Prepositions in (English) Dictionaries

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ABSTRACT

This study investigates dictionaries' explicit and implicit views on the category of preposition. Current English-language dictionaries, almost across the board, define prepositions as words that must take noun-phrase complements (objects). But, in conflict with these definitions, entries that label words like *about*, *before*, *except*, *from*, *in*, *until*, and *with* as prepositions include examples where these words have non-NP complements or none at all. I argue that this analysis is empirically inadequate and results in dictionaries entries that are more complex, less internally consistent, and harder for dictionary users to navigate than is necessary or justified. Adopting a view of prepositions as characteristically taking complements, but not restricted to NP complements, would result in simpler, more accurate, and more user-friendly dictionary entries.

Keywords: prepositions, dictionaries, lexical categories, syntax, adverbs, conjunctions, complements

INTRODUCTION

There are two incompatible views of what constitutes a preposition. This article examines how these two views are reflected, implicitly and explicitly, in the definitions and lexical categorization systems of English dictionaries. I argue that the prevailing view found in

dictionaries is inadequate and that the alternative view, which is more theoretically justified and empirically supported, would lead to more consistent, simpler, and user-friendly dictionary entries.

The first, which I will call "the NP-complement view," is that the preposition category includes only words that obligatorily license a noun-phrase complement—an object, for example, *after dinner*, *anywhere but earth*, *come Christmas*, *despite changing*, *except next week*, *for you*, *given the situation*, *with luck*, and so forth.[1] This view is reflected in the *Cambridge Dictionary*'s definition of **preposition** as "in grammar, a word that is used before a noun, a noun phrase, or a pronoun, connecting it to another word." This definition, more or less standard for centuries and echoed across countless dictionaries and grammars, provides a straightforward way for people to identify prepositions and understand their role. Even those who take a different view agree that the NP-complement definition identifies a highly typical characteristic of prepositions. It also aligns with the expectations and existing knowledge of many first- and second-language users of English dictionaries. For these reasons, the NP-complement view may be a practical and user-friendly approach in the context of general-purpose English dictionaries.

The NP-complement view typically comes packaged with a view that similar words which license clausal complements (e.g., *before you try it*) are "conjunctions," while those that lack any complement (e.g., *I've been here before*) are adverbs. I'll call this "the three-way analysis."

[1]For the sake of simplifying the exposition, this includes "gerunds", as in definition (11), which are taken to "function as nouns," although gerunds and nouns have overlapping but distinct distributions.

The second view is that prepositions, like verbs and other lexical categories, should not be defined by the complements they do or do not license. I'll call this "the flexible-complements view." Under the second view, but not the first, the following "conjunctions" are also prepositions: *after we had dinner*, *nothing to do but leave*, *due to the changes*, *except that it is*, *for free*, *with her hands in her pockets*, and so forth. So too are the words following *came* in *he came after*/*back*/*close*/*down*/*east*/*forth*, which license no complements at all and are therefore typically categorized as adverbs. This flexible-complements view unites under the banner of preposition the undisputed prepositions, words homophonous with them but typically categorized as adverbs and conjunctions, and a few words that share various characteristics with this group but never license NP complements (e.g., *abroad*, *because*, *home*, and others).

To be clear, the flexible view is not that any given preposition is always and only monocategorial. *But* is a coordinator most of the time and a preposition only when it means 'except' (*everything but the kitchen sink*). *Home* is a noun in *I have many homes* and an intransitive preposition in *send them home*. *Clear* is an adjective most of the time, but arguably a preposition in cases like *stand clear of the debris*. *If*, in its conditional use, is a preposition that licenses bare clausal complements (e.g., *If you go, you'll have fun.*). When *if* simply introduces a subordinate interrogative clause as an alternative to *whether*, it is a subordinator.[2]

To provide context for the two views, it's helpful to examine the historical development of these ideas. The following section will trace the evolution of views on prepositions from the ancient grammarians to modern linguistic theories.

[2]For a reasonably complete list of English prepositions, see https://simple.wiktionary.org/wiki/Category:Prepositions.

BACKGROUND

Early definitions and treatments of prepositions. The Alexandrian grammarians, with Dionysius Thrax as a leading figure, were the first to recognize the preposition (πρόθεσις, prothesis) as a distinct part of speech. Dionysius defined *preposition* as a word "placed before all parts of speech in both compound words and syntactic constructions" (Πρόθεσίς ἐστι λέξις προτιθεμένη πάντων τῶν τοῦ λόγου μερῶν ἔν τε συνθέσει καὶ συντάξει. Prothesis esti lexis protithemenē pantōn tōn tou logou merōn en te synthesei kai syntaxei) (Michael 2010, 65). Following Dionysius, the Latin grammarian Priscian defined *preposition* as "uninflected" and as something that "is placed before other parts either in juxtaposition or in composition" (Matthews 2019, 84). William Lily's English definition in 1527 is essentially the same: "a parte of speche put before other words, other [*sic*] iyoneth to the words in compounds, as *Indoctus* ['uneducated'], or asondre from the words, as *Coram Deo* ['before God']" (quoted by Michael 2010, 67). This "before other words" phrasing persisted into at least the late 1700s (e.g., Scott 1786, lv) as applied to English.

Whether or not this observed flexibility signals a broader view of prepositions is unclear. Without doubt, in Ancient Greek and Latin, prepositions overwhelmingly licensed NP complements in "syntactic constructions" as opposed to "composition," which is to say affixation. It's only as prefixes that items like *ἐπι*/*ἐπι-* (*epi*/*epi-*) regularly combine with words of other categories. This is the "inseparable/separable" preposition distinction made by many early grammarians, which today would be framed as bounded/unbounded morphemes, or affixes versus words. Nevertheless, we do find constructions such as *εἰς τότε* (*eis tote*) 'until then' and *ἐκ πάλαι* (*ek palai*) 'from long ago', for which *εἰς* and *ἐκ* are undisputed prepositions and the

complements *τότε* and *πάλαι* are clearly not NPs. Latin, too, has expressions such as *ex tunc* 'from then' and *in perpetuum* 'forever', which have the same structure as the Ancient Greek examples.

Nevertheless, the ancient grammarians may not have had these affixive examples in mind when they mentioned the placement of prepositions "before all parts of speech." They're less than explicit about such things, their grammars being primarily intended as authoritative collections of facts and conclusions about the structure and usage of Greek and Latin, not as guides to readers in understanding the thought processes or reasoning behind those conclusions. Yet clearly, many scholars in the following centuries seem to understand them as having meant that stand-alone prepositions govern "substantives," what I'm calling NPs, and nothing else.

The Rise of the NP-complement view. It was Antonio de Nebrija, in 1481, who first made the NP-complement view explicit (Michael 2010, 65), writing, "Praepositio est quod ponitur nomini per appositionem & aliis etiam partibus per compositionem: ut adeo ad eum" ('A preposition is that which is placed before a noun by apposition and also before other parts by composition: as in *adeo ad eum* I go to him'; Nebrija 1532, folio 54 verso). From that time forward, up to the present day, the view can be consistently found restated in many sources (e.g., Larsen-Freeman and Celce-Murcia 2015).

Challenges to the NP-complement view. There were other views, but they were distinctly marginal, at least at first. For example, "Ramus [writing in the mid 1500s] alone denies the preposition any standing as a part of speech" (Michael 2010, 66). It was Sanctius (1587) who took the bold step of unifying the Latin adverb, conjunction, and preposition under the single

term of PARTICLE (Latin *particula*). The term chosen, be it ADVERB, PARTICLE, PREPOSITION, or something else, is immaterial. What matters is that he saw the commonality of what had previously been seen as three distinct categories and grouped them together regardless of their complementation pattern. He may have gone too far in this, but it was a key step in the development of what I'm calling "the flexible-complement view." Michael (2010, 535) provides an appendix showing 59 out of 275 grammars following some elements of this approach, two-thirds of which appear between 1695 and 1760.

It is only just over a century since general English dictionaries arrived at the currently prevailing three-way preposition/adverb/conjunction analysis, with the 1928 publication of *OED1* being among the first to give **before** that treatment. Samuel Johnson's *Dictionary of the English Language* (1825), has only two categories for **before**: adverb and preposition. The examples where **before** licenses clausal complements (e.g., *before the Phrygian fleet is landed on the shore*) are categorized as adverbs, a position that is rejected today. The same treatment is given in Noah Webster's *A Compendious Dictionary of the English Language* (1806) and Webster's 1828 *American Dictionary of the English Language*, the examples of adverbs once again involve clausal complements (e.g., *before the hills appeared*). But the history of the idea of prepositions is full of much more variability.

The flexible-complement view in English grammars. When it comes to English grammars, the classifications were not entirely well regarded, even by their authors. As for adverbs, for instance, many of them are "put under this class of words because we do not know what else to call them" (Collyer 1735, 78). Yet, James Greenwood was able add some clarity to the flexible-complement view.

> Note, By a *Part of Speech*, is meant a *Word*, for every *Word* is a *Part of our Speech*. I uſe the Word *added*, cauſe Prepoſitions in our Language, are oftimes ſet *behind* a *Word* as well as *before* it; as, *A good while after*. I ſay likewiſe, it is *added to other Parts of Speech*; for tho' the Prepoſition is chiefly added to the *Noun Subſtautive*, yet it is alſo added to other *Parts of Speech*; as for Example; before the *Pronoun*, *he came to him*, or *from me*; before the Verb, as, *to fight*, to *read*, &c. before the *Participle*, as, *after having read*; before the *Article*, as, *with the help of a Sword*; before the *Adverb*, as, *from henceforth* (Greenwood 1711, 71)

John Hunter, in an essay read before the Royal Society in 1784, made a clear argument for the flexible-complement view.

> In the ſentence, "I came *after his departure*" the word AFTER is claſſed with the *Prepoſitions*; while, in this other, "I came *after he departed*" it is claſſed with the *Conjunctions*. The word AFTER is, however, the ſame in both ſentences; its meaning is the ſame, and its effect preciſely the ſame. The only circumſtance of diſcrimination is, that, in the firſt example, it is prefixed to a noun ſubſtantive,—*his departure*; in the latter, it is prefixed to a nominative and a verb—*he departed* [. . .]
>
> From theſe obſervations it ſhould ſeem that there is no ſufficient reaſon for claſſing the word AFTER, in the one caſe, with the *Prepoſitions*, and, in the other, with the *Conjunctions*. (Hunter 1784, 113–14)

The flexible-complement view continued to be reflected in grammars such as Bain (1863). The argument, though, was mostly dormant until it was taken up and extended by Jespersen (1924), who made the point that verbs may be intransitive or transitive and may take a wide range of complements, and prepositions should be accorded the same treatment.

Modern linguistic approaches to prepositions. The flexible-complement view gained significant traction and theoretical support in the latter half of the twentieth century, with the advent of modern syntactic theories. Linguists such as Michael Geis (1970), Joseph Emonds (1972), and Ray Jackendoff (1973) provided compelling arguments and evidence for analyzing prepositions as governing a wide range of complement types. This perspective has since been embraced by many contemporary syntactic frameworks. Grammars and grammatical frameworks of English that endorse all or part of this view include Generative Grammar (Chomsky 1965;[3] Radford 2004), Generative Semantics (McCawley 1998), Head-Driven Phrase Structure Grammar (Sag, Wasow, and Bender 2003), Word Grammar (Hudson 2010), Lexical-Functional Grammar (Bresnan, Asudeh, Toivonen, and Wechsler 2014), Construction Grammar (e.g., Michaelis 2017), and even some pedagogical grammars (e.g., Brinton and Brinton 2010).

The flexible-complement view is developed and argued most thoroughly in *The Cambridge Grammar of the English Language* (*CGEL*, Huddleston & Pullum 2002), which states "in keeping with much work in modern linguistics, we adopt a significantly different conception of prepositions. We take them to be heads of phrases—phrases comparable to those headed by

[3]This is not explicit in Chomsky 1965, but see his footnote 13, p. 200.

verbs, nouns, adjectives, and adverbs, and **containing dependents of many different sorts**" (*CGEL*, 598, emphasis added).

Leech's critique of the flexible-complement view. In his 2004 review of *CGEL*, Leech argues that the flexible-complement view of prepositions is flawed. He claims that this view ignores the distinction between sequences that can occur in a prepositional phrase and an abbreviated clause, citing the examples *despite their arrival* vs. **although their arrival*, *despite dating from the 1400s* vs. **although dating from the 1400s*. However, this is no more surprising than similar differences in verb phrase valency: *I observed their arrival* vs. **I thought their arrival*; *they authorized going to the scene* vs. **they consent going to the scene*.

Leech argues that the expanded class of prepositions lacks morphological clues, leading the grammar to rely on "unmotivated" criteria for distinguishing prepositions from adverbs, such as lack of *-ly* and ability to take a complement. Yet Leech himself offers no motivation for a reliance on morphological clues or for the NP-object criterion and ignores the extensive distributional evidence set out below (in the section "The NP-complement view accounts for the data better").

Furthermore, Leech claims that preposition stranding, a distinctive property of prepositions, only applies when words like *before* and *after* are governing NPs: *<u>the mirror</u> I'm standing before* ___, but not **<u>you go</u> I'm leaving before* ___. This should not surprise us: there are no constructions in English that allow the fronting of a bare clause like *you go*. And, of course, there is nothing to strand for intransitive prepositions.

In conclusion, while Leech raises some points worth considering, his critique fails to undermine the theoretical and empirical support for the flexible-complement view of prepositions.

The views reflected in dictionaries of linguistics, grammar, and lexicography. The flexible-complement view is also reflected in **preposition** or related entries in dictionaries of linguistics, grammar, and lexicography (1)–(6).

(1) [. . .]The commonest extension, in grammars of English, is to similar constructions where no complement follows. E.g. *outside* is a preposition both in *They live outside Los Angeles* and in *They live outside*. Further extensions, in some treatments, are to constructions where the complement will be of another category. E.g. *since* would be a preposition both in *since Tuesday* and, with a clause as its complement, in *since I saw him*. In the widest extension, *when* would also be a preposition in *when I saw him*. (*The Concise Oxford Dictionary of Linguistics*, Matthews 2014)

(2) **Prepositional complement:** A prepositional complement is typically a *noun phrase, but can be realized by other phrase types or by a clause. (*The Oxford Dictionary of English Grammar*, Aarts 2014)

(3) A constituent that prototypically links a verb, adjective or noun to another noun phrase, which it precedes: e.g. *works <u>in</u> the bank, small <u>in</u> stature, books <u>about</u> caving*; [. . .] Some analyses distinguish intransitive prepositions as in *He tripped over* and transitive prepositions as in *He tripped over the carpet*. (Latin *prae* ‘in front of’, *positus* ‘placed’.) Prepositions also link verbs and adjectives, as in *What counts <u>as</u> expensive?*, *That passes <u>for</u> amusing in these parts*. Some analysts treat items such as *after* in *after we arrived* and *before* in *before he resigned* as prepositions taking a clause as a complement; an example

from non-standard English is *without she helps = unless she helps*. (*The Cambridge Dictionary of Linguistics*, Brown and Miller 2013)

(4) **Intransitive preposition:** A preposition-like adverbial which has no overt object NP, when this is regarded as belonging to the lexical category Preposition. (*A Dictionary of Grammatical Terms in English*, Trask 1992)

(5) A PART OF SPEECH typically governing a following word or phrase, and expressing relationships of time, place, cause, modality etc. (*Dictionary of Lexicography*, Hartmann and James 1998)

(6) [. . .] Many linguists subscribe to a broader view of prepositions. To form a prepositional phrase, prepositions can combine with not only an NP but also a PP (e.g. *since before breakfast*), a clause (e.g. *since they finished their breakfast*) or nothing (e.g. *I haven't seen him since*). In this account, it is possible to talk of 'transitive' and 'intransitive' prepositions. (*A Dictionary of Linguistics and Phonetics*, Crystal 2008)

With the background of the two competing views and a brief history of prepositions established, it's now possible to examine the views reflected in monolingual general English dictionaries. I consider first the explicit definitions of **preposition**, and then I examine the entries for various uncontroversial prepositions such as *for*, *in*, and *with* to determine to what extent the definitions and the labeling of individual headwords match.

IN GENERAL ENGLISH DICTIONARIES

Dictionary sample. The dictionaries selected for this study represent a diverse range of well-established, authoritative sources that capture different aspects of English lexicography from various publishers and various English-speaking countries and beyond. The selection includes a

mix of learner's dictionaries, collegiate dictionaries, unabridged dictionaries, and specialized regional dictionaries, along with a bilingual dictionary, ensuring a broad examination of how prepositions are treated across various dictionary types and cultural contexts. The list is as follows in alphabetical order:

- *American Heritage Dictionary*, 5th edn. (*AHD*)
- *Cambridge Advanced Learner's Dictionary* (*Cambridge*)
- *Collins COBUILD Advanced Learner's Dictionary* (*COBUILD*)
- *Kenkyusha's New English–Japanese Dictionary*, 5th edn. (*Kenkyusha*)
- *Longman Dictionary of Contemporary English* (*LDOCE*)
- *Macmillan English Dictionary: For Advanced Learners of American English* (*Macmillan*)
- *Macquarie Dictionary*, 7th edn. (*Macquarie*)
- *Merriam-Webster Dictionary* (*MW*)
- *Oxford Advanced Learner's Dictionary* (*OAL*)
- *Oxford English Dictionary* (*OED Online*)
- *Wiktionary* (*Wiktionary*)

By analyzing this diverse set of dictionaries, this study aims to provide a comprehensive understanding of how prepositions are defined and categorized in contemporary English lexicography, while also considering historical trends, regional variations, and cross-cultural influences. The selection criteria prioritize reputation, authority, diversity of type, geographic representation, and accessibility, all of which contribute to the rigor and reliability of the study's findings.

Dictionary definitions of the category. The following are the definitions of **preposition** in the selected volumes.

(7) A word or phrase placed typically before a substantive and indicating the relation of that substantive to a verb, an adjective, or another substantive, as English *at*, *by*, *with*, *from*, and *in regard to*. (*AHD*)

(8) in grammar, a word that is used before a noun, a noun phrase, or a pronoun, connecting it to another word. (*Cambridge*)

(9) A preposition is a word such as 'by', 'for', 'into', or 'with' which usually has a noun group as its object. (*COBUILD*)

(10) 前置詞 *in*, *by*, *for*, *with*, *to* など ('**preposition** *in*, *by*, *for*, *with*, *to* etc.') (*Kenkyusha*)

(11) a word that is used before a noun, pronoun, or gerund to show place, time, direction etc. (*LDOCE*)

(12) a word that usually comes before a noun or a pronoun and shows its relation to another part of the sentence. In the sentences "I left it on the table" and "She came out of the house," the words "on" and "out of" are prepositions.[4] (*Macmillan*)

(13) (in some languages) one of the major form-classes, or parts of speech, comprising words placed before nouns to indicate their relation to other words or their function in the sentence. *By, to, in, from* are prepositions in English.[5] (*Macquarie*)

[4]Macmillan has no entry for the putative word *out of*, but it calls the string a "preposition phrase" under **out**.

[5]Only Macquarie explicitly mentions English and other languages.

(14) a function word that typically combines with a noun phrase to form a phrase which usually expresses a modification or predication. (*MW*)

(15) a word or group of words, such as *in*, *from*, *to*, *out of* and *on behalf of*, used before a noun or pronoun to show place, position, time or method (*OAL*)

(16) *Grammar*. An indeclinable word or particle governing (and usually preceding) a noun, pronoun, etc., and expressing a relation between it and another word. Also formerly used with reference to: such a word when combined as prefix with a verb or other word, and certain other particles of similar force which are used only in combination (also called inseparable prepositions). (*OED Online*)

(17) (grammar, strict sense) Any of a class of non-inflecting words typically employed to connect a following noun or a pronoun, in an adjectival or adverbial sense, with some other word: a particle used with a noun or pronoun (in English always in the objective case) to make a phrase limiting some other word. (*Wiktionary*)

Definitions (8), (11), (12), and (14) clearly represent the NP-object view with no hedging. Uniquely, (10) simply gives a list, taking no position on complementation. The others ((7), (9), (13), (15), and (16)) hedge (e.g., "typically," "usually," "etc."), but none mention intransitive prepositions or the possibility of licensing PP complements, predicative complements, clausal complements, or anything else. There is no explicit acknowledgement of the flexible-complement view, which is only reflected in technical definitions in specialist dictionaries (1)–(6).

As a reflection of the way many lay people use the word, all the definitions seem valid. So, perhaps the flexible-complement view could be considered too technical for inclusion in a general English dictionary. And yet the inclusion of technical vocabulary in general dictionaries

is centuries old and has been on the increase (Béjoint 1988). Where both folk and technical definitions exist (e.g., **rent**, **theory**, **particle**), separate entries are typically given. *LDOCE,* for instance, provides four senses for **particle**, with 3 and 4 being technical senses. All the dictionaries include **determiner**, which, in conception, is an early twentieth-century innovation and seems at least as technical as the flexible-complement view of prepositions. As such, the omission of this sense of **preposition** is notable.

Categorization of individual prepositions. I consider here the following words: *about*, *as*, *before*, *by*, *except*, *for*, *from*, *in*, *on*, *until*, and *with*, along with *depending* and *according*. This is admittedly an opportunistic set with no central justification except that they are all very common undisputed prepositions and that the list covers a broad semantic range. The last two were chosen specifically to highlight newer prepositions (Reynolds and Pullum 2013).

The labels assigned to these words show broad inter-dictionary agreement in assignment of preposition, adverb, and conjunction categories. Nevertheless, some differences pertain. For example, *Cambridge* lists **for** as only a preposition, while the other dictionaries say it is also a conjunction, with *COBUILD* calling it a "subordinating conjunction," the only entry for which that phrasing is used. *AHD*, *COBUILD*, and the *OED Online* also assign it to the adverb category. Only four of the dictionaries have **with** as an adverb: *AHD*, *Macquarie*, *OED Online*, and *Wiktionary*.

When it comes to internal agreement with definitions, though, there is less consistency. *From* is assigned only to the preposition category by all dictionaries, and yet this contradicts the NP-only view reflected in their definitions of **preposition** because *from* licenses non-NP complements. Consider the following examples from the entries, in which the complement is

underlined and its phrase type identified: *How far is it from here* (PP;[6] *COBUILD*); *Things went from bad to worse* (AdjP; *Cambridge*); and *That dates from before the war* (PP; *Kenkyusha*). *By* is consistently marked as a preposition and an adverb, even though it too licenses non-NP complements. The following examples are under the preposition entry in the respective dictionaries: *They were persuaded little by little* (AdvP; *AHD*); *Godard's first film was better by far* (AdvP; *LDOCE*); and *They must have sailed by now* (PP; *OED Online*).

The *AHD* and *Cambridge* both employ an "idiom" category, seemingly to deal with items that don't fit any of their established categories: *except for* and *on to* (PP; *AHD*), *in that* and *except that* (*that* clause; *AHD* and *Cambridge* respectively). But it's not clear why, for instance, **except that** is an "idiom," while *from bad to worse* is not. A number of dictionaries use "phrase" for a similar purpose, for example, *as against*, *as ever*, *as follows*, *as opposed to*, *as well*, *as yet* (various complement types; *COBUILD*), and *about to* (*to* infinitival; *Macquarie*). But again, does *from here* get a different treatment from *as yet*? And *COBUILD* has separate entries for various strings, such as **as to**, **as for**, **as of**, **as from**, and **as though**, with no categorial label, saying only "used with other prepositions and conjunctions."

In summary, dictionaries generally agree on the identification of prepositions, adverbs, and conjunctions, with some exceptions.

Accounting for other types of complements. Despite broad inter-dictionary categorial agreement, the NP-complement view fails to account for prepositions that license other types of

[6]PP under the flexible-complement view, but AdvP under the NP-complement view. Either way, not NP. The same applies with subsequent PP examples lacking complements.

phrases. It is in these cases where dictionaries show the most inconsistency, both internally with their own definitions of prepositions and in comparison with each other's categorial decisions.

Such cases are not rare; they show up regularly, even in the examples provided by the dictionaries themselves. Consider the following:

(18) AdjP complements

a. The constant changing from hot to cold. (*OED Online*)

b. The problem is regarded as serious. (*LDOCE*)

(19) PP complements

a. From over the fence we hear a rumpus. (*OED Online*)

b. The soldiers slept at night, except for one who stayed awake to keep watch. (*Cambridge*)

(20) AdvP complements

a. [It] has, until lately, been a question among chemists. (*OED Online*)

b. Rely, Except metaphorically, has not a personal reference. (*OED Online*)

c. Before long there was a crowd of 200 or so. (*LDOCE*)

(21) Subordinate-clause complements: interrogative, exclamative, and declarative

a. There have been violent quarrels about whether the whole is greater than a part. (*Wiktionary*)

b. I've been thinking about what you said, and I've decided that you're right. (*LDOCE*)

c. He's always going on about what a great job he's got. (*COBUILD*)

d. Let him die, in that he is a Foxe. (*OED Online*)

(22) Infinitival clause complements

a. I am about to start. (*Kenkyusha*)

b. That's <u>for you to decide</u>. (*Cambridge*)

c. It might be possible <u>for a single woman to be accepted as a foster parent</u>. (*COBUILD*)

(23) Verbless predicand–predicate complements

a. Joanne stood <u>with her hands on the sink</u>. (*COBUILD*)

b. We lay in bed <u>with the window open</u>. (*LDOCE*)

The complements in the underlined PPs are AdjPs in (18), PPs in (19), and AdvPs in (20). They are subordinate clauses in (21) and infinitivals in (22). The verbless predicand–predicate constructions ("small clauses") in (23) are not even imagined in any analysis before the twentieth century. The NP-complement view of prepositions as part of the three-way adverb/preposition/conjunction analysis has nothing at all to say about these examples, and the English dictionaries are left to deal with them on an ad-hoc basis, sometimes calling them "idioms" or "phrases," sometimes avoiding assigning any lexical category at all, but mostly categorizing them as prepositions despite the incompatibility with their definitions thereof.[7] Once one goes down this path, then the justification for analyzing **before** as preposition, adverb, and conjunction is undermined.

It is difficult to say how conscious the dictionary editors are about including these examples, but the *OED Online* goes so far as to say of (20b) "This construction may be regarded as an instance of the use of the preposition [. . .] with adverbial phrase as object" (*OED Online* **except** 3a). Suffice it to say that this is a highly unorthodox view of the object function, contrary even to the *OED Online*'s own definition of **object** (s.v. I.6.).

[7]*Cambridge* is not only internally inconsistent but also wildly heterodox when it says, in its entry for **to** (*preposition*), "used before a verb to show that it is in the infinitive" (A1).

In summary, the evidence presented in this section demonstrates that the NP-complement view, which is prevalent in general English dictionaries, fails to account for the wide range of complement types that prepositions can license. The inconsistencies between the dictionaries' definitions of prepositions and their categorization of individual words, as well as their ad-hoc handling of non-NP complements, highlight the limitations of their approach. These findings underscore the need for a more comprehensive and theoretically sound view of prepositions, one that acknowledges their ability to take various types of complements beyond just noun phrases. The flexible-complement view, as advocated by Pullum (2009) and others, offers a promising alternative that can better account for the actual behavior of prepositions in English. In the following section, I examine critiques of dictionaries' treatment of prepositions and explore how the NP-complement view falls short in capturing the full range of data.

THE NP-COMPLEMENT VIEW ACCOUNTS FOR THE DATA BETTER

In arguing for the flexible-complement view, Pullum (2009) specifically critiques how dictionaries address prepositions. Analogizing the NP-complement view to pre-Darwinian biology, he argues that dictionaries' adherence to the NP-complement view is antithetical to their purpose and misleads their readers. The different views, he claims, cannot simply be waved away by appealing to epistemological relativism; the NP-complement view, according to Pullum, is simply wrong. He concludes that dictionaries' approaches to categorial analysis are strangely at odds with the research and discernment that they put into describing word senses.

Pullum was not the first to voice such critiques; critical observations about dictionaries' systems of lexical categorization predate his by decades. Echoing Cowie (1983, 105), Wachal observes that English dictionaries devote little to no effort to explaining their lexical

categorization systems, and "their management of part-of-speech labels is often oversimplified" (1994, 166). As a result, Wachal says, readers who wish to know what the dictionary considers to be a preposition will have little recourse but to look up **preposition**. It matters little which dictionary one consults because, Wachal observes, "all definitions are substantially the same" (1994, 168): they revolve around the licensing of an NP object. As definitions (1)–(6) show, little has changed in the intervening thirty years.

For most general English dictionaries, there is an implicit use of the lay definition for assigning categories to headwords (Wachal 1994). The results of this practice turn out to be under-theorized, complex, and internally contradictory, at least when it comes to prepositions. Consider, for instance, the complexity of **before** under the NP-complement view: it is an adverb when it licenses no complement, a conjunction when it licenses a clausal complement, and a preposition when it licenses an NP object, despite essentially identical senses (i.e., 'earlier'). In contrast, the flexible-complement view that **before** is only and always a preposition is much simpler. It would unify many senses, allowing users to find the sense they seek more quickly.

The NP-complement view of prepositions is not limited to English dictionaries but is also hegemonic in contemporary pedagogical grammars of English (Pullum 2009). For example, it is the one set out in *Collins COBUILD English Grammar* (2017). Yet, there too, the analysis suffers from internal inconsistencies. On page 335, the *COBUILD* grammar claims that "many prepositions can also be adverbs:[8] that is, they can be used without an object," but three pages

[8]I take this to mean that a given word is sometimes a preposition and sometimes an adverb and not that any given word token is both adverb and preposition at once.

later, it refers to "compound direction prepositions" (e.g., *northeast*). Words like *northeast*, though, are intransitive; **I went northeast the road* is ungrammatical.

A much more significant problem than these inconsistencies is the glaring difference in the functional distributions of undisputed adverbs, prepositions, and conjunctions. As Jackson argues, correct labels are important because "the word-class label provides basic information about the syntactic operation of a lexical item. To be told that an item is a "noun" is to be informed about the places at which it may occur in syntactic structure" (1985, 55). Labeling words like *before* as adverbs or conjunctions undermines that purpose.

Adverbs versus prepositions. The issue of mismatches between labels and functional characteristics becomes clear when comparing the functional behaviors of adverbs and prepositions. In almost every case where there is a functional difference between AdvPs and PPs, the intransitive words (like *apart, before, by, between, in, on, out, up* etc.) behave like PPs and unlike AdvPs. PPs function as predicative complements of *be*, while AdvPs typically don't. Compare *The trip was <u>between Toronto and Québec</u>* and **The trip was <u>easily</u>*. Intransitive words like *off, on,* and *over* can also function as predicative complements of *be* (e.g., *The trip was <u>off</u>*). Similarly, PPs function as the second complement in a *put* VP (*put it <u>on the table</u>*), but AdvPs don't (**put it <u>carefully</u>*). Intransitive words like *down, home, in, there, through, under*, etc. pattern with the PPs in this context, not the AdvPs. Additionally, a wide range of verbs license PP complements, including the so-called "phrasal verbs" (e.g., *give <u>up</u>*), while AdvP complements are extremely rare.[9] Once again, the intransitive words pattern with the PPs.

[9] *Treat it <u>gently</u>* is an example; compare ?*treat it*.

This inconsistency in labelling extends to PPs, which allow PP complements (*from under the bed*) much more readily than AdvP complements. In cases where PPs license transitive PPs as complements, the intransitive words are also possible (*from before, towards home, in between*, etc.). Furthermore, PPs function as modifiers in NPs (*a down-the-rabbit-hole idea, the door in the wall*), while AdvPs don't.[10] Once again, the intransitive words in question behave like PPs (e.g., *the down escalator, the door in*). Similarly, locative PPs and intransitive words typically allow *right* and *just* as modifiers: *right through* (*the gap*), *just under* (*the limit*). AdvPs don't allow this: **right transversely*. Instead, AdvPs typically allow modification by *very* and *more*, which the intransitive words don't. In all these ways, the intransitive words behave like prepositions and unlike adverbs.

Consider, also, Emonds's (1972) point that expressions like *into the bin with it* or *off to bed with you* highlight another function of PPs that is not shared by AdvPs (e.g., **downwardly with fascism*). These constructions have parallels with the intransitive words in *down with Fascism* and *out with the old, in with the new*.

Conversely, a prototypical function for adverbs is pre-head modifier in a VP (e.g., *I really/just/still/actually like it*.), a function in which the intransitive words are completely ungrammatical (e.g., **I apart/by/in/on/out/up like it*).

Given these numerous, diverse, and stark differences, it seems preferable to treat the intransitive words as prepositions and not as adverbs.

[10]Except in very rare cases with de-verbal nouns, such as *the change globally in supply* (Payne, Huddleston, and Pullum 2010).

Conjunctions versus prepositions. While the distinctions between adverbs and prepositions are quite clear, the differences between subordinating conjunctions and prepositions are less systematic because there are so few subordinators, the central members being only *that, whether*, and *if* in its non-conditional use.[11] Also, the number of other putative "conjunctions" is small, perhaps fewer than twenty words, including: *after*, *although*, *because*, *before*, *except*, *if* (conditional), *since*, *though*, *until*, and *while*.

Nevertheless, distributional evidence can be brought to bear. Subordinate clauses marked with the subordinators function as complements in verbs of thinking (e.g., *I know that it's true*, *I don't know whether*/*if it's true*, *I believe that it's true*, *I wonder whether*/*if it's true*). Phrases like *because it's true*, *since it's true*, *after it's true*, etc. are fully grammatical here, but they are adjuncts rather than complements. They can co-occur with the subordinate clauses, which themselves cannot function as adjuncts in this context, and so cannot co-occur. Compare items a and b in (24), (25), and (26).

(24) a. I still wonder whether it's really true after I know it's true. ["conjunction" adjunct]

b. I still wonder, after I know it's true, whether it's really true. ["conjunction" adjunct]

(25) a. I don't know whether it's really true after midnight. [PP adjunct]

b. I don't know, after midnight, whether it's really true. [PP adjunct]

(26) a. *I don't know whether it's really true that it's true.[12] [subordinator adjunct]

b. *I don't know, that it's true, whether it's really true. [subordinator adjunct]

[11]For a comparison to coordinators, see Reynolds 2011.

[12]Here *that it's true* can be a complement in the AdjP *really true that it's true*, but that's not the construction in question.

Thus, the "conjunctions" function just like prepositions, and there's a clear difference between them and the subordinators.

Other evidence. *CGEL* (p. 1327) observes that a clausal complement can be coordinated with an object in sentences like *After* [*their rubber plantation failed, and her husband's death on the Upper Rewa in 1885*], *she maintained her three young children with a tiny store*. In such a case, the dictionary definitions would put *after* in a superposition of being both a preposition and a "conjunction," an untenable situation. The evidence from coordination goes further. Consider (27) and (28).

(27) a. It went quickly and smoothly. [AdvP + AdvP]

b. It went up and to the left. [intransitive + PP]

c. *It went quickly and up. [AdvP + intransitive]

(28) a. She tells us that she can't come or whether to expect her Monday or Tuesday.
[subordinator-marked clause + subordinator-marked clause]

b. She tells us before noon or after she arrives. [PP + "conjunction"-marked clause]

c. *She tells us that she can't come or after she arrives.
[subordinator-marked clause + "conjunction"-marked clause]

The two adverbs in (27a) coordinate fine, as do *up* and *to the left* in (27b). If *up* were an adverb, as the dictionaries would have it, then (27b) should be zeugmatic, while (27c) should be fine. Instead, *up* coordinates naturally with the PP *to the left*, while (27c) appears to be a case of syllepsis at best and an error at worst. The reason, by now, should be clear: *up* is an intransitive preposition, not an adverb. Similarly, (28a) coordinates two subordinator-marked clause, (28b) is

fine, and (28c) is clashingly bad because *although* is a preposition, not a subordinator. The syntactic evidence is overwhelming.

There is more to say on the topic, but for that I refer the reader to *CGEL*, particularly Chapter 7, Sections 1, 2.1, and 2.4 (see also Ch. 11 §8.1 and §8.2).

IF DICTIONARIES WERE TO ADOPT THE FLEXIBLE-COMPLEMENT VIEW

To help the reader conceptualize what a shift to the flexible-complement view would look like, I present a number of relevant entries, showing how they might change under this proposal.[13]

First, mention of NP complements would be removed from the definition of **preposition**, or at the very least backgrounded. For example, *OAL*'s entry would change from "**preposition** [. . .] a word or group of words such as in, *from*, *to*, *out of*, and *on behalf of*, used before a noun or pronoun to show place, position, time, or method" to the following, where underlines mark changes:

> **preposition** [. . .] a word or group of words such as *in*, *from*, *to*, <u>*as if*</u>, and <u>*in front*</u>, <u>typically used to show relationships between a word and other parts of the sentence, including relationships of position, time, method, or comparison</u>

[13]A reviewer asks, "Does this result in a definition that provides necessary and sufficient conditions for applying the word *definition*?" No, the resulting definitions do not have this property, but neither do the existing definitions, which rely on family resemblance and typicality. It's also important to note that the goal is to define **preposition**, not **English preposition**, which rules out English-specific syntactic criteria as part of the definition.

MW's entry would change from "**preposition** [. . .]: a function word that typically combines with a noun phrase to form a phrase which usually expresses a modification or predication" to:

> **preposition**... a function word that characteristically takes a complement (which is often but not always a noun phrase) and expresses a relation (such as spatial, temporal, causal, modal, or comparative) between the complement and other parts of the sentence, and that is usually morphologically simple.

OED Online's relevant entry is:

> 1a *Grammar*. An indeclinable word or particle governing (and usually preceding) a noun, pronoun, etc., and expressing a relation between it and another word. Also formerly used with reference to: such a word when combined as prefix with a verb or other word, and certain other particles of similar force which are used only in combination (also called inseparable prepositions).

I suggest modifying it to:

> 1a. An indeclinable word or particle typically preceding a word, phrase, or clause and expressing a relation between it and another constituent. Also formerly used with reference to: such a word when combined as a prefix with a verb or other word, and certain other particles of similar force which are used only in combination (also called inseparable prepositions).

Entry 1b is obsolete and would remain as it is. I propose adding definition 1c:

> *Syntax.* An indeclinable word heading a preposition phrase with or without an overt complement and typically denoting spatial, temporal, causal, modal, comparative, or other relations between any complement (prototypically a noun phrase, but also prepositional phrases, clauses, etc.) and another constituent.

Because *OED Online* is a historical dictionary, the original sense has been made to resemble more closely the traditional idea of preposition, while 1c is added to deal with modern technical conceptsof heads and phrases, which should not be anachronistically attributed to earlier uses.

As for the entries for the prepositions themselves, for the most part, all adverbs and "conjunctions" that are homonymous with prepositions would be brought into the preposition entry. For example, *OAL* has one entry for **apart** *adverb* and one for **apart from** *preposition*.

> **apart** [. . .] *adv*. **1** separated by a distance, of space or time. *The two houses stood 500 metres apart. • Their birthdays are only three days apart. •* (figurative) *The two sides in the talks are still a long way apart* (= are far from reaching an agreement). **2** not together, separate or separately: *We're living apart now. • Over the years, Rosie and I had* ***drifted apart.***[14] *• She keeps herself apart from other people. • I can't* ***tell*** *the twins* ***apart*** (= see the difference between them). **3** into pieces: [. . .] **4** used to say that sb/sth is not included in what you are talking about: *Victoria apart, not one of them seems suitable for the job.*
>
> **apart from** [. . .] *prep*. **1** except for: *I've finished apart from the last question.* [. . .] **2** in addition to; as well as: *Apart from their house in London, they also have a villa in Spain.* [. . .]

[14]Bold marks collocations.

I suggest merging these under **apart** *preposition*, and marking transitivity.[15] Again, changes are underlined.

> **apart** [. . .] *prep*. **1** [I] separated by a distance, of space or time. *The two houses stood 500 metres* ***apart*** (***from*** *each other*). • *Their birthdays are only three days apart.* • (figurative) *The two sides in the talks are still a long way apart* (= are far from reaching an agreement). **2** [I] not together, separate or separately: *They're living* ***apart*** (***from*** *their parents*) *now.* • *Over the years, Rosie and I had* ***drifted apart****.* • *She keeps herself apart from other people*. • *I can't* ***tell*** *the twins* ***apart*** (= see the difference between them). **3** [I] into pieces: [. . .] **4** [I] except for: ***Apart from*** *my hating the job, it's fine.* • *I've finished* ***apart from*** *the last question.* • *Victoria apart, not one of them seems suitable for the job.* [. . .] **5** [I] in addition to; as well as: *Apart from their house in London, they also have a villa in Spain.* [. . .]

Here is the relevant entry for **before**.

> **before** [. . .] *prep., conj., adv.*
>
> ■ *prep*. **1** earlier than sb/sth: *before lunch* • *the day before yesterday* • *The year before last he won a gold medal, and the year before that he won a silver.* • *She's lived there since before the war.* • *He arrived before me.* • *She became a lawyer as her father had before her.* • *Leave your keys at reception before departure.* • *Something ought to have been done before now.* • *We'll know*

[15]I thank a reviewer for the suggestion to mark transitivity.

before long (= soon). • *Turn left just before* (*you reach*) *the bank.* **2** (*rather formal*) used to say that sb/sth is in a position in front of sb/sth: *They knelt before the throne.* • *Before you is a list of the points we have to discuss.* [. . .] **3** used to say that sb/sth is ahead of sb/sth in an order or arrangement: [. . .] **4** used to say that sth is facing sb in the future: [. . .] **5** in the presence of sb who is listening, watching, etc: [. . .] **6** (*formal*) used to say how sb reacts when they have to face sb/sth: [. . .]

■ *conj.* **1** earlier than the time when: *Do it before you forget.* • *Did she leave a message before she went?* **2** until: *It may be many years before the situation improves.* • *It was some time before I realized the truth.* **3** used to warn or threaten sb that sth bad could happen: *Put that away before it gets broken.* **4** (*formal*) rather than: *I'd die before I apologized!*

■ *adv.* at an earlier time; in the past; already: *You should have told me so before.* • *It had been fine the week before* (= the previous week). • *That had happened long before* (= a long time earlier). • *I think we've met before.*

And a proposed revision to reflect the flexible-complement view.

before [. . .] *prep.* **1** [T, I] earlier than sb/sth: *before lunch* • *the day before yesterday/we met* • *The year before (last) he won a gold medal, and the year before that he won a silver.* • *Do it before you forget.* • *She's lived there since before the war (started).* • *He arrived before me/I did.* • *She became a lawyer as her father had before her.* • *Leave your keys at reception before departure/you leave.* • *Something ought to have been done before (now).* •

We'll know ***before long*** (= soon). • *That had happened long before* (= a long time earlier). • *Turn left just before* (*you reach*) *the bank*. **2** [T] (*rather formal*) used to say that sb/sth is in a position in front of sb/sth: *They knelt before the throne.* • *Before you is a list of the points we have to discuss.* [. . .] **3** [T] used to say that sb/sth is ahead of sb/sth in an order or arrangement: [. . .] **4** [I] until: *It may be many years before the situation improves*. • *It was some time before I realized the truth.* **5** [I] used to say that sth is facing sb in the future: [. . .] **6** [I] used to warn or threaten sb that sth bad could happen: *Put that away before it gets broken.* **7** [T] in the presence of sb who is listening, watching, etc: [. . .] **8** [T] (*formal*) used to say how sb reacts when they have to face sb/sth: [. . .] **9** [I] (*formal*) rather than: *I'd die before I apologized!*

These changes are small and seem to impose no additional burden on the learner apart, perhaps, from that conferred by familiarity with the NP-complement view. The result is fewer entries and sub-entries along with slightly shorter entries. This could facilitate lookup as there is evidence that learners tend not to browse the whole entry or know that they should look up *because of* instead of *because* (Nesi 2000).

The entry for **apart** categorizes it as a preposition, not an adverb, and merges **apart from**, which had already been inadvertently included in the examples.[16] **Before** removes the extra

[16]Again, note the inconsistencies. *She keeps herself apart from other people* is under **apart**, not **apart from**. In *Victoria apart*, the preposition is used after the NP, not before. The examples include *before now* and *before long* even though neither *now* nor *long* are NPs. If even the

adverb and conjunction category labels. Both remove redundant definitions (e.g., "earlier than sb/sth" and "at an earlier time; in the past; already"), merging the examples with and without complements and showing how alternative complement types are possible (e.g., *The two houses stood 500 metres apart* (*from each other*). • *the day before* (*yesterday*/*we met*) • *Apart from my hating the job, it's fine.*)

CONCLUSION

This study has reviewed the treatment of prepositions in a diverse set of English dictionaries, ranging from learner's dictionaries to the comprehensive *OED Online*. Across this spectrum, I find that dictionaries overwhelmingly adopt a view of prepositions that restricts them to words that obligatorily license noun-phrase complements. This NP-complement view leads to an analysis in which words like *before* and *until* are categorized variously as adverbs, conjunctions, or prepositions depending on whether the complements they license are noun phrases, clauses, or nothing at all.

I have argued that this traditional analysis is empirically inadequate, failing to account for the wide range of complement types that prepositions can license. It also fails to recognize the prevailing view in contemporary linguistics, which holds that prepositions, like verbs and other lexical categories, should not be defined solely by the complements they take. The NP-complement view results in dictionary entries that are more complex, less internally consistent, and harder for users to navigate than is necessary or justified.

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lexicographers can't keep these distinctions and definitions straight, perhaps they should be abandoned.

In contrast, I suggest that dictionaries would better serve their users by adopting the more empirically adequate flexible-complement view, which recognizes that prepositions characteristically take complements but are not restricted to NP complements. Under this view, the adverb and conjunction senses of words like *after*, *before*, and *until* would be merged under single preposition entries, eliminating redundant senses and sub-entries and simplifying lookup. Minor changes to the definition of *preposition* itself would also be required to decouple it from the notion of obligatory NP complements and focus more on the relational nature of prepositions.

Admittedly, implementing these changes would require a significant shift in how prepositions are presented in dictionaries, and the flexible-complement view may not yet have achieved widespread acceptance among dictionary users. Lexicographers would need to carefully consider how to present the revised entries in a way that is accessible and useful to users with varying levels of linguistic knowledge and different lookup needs.

Learner's dictionaries, which prioritize clarity and simplicity, may be best positioned to lead this change. But even the *OED Online*, with its historical focus, could benefit from acknowledging the flexible-complement view in its more contemporary senses of preposition. And, in fact, the *OED Online* implemented a shift from categorizing words like *many* as adjectives to "Adjective (*determiner*)," a change that was adopted for the publication of the Third Edition online (Edmund Weiner, personal communication, May 29, 2008). This shift illustrates that dictionaries can adapt to contemporary linguistic theories and improve their categorization practices. Ultimately, all dictionaries share the fundamental purpose of describing the language and guiding users to the information they seek as efficiently as possible. Adopting the flexible-complement view of prepositions would further that purpose.

This study highlights the ways in which dictionaries' treatment of prepositions has remained stagnant over the past century despite significant advances in linguistic understanding. It is my hope that this work will spur lexicographers to reevaluate their approach to this category and consider the benefits of embracing a more empirically sound view of prepositions. By doing so, they can create dictionaries that are more accurate, consistent, and responsive to the needs of contemporary users, fulfilling their vital role in promoting effective communication and language learning.

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