85 (34.8%)	22.60 (19.8%)
Total	166.84 (100%)	163.32 (100%)	129.41 (100%)	105.92 (100%)	113.94 (100%)

Table 6

Normalized and percentage frequencies of further and farther in verbal, adverbial, and prepositional contexts across all five periods

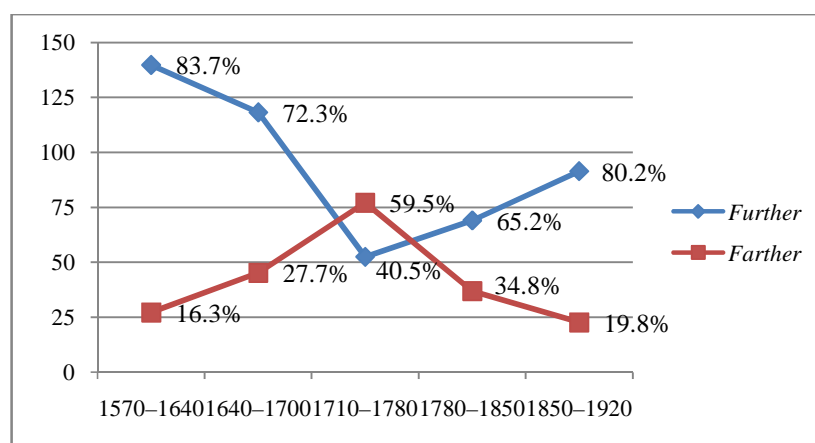


Figure 5

Normalized and percentage frequencies of further and farther as verb, adverb, and PP modifiers in each period

¹⁰ Absolute frequencies for the chi-square test (1710–1780): *further*: 78 verbs/adverbs/PPs, 122 other; *farther*: 110 verbs/adverbs/PPs, 90 other

Third, 14.5% of all instances of *farther* – compared to 6.5% of those of *further* – have an ambiguous scope in 1850–1920 by occurring with single-word prepositions ($p = 0.009$, $v = 0.13$).¹¹ In contrast, the normalized frequencies in Table 7 and Figure 6 below offer a nuanced account by demonstrating how the sequence [*further/farther* + preposition] correlates more strongly with *further* in 1640–1700 and 1850–1920 and with *farther* in 1570–1640, 1710–1780, and 1780–1850.

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	0 (0%)	1.52 (58.9%)	0.67 (10.7%)	1.73 (31.6%)	14.84 (70.8%)
<i>Farther</i>	2.99 (100%)	1.06 (41.1%)	5.60 (89.3%)	3.75 (68.4%)	6.12 (29.2%)
Total	2.99 (100%)	2.58 (100%)	6.27 (100%)	5.48 (100%)	20.96 (100%)

Table 7

Normalized and percentage frequencies of further and farther with an ambiguous scope across all five periods

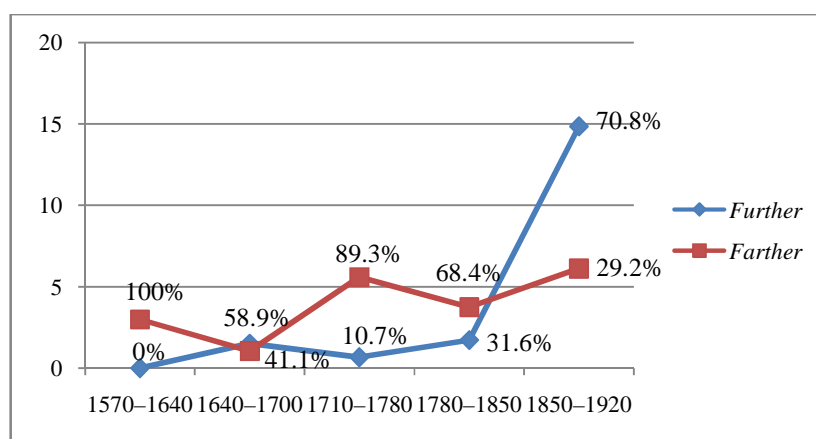


Figure 6

Normalized and percentage frequencies of further and farther denoting ambiguous scopal relations in each period

¹¹ Absolute frequencies for the chi-square test (1850–1920): *further*: 13 ambiguous, 187 other; *farther*: 29 ambiguous, 171 other

3.3 *Semantic analysis*

In this section, it is our aim to explore the rate at which the different meanings of *further* and *farther* have evolved from Early to Late Modern English. To this end, we have identified all the readings that *further* and *farther* can take based on the types of syntactic categories they modify. The corpus data reveals that *further* and *farther* in the context of the NP are typically used as postdeterminers in an ‘additive’ or ‘continuative’ sense. As regards their verb-modifying uses, *further* and *farther* usually allow either an ‘additive’ or ‘continuative’ interpretation or quite rarely a combination of both. An ‘additive’ sense is also evoked with the linking adverbial use of the two forms.

Moreover, three ‘space adjunct’ senses have been distinguished with the noun- and verb-modifying uses of *further* and *farther*. These include expressions of physical distance, figurative distance at the VP level, and figurative distance at the word level. Possible sense combinations of ‘space adjunct’ and ‘continuative’ in the VP and to a lesser extent ‘space adjunct’ and ‘additive’ in the NP are also attested. Lastly, a minor ‘scalar’ reading (similar to that of intensifier *more*) is noted with the adjective-modifying and zero-scope uses of both forms.

Along the lines of the syntactic analysis in the previous section, *further* and *farther* will be discussed in turn with respect to the possible interpretations they admit. For our purposes here, we have collapsed the previous distinction between the two types of figurative distance and only conflated all ‘space adjunct’ readings when they combine with an ‘additive’ or ‘continuative’ interpretation. We have also merged all ‘additive’ senses on the one hand (with the exception of the linking adverbial use) and ‘continuative’ senses on the other – regardless of their syntactic environments. Table 8 and Figure 7 below illustrate the resulting kinds of meaning associated with *further* across all five periods in the corpora.

Sense	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
Additive	88.67 (34.2%)	111.82 (44.8%)	65.12 (48.5%)	58.73 (34%)	97.04 (42.5%)
Continuative	71.42 (27.5%)	75.34 (30.2%)	39.61 (29.5%)	57.85 (33.5%)	50.23 (22%)
Additive + continuative	6.16 (2.4%)	2.44 (1%)	0.67 (0.5%)	0 (0%)	1.14 (0.5%)
Space adjunct (physical)	19.38 (7.5%)	5.29 (2.1%)	7.38 (5.5%)	11.22 (6.5%)	37.66 (16.5%)
Space adjunct (figurative)	24.57 (9.5%)	20.41 (8.2%)	7.38 (5.5%)	14.68 (8.5%)	17.2 (7.5%)
Space adjunct + continuative	11.83 (4.5%)	5.76 (2.3%)	8.05 (6%)	17.27 (10%)	15.97 (7%)
Space adjunct + additive	4.15 (1.6%)	0 (0%)	1.34 (1%)	1.73 (1%)	2.28 (1%)
Linking adverbial	31.28 (12%)	24.32 (9.8%)	4.03 (3%)	11.22 (6.5%)	6.84 (3%)
Scalar	2.12 (0.8%)	3.99 (1.6%)	0.67 (0.5%)	0 (0%)	0 (0%)
Total	259.58 (100%)	249.37 (100%)	134.25 (100%)	172.70 (100%)	228.36 (100%)

Table 8

Normalized and percentage frequencies of the different senses of further across the five periods

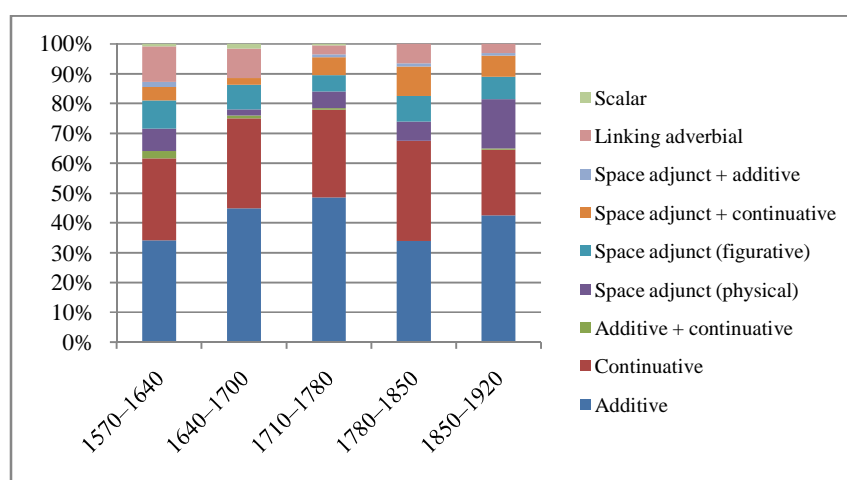


Figure 7

Percentage frequencies of the different meanings of further in each period

To interpret the above data, five key points need to be made. First, the ‘scalar’, ‘additive + continuative’, ‘space adjunct + additive’, and ‘space adjunct + continuative’ senses will not be dealt with due to their insignificant frequency variation. Second, the ‘additive’ reading of *further* sees frequency growth from 1570–1640 to 1710–1780 before declining and rising again over the next two periods, with the attested fluctuation statistically significant ($p = 0.002$, $v = 0.12$).¹² Third, the use of *further* in a ‘continuative’ sense remains mostly stable in all periods, apart from a somewhat steep drop between 1780–1850 and 1850–1920 that is of moderate statistical significance at the 0.01 ($v = 0.13$) level.¹³ Fourth, *further* in its capacity as a physical ‘space adjunct’ records a significant boost in frequency from 1710–1780 to 1850–1920 ($p = 0.003$, $v = 0.14$).¹⁴ Perhaps surprising here is also the tendency for *further* in the early 20th century to be used to express more physical than figurative distance. Fifth, with its decline in frequency from 1570–1640 to 1710–1780 being statistically significant ($p = 0.003$, $v = 0.14$),¹⁵ linking adverbial *further* constitutes merely 3% of all the form’s uses by 1850–1920.

For the comparison of *further* and *farther* on semantic grounds, let us now turn to the different interpretations that *farther* lends itself to in the corpus data, as demonstrated in Table 9 and Figure 8 below.

¹² Absolute frequencies for the chi-square test:
1570–1640: 68 additive, 132 other; 1640–1700: 89 additive, 111 other; 1710–1780: 97 additive, 103 other; 1780–1850: 68 additive, 132 other; 1850–1920: 91 additive, 109 other

¹³ Absolute frequencies for the chi-square test:
1780–1850: 67 continuative, 133 other; 1850–1920: 44 continuative, 156 other

¹⁴ Absolute frequencies for the chi-square test:
1710–1780: 9 physical space adjuncts, 191 other; 1780–1850: 12 physical space adjuncts, 188 other; 1850–1920: 26 physical space adjuncts, 174 other

¹⁵ Absolute frequencies for the chi-square test:
1570–1640: 24 linking adverbials, 176 other; 1640–1700: 20 linking adverbials, 180 other; 1710–1780: 6 linking adverbials, 194 other

Sense	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
Additive	10.82 (20.2%)	30.75 (35.4%)	40.63 (29%)	10.92 (16%)	0.84 (2%)
Continuative	11.79 (22%)	19.49 (22.4%)	37.13 (26.5%)	14.68 (21.5%)	1.48 (3.5%)
Additive + continuative	0.29 (0.5%)	0.89 (1%)	0.70 (0.5%)	0 (0%)	0 (0%)
Space adjunct (physical)	12.25 (22.9%)	8.93 (10.3%)	28.71 (20.5%)	19.79 (29%)	25.76 (61%)
Space adjunct (figurative)	8.05 (15.1%)	14.16 (16.3%)	17.50 (12.5%)	11.93 (17.5%)	11.20 (26.5%)
Space adjunct + continuative	3.91 (7.3%)	1.96 (2.2%)	11.20 (8%)	8.87 (13%)	2.11 (5%)
Space adjunct + additive	1.10 (2.1%)	0 (0%)	0.70 (0.5%)	0.68 (1%)	0.84 (2%)
Linking adverbial	3.54 (6.6%)	7.19 (8.3%)	2.80 (2%)	1.02 (1.5%)	0 (0%)
Scalar	1.76 (3.3%)	3.55 (4.1%)	0.70 (0.5%)	0.34 (0.5%)	0 (0%)
Total	53.51 (100%)	86.92 (100%)	140.07 (100%)	68.23 (100%)	42.23 (100%)

Table 9

Normalized and percentage frequencies of the different senses of farther across the five periods

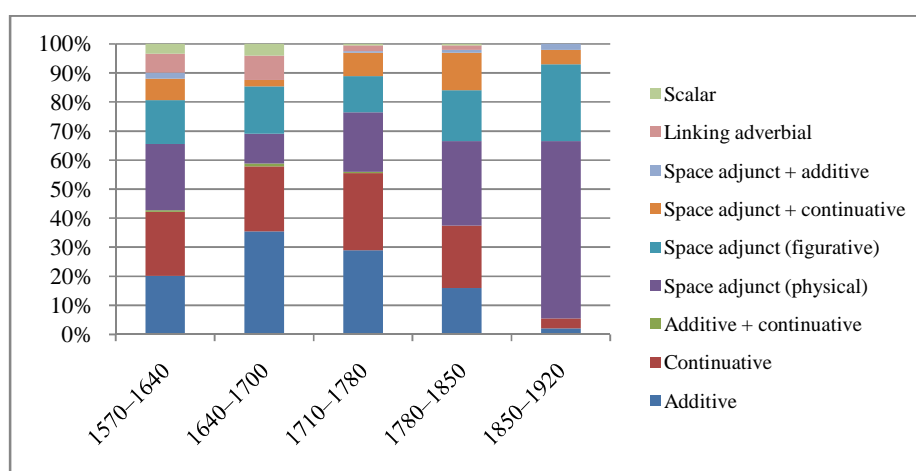


Figure 8

Percentage frequencies of the different meanings of farther in each period

With the exception of its ‘scalar’, ‘additive + continuative’, and ‘space adjunct + additive’ senses, *farther* in its various uses goes through a number of significant changes in the corpus data. First, both the ‘additive’ and ‘continuative’ readings decline from the early 18th century, most drastically between 1780–1850 and 1850–1920, which has proved to be highly statistically significant for the two senses ($p = 0$, $v = 0.24$ and 0.27 respectively).¹⁶ Second, over the same period, the physical ‘space adjunct’ use of *farther* sees a significant spike in frequency ($p = 0$, $v = 0.32$),¹⁷ which in effect offsets the total percentage frequency loss suffered by the ‘additive’ and ‘continuative’ senses above. Third, much against (or perhaps despite) the prescriptive literature cited earlier (e.g. Garner 2003: 340; Fowler 2009 [1926]: 171), figurative ‘space adjunct’ marks the second most frequent use of *farther* in the early 20th century, consistently rising from 1710–1780 to 1850–1920 ($p = 0.001$, $v = 0.15$).¹⁸ Fourth, following the same pattern observed for the ‘continuative’ rather than the ‘space adjunct’ sense, ‘space adjunct + continuative’ drops in frequency between 1780–1850 and 1850–1920, which has turned out to be statistically significant at the 0.003 ($v = 0.15$) level.¹⁹ Lastly, the linking adverbial use of *farther* diminishes from 1640–1700, to the extent where no such instances are attested by 1850–1920.

¹⁶ Absolute frequencies for the two chi-square tests:

(i) 1780–1850: 32 additive, 168 other; 1850–1920: 4 additive, 196 other

(ii) 1780–1850: 43 continuative, 157 other; 1850–1920: 7 continuative, 193 other

¹⁷ Absolute frequencies for the chi-square test:

1780–1850: 58 physical space adjuncts, 142 other; 1850–1920: 121 physical space adjuncts, 79 other

¹⁸ Absolute frequencies for the chi-square test:

1710–1780: 25 figurative space adjuncts, 175 other; 1780–1850: 35 figurative space adjuncts, 165 other; 1850–1920: 53 figurative space adjuncts, 147 other

¹⁹ Absolute frequencies for the chi-square test:

1780–1850: 26 ‘space adjunct + continuative’, 174 other; 1850–1920: 9 ‘space adjunct + continuative’, 191 other

By contrasting the semantic development of *further* with that of *farther*, three broad tendencies can be discerned. First, *further* is much more likely than *farther* to encode an ‘additive’ or ‘continuative’ sense in all periods. In fact, while the ‘additive’ and ‘continuative’ readings constitute the two most common uses of *further*, they are rarely evoked with *farther* in 1850–1920. Tables 10 and 11 with their accompanying graphical representations below illustrate how the normalized frequencies of the ‘additive’ and ‘continuative’ meanings of *farther* come close to matching those of their *further* counterparts in 1710–1780. However, by the early 20th century, *further* has come to predominate in both senses, accounting for nearly all such observations in 1850–1920.

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	88.67 (89.1%)	111.82 (78.4%)	65.12 (61.6%)	58.73 (84.3%)	97.04 (99.1%)
<i>Farther</i>	10.82 (10.9%)	30.75 (21.6%)	40.63 (38.4%)	10.92 (15.7%)	0.84 (0.9%)
Total	99.49 (100%)	142.57 (100%)	105.75 (100%)	69.65 (100%)	97.88 (100%)

Table 10

Normalized and percentage frequencies of the ‘additive’ sense of further and farther across all five periods

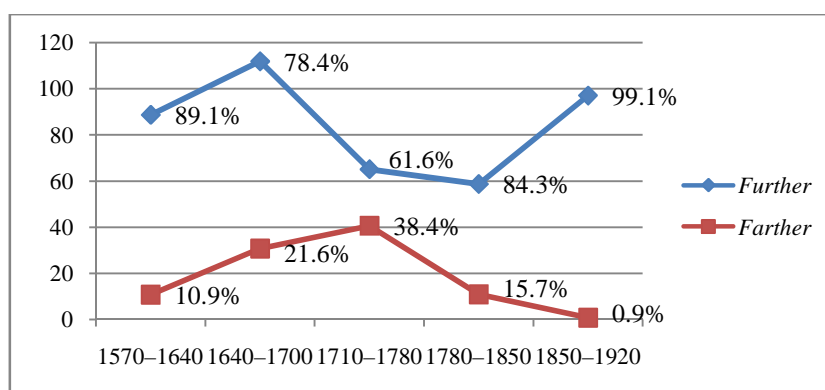


Figure 9

Normalized and percentage frequencies of further and farther with an ‘additive’ sense in each period

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	71.42 (85.8%)	75.34 (79.4%)	39.61 (51.6%)	57.85 (79.8%)	50.23 (97.1%)
<i>Farther</i>	11.79 (14.2%)	19.49 (20.6%)	37.13 (48.4%)	14.68 (20.2%)	1.48 (2.9%)
Total	83.21 (100%)	94.83 (100%)	76.74 (100%)	72.53 (100%)	51.71 (100%)

Table 11

Normalized and percentage frequencies of the ‘continuative’ sense of further and farther across all five periods

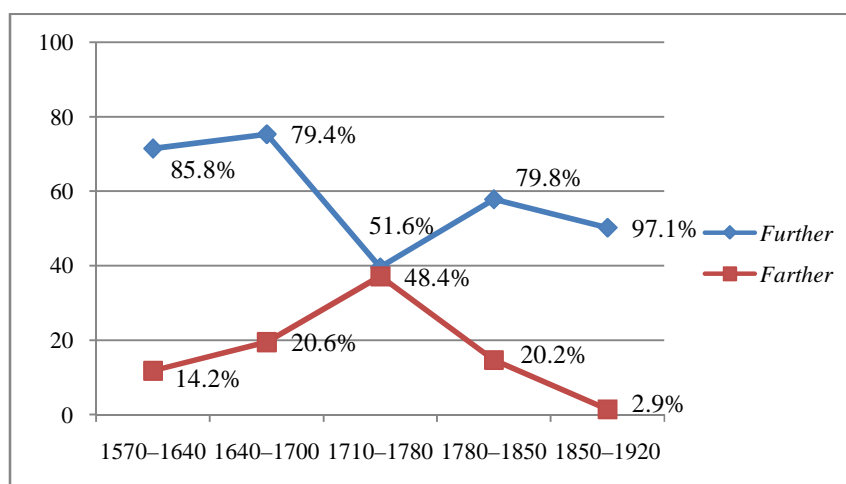


Figure 10

Normalized and percentage frequencies of further and farther with a ‘continuative’ sense in each period

Second, the corpus data shows that 87.5% of all instances of *farther* in 1850–1920 denote both physical and figurative ‘space adjuncts’, as opposed to 24% only of those of *further*. On the one hand, this tendency effectively refutes any prescriptive claims restricting *farther* to expressions of physical distance only. On the other, it is fairly consistent with the wider (and more balanced) view in the *OED*, which states that *farther* is preferred as the comparative form of *far* (without invoking a physical-figurative contrast), while *further* is largely used in contexts where a spatial construal is hardly evoked (e.g. in an ‘additive’ or

‘continuative’ sense). Conversely, from an onomasiological perspective, Tables 12 and 13 with their visual representations below show *further* as the preferred form (in terms of normalized frequencies) with physical distance in 1570–1640 and 1850–1920 as well as figurative distance in all periods except 1710–1780. The discrepancy between the above findings can be attributed to *further* being on the whole more frequent and thus more likely on average to be used with both types of spatial expressions.

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	19.38 (61.3%)	5.29 (37.2%)	7.38 (20.4%)	11.22 (36.2%)	37.66 (59.4%)
<i>Farther</i>	12.25 (38.7%)	8.93 (62.8%)	28.71 (79.6%)	19.79 (63.8%)	25.76 (40.6%)
Total	31.63 (100%)	14.22 (100%)	36.09 (100%)	31.01 (100%)	63.42 (100%)

Table 12

Normalized and percentage frequencies of the physical ‘space adjunct’ use of further and farther across all five periods

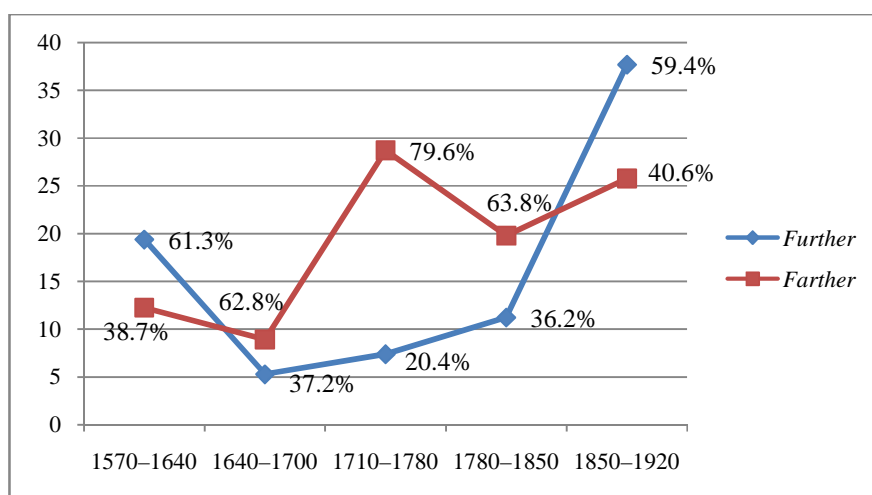


Figure 11

Normalized and percentage frequencies of further and farther as physical ‘space adjuncts’ in each period

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	24.57 (75.3%)	20.41 (59%)	7.38 (29.7%)	14.68 (55.2%)	17.20 (60.6%)
<i>Farther</i>	8.05 (24.7%)	14.16 (41%)	17.50 (70.3%)	11.93 (44.8%)	11.20 (39.4%)
Total	32.62 (100%)	34.57 (100%)	24.88 (100%)	26.61 (100%)	28.40 (100%)

Table 13

Normalized and percentage frequencies of further and farther with expressions of figurative distance across all five periods

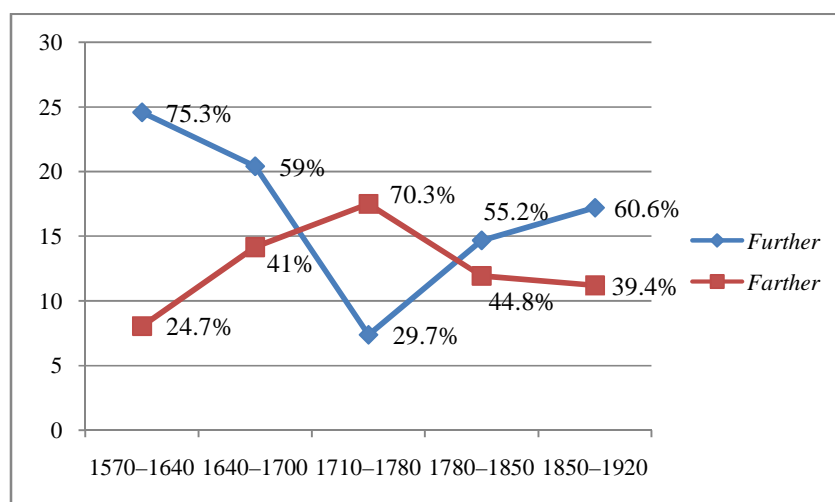


Figure 12

Normalized and percentage frequencies of further and farther as figurative 'space adjuncts' in each period

Third and finally, while a linking adverbial use is exclusively associated with *further* in the literature, the corpus data reveals that *farther* also has the same function in all periods except 1850–1920. However, it can only be regarded as a diminishing minor use, accounting for as little as 3% and 0% of all instances of *further* and *farther* respectively by 1850–1920. Using normalized frequencies, Table 14 and Figure 13 below demonstrate that there has always been a strong preference for *further* with the linking adverbial use across all periods in the corpora.

Form	Period				
	1570–1640	1640–1700	1710–1780	1780–1850	1850–1920
<i>Further</i>	31.28 (89.8%)	24.32 (77.2%)	4.03 (59%)	11.22 (91.7%)	6.84 (100%)
<i>Farther</i>	3.54 (10.2%)	7.19 (22.8%)	2.80 (41%)	1.02 (8.3%)	0 (0%)
Total	34.82 (100%)	31.51 (100%)	6.83 (100%)	12.24 (100%)	6.84 (100%)

Table 14

Normalized and percentage frequencies of further and farther as linking adverbials across all five periods

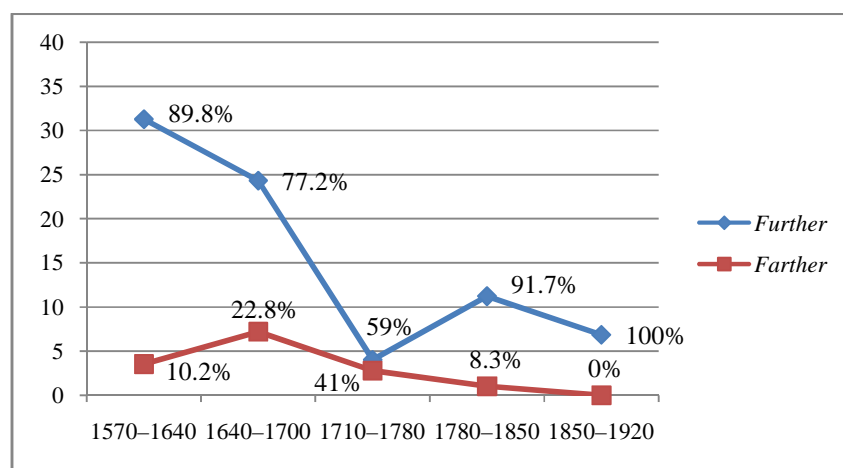


Figure 13

Normalized and percentage frequencies of the linking adverbial use of further and farther in each period

4 CONCLUSION

The use of *further* and *farther* has been the subject of a number of unsystematic observations in the literature. On the one hand, a division of labor has been long maintained in the prescriptive tradition, where *further* is reserved for figurative distance and *farther* for physical distance (e.g. Cobbett 1883 [1818]: 49; Garner 2003: 340). On the other, a distinction is far less obvious in descriptive grammars, where *further* is used for all purposes and *farther* largely restricted to expressions of physical distance (e.g. Quirk et al. 1985: 458–9; Fowler 2009 [1926]: 171). The additional uses of *further* in the literature (most notably those of postdeterminer and linking adverbial) seem to suggest that some sort of present-day functional differentiation operates between the two forms. This view, however, is in stark contrast with the evidence from the *OED*, which demonstrates that *further* and *farther* in theory have always shared the same senses from as early as the 14th century. In this study, we have aimed to examine how this differentiation could have come about by means of a comparative corpus analysis of *further* and *farther* from 1570 to 1920 on the basis of their frequency distribution as well as their syntactic and semantic properties.

The corpus data has shown *further* as the dominant form in all but one period, *farther* being more frequent in 1710–1780 only. Besides, the frequency behavior of both forms has exhibited two reverse trends, as *further* drops and *farther* rises in frequency from 1570–1640 to 1640–1700 and 1710–1780 before they switch patterns over the next two periods.

On the syntactic level, we have identified three general tendencies. First, noun-modifying *further* is strongly favored over its *farther* counterpart in all periods, most prominently 1850–1920. This may corroborate Breban's (2010: Chapters 3–4) assertion regarding how present-day *further* has developed a postdeterminer use in the NP due to subjectification. Second, by taking into

account the combined normalized frequencies of verb, adverb, and PP modifiers, *further* appears to correlate more closely than *farther* with the resulting sequence [*further/farther* + verb/adverb/PP] in all periods except 1710–1780. Third, with regard to scopal ambiguity, the sequence [*further/farther* + preposition] shows a strong preference for *further* in 1640–1700 and 1850–1920 and for *farther* in 1570–1640, 1710–1780, and 1780–1850.

Investigating the different meanings of *further* and *farther* in the corpus data, we have observed three major trends. First, *further* is much more likely than *farther* to express an ‘additive’ or ‘continuative’ sense in all periods, culminating in 1850–1920 in which it accounts for an overwhelming majority of both senses. Second, against the prescriptive claims limiting *farther* to physical distance only, *farther* in itself is extensively used as a ‘space adjunct’ denoting not only physical but also figurative distance across all periods. This is fairly consonant with the position articulated in the *OED*, in which *farther* is used with expressions of distance in general and *further* where the notion of distance is altogether absent (e.g. in an ‘additive’ or ‘continuative’ sense). In terms of normalized frequencies, however, *further* appears to be preferred over *farther* with physical distance in 1570–1640 and 1850–1920 and with figurative distance in all periods except 1710–1780. These seemingly conflicting results can be ascribed to *further* being on the whole more frequent and thus more likely to be used with all spatial expressions. Third, the linking adverbial use has proved to be a minor one for both *further* and *farther* in all periods, except 1850–1920 in which it is exclusively associated with *further* to a very small extent.

Given the above findings, it is important to acknowledge the important role that frequency plays in form choice. Indeed, the corpus data has shown how *farther* strongly challenges *further* in every syntactic and semantic category in 1710–1780, the only period in which *farther* is more frequent. Similarly, in 1850–1920, while the majority of all observations of *farther* appear to denote the two

spatial senses, *further* vis-à-vis *farther* remains the preferred form with such expressions due to its higher overall frequency. This confirms how arbitrary the so-called differentiation between *further* and *farther* is, which in effect does not translate into actual language usage. It also goes to show how current functional distinctions simply fail to capture how language users typically opt for the more frequent (and thus the more cognitively accessible) of the two forms.

In closing, not only does the current inquiry contribute to a growing body of literature regarding the structural and semantic factors that impact the choice of competing forms, it also sheds light on how related forms may undergo functional differentiation in the course of their development. The analytical results presented here can therefore serve as an inspiration for future diachronic studies aiming to compare the syntactic and semantic properties of any two forms competing over a set of similar functions. More research in this area could expand on the present scope by including a logistic regression analysis to test for possible interaction effects between language-internal (e.g. syntax, meaning) and language-external (e.g. time, dialect) predictors on the response outcome. Variationist investigations of this kind would not only explore the relative and aggregate effects of different factors on form choice, but also lead to a better overall understanding of how the forms in question have evolved through time.

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