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## A *Just So* Story: on the recent emergence of the purpose subordinator *just so*<sup>1</sup>

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This article identifies *just so* as a newly emerging purpose subordinator. Using data from the *Corpus of Contemporary American English* and the *Corpus of Historical American English*, it traces its development and steady increase in frequency from its first attestation in the mid nineteenth century to the present day. *Just so* is shown to represent a case of semantic specialization where the purpose meaning wins out over the conditional meaning, thus filling the niche of an informal purpose subordinator and providing an alternative to its multifunctional and semantically ambiguous competitors *so that* and *so*. With increasing grammaticalization the *just so* purpose subordinator also exhibits signs of intersubjectification, being coopted for syntactically independent, interpersonal uses (e.g. *just so we're clear*) and culminating in the emergence of a new discourse marker in the form of *just so you know* in the late twentieth and early twenty-first century. To account for the emergence of purpose *just so*, a constructional network approach is adopted, which considers the network links to other purpose subordinators, notably *so that* and *so*.

**Keywords:** complex subordinator, purpose, grammaticalization, discourse marker, constructional network

### 1 Introduction

This article discusses the use of *just so* in examples such as (1) and identifies it as a newly emerging subordinator of purpose.

- (1) I definitely need more Legos, so we need to have kids **just so** I can justify the toys.  
(COHA:2004:NEWS:Atlanta)

The phrase *just so* has received very little attention in the literature. When the phrase is discussed at all, it is usually in its use as an adjective meaning, for instance, ‘precise, exact; neat and tidy; fastidious’ (*OED* s.v. *just so* A), as in (2), or as an adverb with the meaning of ‘precisely, or almost precisely, in this or that way’ (*OED* s.v. *just so* B), as in (3).

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- (2) She's always **just so**, and speaks in the modulated tones of perfect breeding. (1922, *Everybody's Mag.* Feb 140/1; *OED* s.v. *just so* A.2)
- (3) While this is unlikely, there will be those dedicated citizens who, very well armed, will do **just so**. (2008, S. Bowen: *Vampire Survival Guide* 17; *OED* s.v. *just so* B.1)

As a subordinator *just so* (*that*) is only referred to in its conditional use (Quirk *et al.* 1985: 1089–90, 1093; Kortmann 1997: 316, 332), that is, as an informal equivalent of *as long as* or *provided* (*that*), as illustrated in (4).

- (4) He doesn't mind inconveniencing others **just so** he's comfortable. (Quirk *et al.* 1985: 1090)

In addition to its use as a subordinator of condition, the present article shows that *just so* is increasingly employed as a subordinator of purpose, a use that so far has not been noted in the literature. Drawing on data from the *Corpus of Contemporary American English* (Davies 2008–) and the *Corpus of Historical American English* (Davies 2010), it is argued that *just so* represents an emerging subordinator of purpose which also gave rise to a new discourse marker: *just so you know*.

A new subordinator-in-the-making is particularly interesting since closed, unproductive word classes are generally seen as unlikely candidates for the development of new forms (e.g. Biber *et al.* 1999: 56; cf., however, also Brems & Davidse 2010; Mair 2010; Peters 2012; Smith 2014; Davidse *et al.* 2017). The process involved is one of grammaticalization, with *just so* representing a case of semantic specialization (Hopper 1991: 22), filling the niche of an informal purpose subordinator and avoiding the polyfunctionality and semantic ambiguity of its competitors *so that* and *so*. It is further demonstrated that this development can best be accounted for by a constructional approach (e.g. Goldberg 2006), which considers the larger network of related constructions (e.g. Diessel 2019), notably *so that* and *so*.

The article is structured in the following way. Section 2 discusses corpus retrieval and the different functions of *just so* introducing a clause. Section 3 argues for its status as a complex subordinator. Section 4 then investigates the development of *just so* subordinator uses, focusing on the changing frequencies over time (4.1) and the grammaticalization of the purpose subordinator (4.2), which eventually leads to the rise of interpersonal uses of *just so* clauses (4.3). Section 5 highlights the culmination of this development in a new discourse marker, viz. *just so you know*. Section 6, finally, explains the emergence of the *just so* purpose subordinator in terms of a constructional network account. Section 7 provides a conclusion.

## 2 Corpus retrieval and functions of *just so*

Two corpora were chosen for the present investigation as they provide large databases for Present-day English, including data from the twentieth century and beyond: the *Corpus of Contemporary American English* (COCA, Davies 2008–) and the *Corpus of Historical American English* (COHA, Davies 2010). The current version of COCA, which was updated in 2020, contains more than one billion words of text from different genres (e.g. spoken, fiction, popular magazines, newspapers, academic texts) from 1990 to

2019.<sup>2</sup> The pre-updated version of COHA, which was expanded in 2021, comprises more than 400 million words and includes texts from the 1810s to the 2000s. For the present study, data from the pre-updated COHA version were used unless indicated otherwise.

The focus on the subordinator use of *just so* represents a challenge for corpus retrieval as neither COCA nor COHA is tagged for this syntactic category. The only option therefore is to conduct searches that target the phrase *just so* followed by a clause with the help of the following search strings: ‘*just so* + Noun/Pronoun/Article/Determiner’. After extensive manual checking, this search yielded a total of 655 cases of *just so* introducing a clause in COHA and 3,534 instances in COCA. The figures do not include *just so* with an explicit subordinator, viz. *just so that* + clause.

Although the literature identifies *just so* with clausal scope exclusively as subordinator of condition (e.g. Quirk *et al.* 1985: 1089–90, 1093; Kortmann 1997: 316, 332), a semantic analysis of the extracted instances of *just so* introducing a clause reveals three distinct uses: (i) purpose, (ii) condition and (iii) manner. They are illustrated in (5) to (7) respectively (for frequencies in COHA see table 1). Classification of the corpus examples is based on their possible substitution with *in order that* for purpose instances, *as long as* for condition and *in such a way/in the same way* for manner.

- (5) They’ll keep a man alive for twenty-four hours **just so** they can roast him longer. (COHA:1975:FIC:MassacreAtFall)
- (6) “Faith, Sidony, I don’t care how the man arrives, **just so** he does,” Sorcha said impatiently. (COHA:2006:FIC:LadysChoice)
- (7) LYDIA: So, you are sighing for a city life? HARRIET: I will confess, Lydia, that I should like to see the city, and not remain altogether ignorant of the polite world. [...] LYDIA: **Just so** I once thought, and dearly have I paid for the experiment. (COHA:1823:FIC:ForestRose)

Syntactically, the manner use of *just so* differs from the other two. Although introducing a clause, it is best classified as a fronted manner adverbial. The conditional use is typically analysed as a complex subordinator (see Quirk *et al.* 1985: 1089) and the same is argued for the purpose use of *just so* in the next section.

### 3 *Just so* as a complex subordinator

The category of complex subordinator is recognized by standard grammars such as Quirk *et al.* (1985: 998–9) and Biber *et al.* (1999: 85–6) for expressions like *in order that*, *in the event that*, *in that*. As noted by Smith (2014: 120–1), however, there is no consensus on membership within that class (also Davidse *et al.* 2017). Generally speaking, the term ‘complex subordinator’ is used for multi-word units that function as subordinators, which means that they ‘introduce (mainly finite) dependent clauses’ (Biber *et al.* 1999: 85). As subordinators introducing adverbial clauses, they ‘indicate the meaning

<sup>2</sup> In the interest of a balanced representation of text types, the genres web and blog, which are only represented in the year 2012, were excluded from the COCA data.

Table 1. *Raw frequencies (and normalized per 1 million words) of different uses of just so introducing a clause in COHA (pre-2021 update)<sup>a</sup>*

	1820s	1830s	1840s	1850s	1860s	1870s	1880s	1890s	1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s	TOTAL
Manner	5	15	8	16	13	7	8	4	7	6	9	4	7	1	1	1	1	0	0	113
Purpose	0	0	1	0	0	1	0	0	5	9	4	14	20	25	31	32	29	68	108	347
Condition	0	0	0	0	0	0	1	0	4	10	14	13	24	21	24	15	20	14	7	167
Unclear	0	1	1	0	1	0	1	0	1	1	0	3	2	1	3	2	1	5	5	28
<b>TOTAL</b>	5	16	10	16	14	8	10	4	17	26	27	34	53	48	59	50	51	87	120	655
Pmw	0.7	1.2	0.6	1.0	0.8	0.4	0.5	0.2	0.8	1.2	1.1	1.4	2.2	2.0	2.5	2.1	2.0	3.1	4.1	

<sup>a</sup>The table omits the 1810s because no instances were found in this decade.

relationship between the dependent clause and the superordinate structure' (ibid.), which in the case of *just so* is one of condition or purpose.

Identifying *just so* as a complex subordinator of purpose raises the question whether it could not alternatively be analysed as a free syntactic construction. After all, as noted by Quirk *et al.* (1985: 1001), 'it is difficult to distinguish categorically between complex subordinators and free syntactic constructions'. More specifically, should *just so* not be analysed as a pre-modified version of the purpose conjunct *so* or the complex subordinator *so that*, with *just* simply acting as a premodifying adverb with focusing function (cf. Huddleston & Pullum *et al.* 2002: 587)? While such an analysis would seem to reflect the historical origin of the subordinator *just so* (cf. Kortmann 1997: 297, 315–16), its current use is very much that of a grammaticalized multi-word unit which is best analysed as a complex subordinator. Arguments for this view, and against a compositional non-unitary analysis, include the following:

(a) As is to be expected with grammaticalized units, *just so* shows a high degree of fixation and a lack of internal variation (cf. Smith 2014: 124). Although variant forms such as *precisely so*, *exactly so* and *only so* are attested, as illustrated in (8) to (10), they are highly infrequent: COCA yields 20 instances of *precisely so* subordinators, 2 instances of *exactly so* subordinators, and 80 of *only so* subordinators.<sup>3</sup>

- (8) The... the point is, I paid money **precisely so** I didn't have adverts, but they were trying to do both. (COCA:2018:TV)
- (9) Cops are kept dumb **exactly so** they won't work against the rich elite. (COCA:2012:BLOG)
- (10) After the flood, the Devil allowed the prophets to live, **only so** he could twist the word of God and humanity would worship him once again (COCA:2012:WEB:tvtropes.org)

In these cases the modifying adverb has its full lexical meaning, with *precisely* and *exactly* denoting precision and *only* being equivalent to *merely*, *exclusively*.<sup>4</sup> In *just so*, on the other hand, *just* has lost much of its original semantic meaning of 'precisely', 'exactly' (cf. *Oxford English Dictionary (OED)* s.v. *just* 2) as a result of semantic bleaching (or desemantization; e.g. Heine & Kuteva 2007; see also Nykiel 2014: 7; Davidse *et al.* 2017: 2.2). Instead, *just so* has developed a non-compositional meaning of condition or purpose. As part of a purpose subordinator, as in (1) above, *just* can therefore not easily be replaced by *precisely* or *exactly*, as is illustrated by the questionable acceptability of (11).<sup>5</sup>

<sup>3</sup> These figures include blog and web, which are a main source for these expressions. As subordinators they occur, however, more frequently with an explicit *that*-complementizer in COCA: *precisely so that* (30 instances), *exactly so that* (3), *only so that* (87).

<sup>4</sup> This full lexical meaning may lead to potential ambiguity in the analysis of the string, as in example (i), where *exactly* can be an adverbial modification of *so* but also of the preceding relative clause *who you're writing for*.

(i) It's always important to know who you're writing for **exactly so** you can do a better job at it. (COCA:2012: BLOG)

<sup>5</sup> While in this example the use of *precisely so* may be acceptable, it is considerably more emphatic (and possibly contradictory) than *just so*, with *precisely* likely to be prosodically highlighted by a nuclear accent, and thus requires a different co(n)text.

(11) I definitely need more Legos, so we need to have kids **?precisely/?exactly so** I can justify the toys.

(b) Not only is *just so* a fixed unit, it also does not require an explicit *that*-complementizer to indicate subordination. Although a *that* may optionally be added, this is relatively infrequent in the corpus data (78 instances of *just so that* in COHA; see section 4.2). The subordinator function is thus fulfilled by *just so* alone (cf. also Davidsen *et al.* 2017: 2.3).

(c) As is typical of other, more established complex subordinators of purpose (e.g. *so that, in order that*), *just so* can also be used in sentence-initial position, as in (12). Although less frequent than in final position, as in (13), initial use attests to a fairly conventionalized association of the subordinator function with *just so*.

(12) **Just so** I can avoid hearing the story, I'm going to deal with it, okay?

(COCA:2012:TV:Put\_a\_Pin\_in\_It)

(13) I'm going to deal with it **just so** I can avoid hearing the story.

(d) In line with many grammaticalizing expressions, *just so* shows signs of subjectification and intersubjectification (e.g. Traugott & Dasher 2002; Traugott 2010), as will be discussed in section 4.3. In simple collocational terms it can be shown, for instance, that the pronominal subject of the subordinate clause introduced by *just so* in COCA has a clear preference for first and second person: viz. 83.5 per cent (460 instances) in the period 2015–19 (i.e. 23.2% first person, 60.3% second person).

(e) Finally, as a typical concomitant of grammaticalization, the *just so* purpose subordinator shows a steep and consistent increase in frequency in recent decades (see e.g. Brinton & Traugott (2005) on frequency as a feature of grammaticalization). We will investigate this development of *just so* in more detail in the following section.

#### 4 The development of *just so* subordinator uses

This section takes a primarily quantitative look at the development of the *just so* subordinator in recent decades: section 4.1 first investigates the frequencies of purpose and condition uses in the last 200 years. Section 4.2 identifies the development as a case of grammaticalization, and section 4.3 discusses the more recent rise of interpersonal uses of *just so* purpose clauses.

##### 4.1 Overall frequencies

As noted in section 2, three main uses of *just so* introducing a clause can be identified: (i) purpose, as illustrated in (14), (ii) condition, as illustrated in (15), and (iii) manner, as illustrated in (16), with the latter, however, not qualifying as a subordinator.

(14) They write this stuff **just so** they can sell magazines (COCA:2017:FIC:BkEdenHill)

(15) Toss that bird in the chuck or eat it yourself, **just so** you get it outa my sight. (COCA:1994:FIC:SatEvenPost)

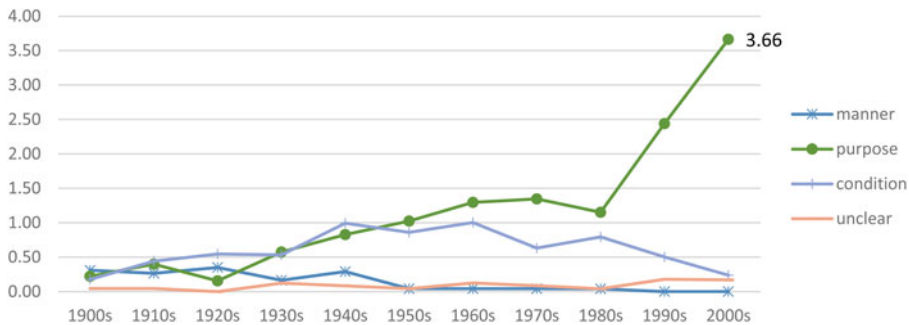


Figure 1. Normalized frequencies (pmw) of *just so* purpose subordinator, condition subordinator and manner adverbial use in COHA (pre-2021 update)

- (16) The rest of the church was dim, the organ pipes mounting tall and golden into the shadowy arches. **Just so** they had looked to me in the days when my head hardly showed above our pew top; (COHA:1942:FIC:AlongStreet)

The COHA (pre-2021 update) data for the last two centuries, given in table 1, comprise a total of 655 tokens of *just so* introducing a clause, with a steady rise in frequency over the decades. As a subordinator *just so* is first attested in COHA in the 1840s with a purpose meaning (viz. “*Oh, do let him, Clem!*” said one of the girls, and another pleaded, “**Just so** he needn’t tell a story to his next customa,”). With a condition meaning, the first attestation is in the 1880s (MRS. DEVINE. -- ... *So run along, now I am sad, and must sit and think. CARROTS All right! Just so you don’t think of Belle*). For both uses, however, the occurrences remain scarce in the nineteenth century.<sup>6</sup>

It is only in the twentieth century that the development of the *just so* subordinator gains momentum, both as a marker of purpose and condition, as indicated by the steady rise in figure 1. Interestingly, this increase in frequency comes at the expense of manner uses, which are slowly but steadily falling out of use with the decline starting already in the nineteenth century.<sup>7</sup> The increase in frequency of purpose *just so*, on the other hand, dramatically picks up the pace towards the end of the twentieth century, with a sharp rise from the 1980s onwards to 3.66 instances per 1 million words in the 2000s. This increase, once again, comes at the expense of another use: this time it is conditional *just so*, which sees a drop in frequency from the mid twentieth century, which further accelerates towards the end of the century (for relative frequencies see figure 4).

<sup>6</sup> An example of an unclear case is: *You’ll burn all the hair off, if you let the tongs get red-hot. Just so they’ll sizzle; I’ve told you five times already.* (COHA:1914:FIC:FlyingURanch).

<sup>7</sup> While manner uses do not have a direct impact on the development of the *just so* subordinator, they are included in the frequency counts to highlight their potential role in the emergence of subordinator uses (note the possible trade-off between the decrease in frequency of manner uses and the emergence of subordinator uses). Such a link will need to be investigated in more detail in a separate study but seems plausible given the diachronic relationship between manner uses of *so* and purpose/resultative uses of *so* as a sentence connective, noted by König & Vezzosi (2022: e.g. 323; see also König 2017).

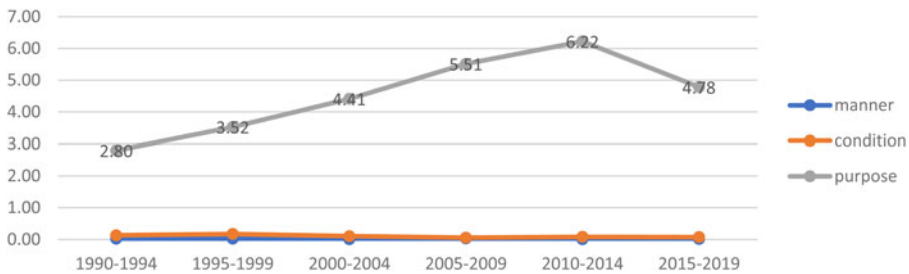


Figure 2. Normalized frequencies (pmw) of *just so* purpose subordinator, condition subordinator and manner use in COCA (post-2020 update without blog/web)

Table 2. Raw frequencies (and normalized per 1 million words) of different uses of *just so* introducing a clause in COCA (post-2020 update without blog/web)

	1990–4	1995–9	2000–4	2005–9	2010–14	2015–19	TOTAL
Manner	3	3	1	4	1	2	14
Condition	16	22	13	7	10	9	77
Purpose	342	445	554	684	774	592	3,391
Unclear	10	7	12	7	7	9	52
TOTAL	371	477	580	702	792	612	3,534
Pmw	3.0	3.8	4.6	5.7	6.4	4.9	

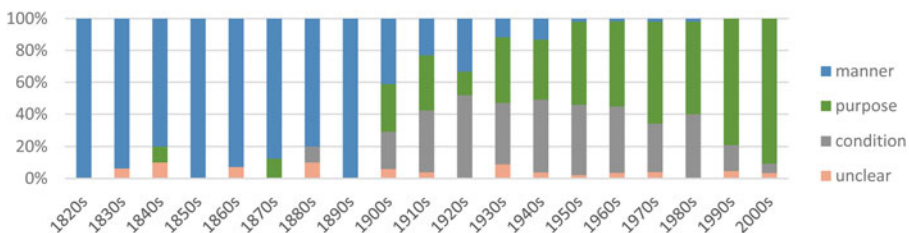


Figure 3. Percentages of *just so* purpose and condition subordinators and manner uses in COHA (pre-2021 update)

The trend identified for purpose *just so* in the COHA data, namely a steady increase in frequency, winning out over its semantic competitor ‘condition’, continues well into the twenty-first century, as is evidenced by the data from COCA. Figure 2 shows that the numbers continue to climb steadily even after the 2000s, reaching their highest level in the period 2010–14 with 6.22 instances per 1 million words (for raw figures see table 2).

Let us now return to the COHA data, focusing on the development of condition and purpose *just so* only, as potential competitors for subordinator use. As noted above,



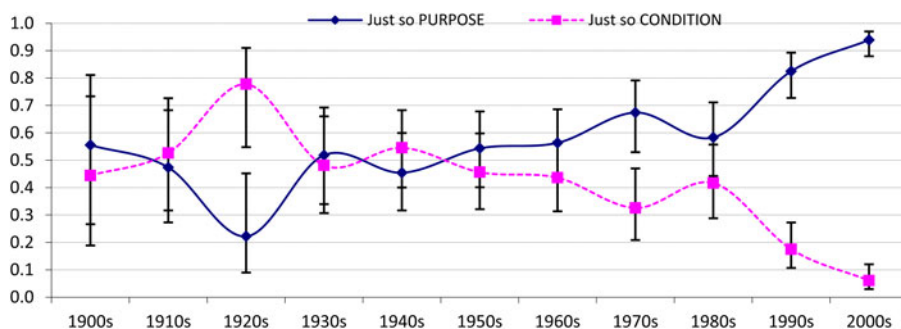


Figure 4. Relative change of purpose and condition subordinators in COHA (pre-2021 update) compared to the baseline of all uses of *just so* subordinators (Wilson confidence intervals for  $p < 0.05$ ; Wallis 2012)

after an initial parallel development of purpose and condition uses, the *just so* subordinator develops a clear preference for purpose in the late twentieth century at the expense of the condition use, which is now rapidly decreasing. This increasing preference for purpose is noticeable in the normalized data in figure 1 as well as in the relative proportion of each semantic type in figure 3 (which also includes manner uses). It is most clearly attested, however, in the relative change within the set of *so that* subordinators, as given in figure 4, which shows a statistically significant divergence of the two uses in the last decade of the twentieth century and the first decade of the twenty-first century.

#### 4.2 A case of grammaticalization

The emergence and development of the *just so* subordinator can be seen as the result of a grammaticalization process starting in the early nineteenth century or before, whereby the syntactic combination of the focus adverb *just* (see König 1991; Nevalainen 1991; Ghesquière 2017) with the subordinator *so that* or *so* becomes increasingly reanalysed as a single grammatical unit, that is, as a complex subordinator. It seems plausible to assume that the analysis of *just so* as a single grammatical unit with clausal scope was facilitated by the existence of the manner adverbial *just so* in sentence-initial position (see examples (5) and (16)).

The process of grammaticalization seems to have affected first the combination of *just* + *so that*, that is, cases where subordination is unambiguously signalled by a *that*-complementizer. In COHA there is a total of 78 *just so that* occurrences, which are attested from the 1820s, thus predating the subordinator *just so* by at least two decades (albeit with very low numbers). With increasing grammaticalization, however, the need for an explicit subordinator in the form of *that* diminishes and the proportion of *just so that* decreases vis-à-vis simple *just so*, as shown in figure 5.<sup>8</sup> The increasing

<sup>8</sup> The figure does not include conditional subordinators since unambiguous conditional uses of *just so that* are extremely rare in the data (three instances in COCA 1900s–2000s).

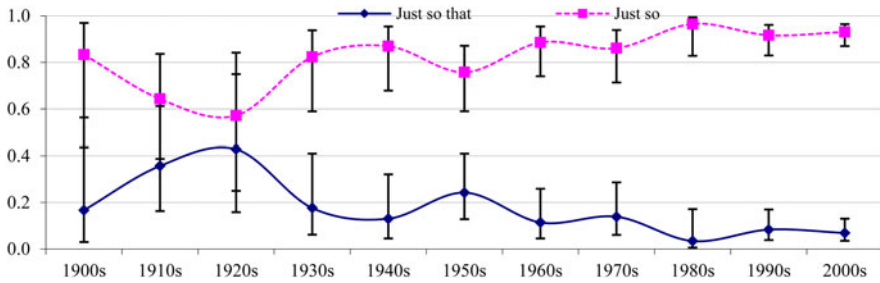


Figure 5. Relative change of *just so that* vs *just so* purpose subordinators in COHA (pre-2021 update) compared to the baseline of all uses of *just so (that)* purpose subordinators (Wilson confidence intervals for  $p < 0.05$ ; Wallis 2012)

redundancy of *that* can be interpreted as a sign of further conventionalization of *just so* as a (complex) subordinator in its own right. The fact that *just so that* has not completely disappeared but continues to exist, if only as a low-frequency expression, is in line with Hopper's (1991) principles of layering and persistence.

Although attested from the 1840s, grammaticalization proper of the *just so* subordinator sets in from the beginning of the twentieth century, which sees a slow but steady increase in the frequency of *just so* used as a subordinator, with both purpose and condition meaning being equally represented at first. The conditional use of *just so*, however, is only short lived. From the middle of the twentieth century the purpose use increases its share, finally winning out over its conditional competitor at the end of the century (from the 1990s). The growing preference for purpose uses thus represents a case of semantic specialization (Hopper 1991: 21), that is, a 'narrowing of choices that characterizes an emergent grammatical construction'. It is accompanied by a steep increase in frequency, as figure 1 shows.

The development of the *just so* subordinator in the COHA data can thus be summarized as in (17).

(17) *Development of the just so subordinator in COHA*

1840s	First attestation of <i>just so</i> purpose
1880s	First attestation of <i>just so</i> condition
From 1900s	Slow but steady increase in frequency of <i>just so</i> : equal share of condition and purpose
From 1950s	First indications of a decrease of conditional <i>just so</i>
From 1990s	Sharp increase in frequency combined with specialization towards purpose and steady decrease of conditionals uses

A further sign of grammaticalization found in the emerging *just so* subordinator is that of desemanticization (semantic bleaching) (e.g. Heine & Kuteva 2007: 33–46). As noted in section 3, the structural unit *just so* has lost some of its compositional meaning with *just* no longer denoting 'exactly', 'precisely'. Instead, *just so* has developed a more schematic

subordinator function expressing purpose or condition (depending on its contextual use). The partial loss of semantic compositionality goes hand in hand with the decategorialization of *just* from a modifying focus adverb to being (part of) a complex subordinator as well as increasing internal structural fixation or bonding (e.g. Lehmann [1982] 2015: 129–88). Structural variations such as *precisely/exactly/only so* are thus rare with purpose uses (see section 3). All of these characteristics are indications that *just so* has developed into a grammatical unit of its own.

The emergence of *just so* as a new subordinator fits into the larger picture of the development of adverbial subordinators. As observed by Kortmann (1997: e.g. 294), there is considerable fluctuation over time in the inventory of adverbial subordinators, with Present-day English having a relatively small inventory size compared to Middle English and Early Modern English. The semantic specialization of the *just so* subordinator as a marker of purpose, on the other hand, ties in with the diachronic tendency of adverbial subordinators to decrease polyfunctionality and increase semantic precision (see Franz 1939: 427; Scheler 1982: 81; Fischer 1992: 287; Kortmann 1997: 314).

#### 4.3 *The rise of interpersonal uses*

As a grammaticalizing unit, the *just so* purpose subordinator has also developed interpersonal uses, in line with the process of intersubjectification (e.g. Traugott & Dasher 2002; Traugott 2010), as in (18). In these uses, the *just so* clause no longer denotes the purpose for an event described in the main clause, as in (19), but relates to the speaker–hearer interaction, typically to the illocutionary force of an utterance, cf. [*I'm telling you this*] *just so you're aware*. These interpersonal uses are no longer clear subordinate clauses but cases of insubordination (e.g. Evans 2007) with an unexpressed, ellipted main clause (e.g. *I'm telling you this*). Syntactically they represent independent extra-clausal constituents (e.g. Kac 1972; Dik 1997), which are no longer governed by a main clause and whose semantic-pragmatic scope extends over the immediate situation of discourse. Their external syntactic status is shown in their inability to form the focus of a corresponding *it*-cleft, e.g. \**It is just so that you're aware that Bipolar II is a disorder....* By comparison, this is possible with example (19): *It is just so you don't have to suffer alone that I'm coming with you* (cf. Verstraete 2007: 167–72; Kaltenböck 2019).

(18) And **just so** you're aware, Bipolar II is a disorder that manifests itself with periods of insomnia, anxiety, high stress, manic states. (COCA:2019:Counterpunch)

(19) Hey, **just so** you don't have to suffer alone, I'm coming with you! (COCA:1994:TV: Simpsons)

Their extra-clausal status is particularly obvious in (i) cases where the associated 'main' clause takes the form of an independent clause (viz. interrogative, imperative or exclamative), as in (20), (ii) cases where the scope is over a complex sentence, as in (21), (iii) cases with intervening material such as adverbials between the *just so* clause and the 'main' clause, as in (22).

- (20) Hey, darling. **Just so I** can finish my paperwork early, what are your people gonna steal what are your people gonna steal today? (COCA:2003:TV:TheWire)
- (21) **Just so** we're clear, If I don't like this person, we can find someone else, right? (COCA:2004:TV:Charmed)
- (22) KING: **Just so I** get this straight, because we hope both of you can come back Tuesday, and we're going to do a major show on this. As I gather from listening to you, Gloria, you're not saying he should stay. (COCA:2000:SPOK:CNN\_King)

Such interpersonal *just so* clauses typically occur in initial position (i.e. is preceding a host clause), but may also occur finally (i.e. following a host clause) as well as medially (i.e. parenthetical uses), as in (23).

- (23) Could you tell the jury, **just so** they understand, what that means? (COCA:1995:SPOK:CNN\_News)

Also attested in the corpus data are stand-alone uses (i.e. without an obvious host clause), as in (24), where the *just so* clause occurs as a speaker turn of its own.

- (24) Mr. WILLIAMS: I don't care whether it's going to bail out savings and loans or going to bail out the bums  
KINSLEY: Oh, **just so** we know where you're coming from.  
Mr. WILLIAMS: It's legalized- (COCA:1990:SPOK:CNN\_Crossfire)

The corpus data evince a steady proportional increase of interpersonal uses of *just so* clauses in both COCA and COHA, as demonstrated by figures 6 and 7. The relatively quick emergence of these uses suggests a development which involves cooptation (e.g. Heine *et al.* 2017, 2021) rather than grammaticalization or pragmaticalization alone. The culmination point of this development is the emergence of a fully fledged discourse marker in the form of *just so you know*, which will be discussed in section 5.

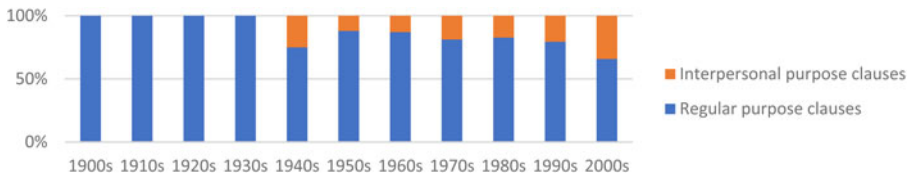


Figure 6. Proportion of interpersonal vs regular *just so* purpose clauses in COHA

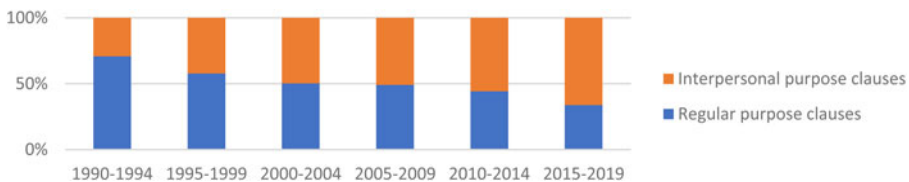


Figure 7. Proportion of interpersonal vs regular *just so* purpose clauses in COCA

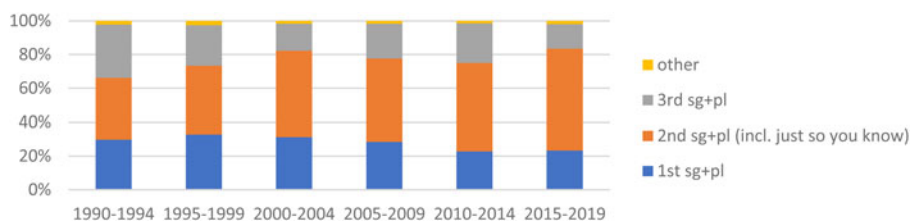


Figure 8. Proportion of first-, second- and third-person subject pronouns in *just so* purpose clauses in COCA

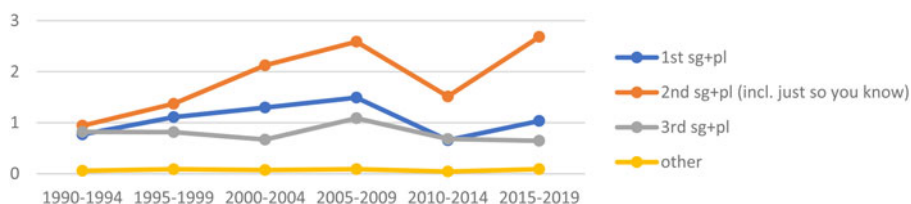


Figure 9. Normalized frequencies (pmw) of first-, second- and third-person subject pronouns in *just so* purpose clauses in COCA

Further evidence for the drift of *just so* purpose clauses towards interpersonal uses can be found in co-occurrence data. As indicated by figures 8 and 9, the COCA data show an increase in the proportion and normalized frequencies of first- and second-person pronominal subjects immediately following *just so*, that is, the pronouns associated with interpersonal function. Note, however, that third-person subjects, although rare, are also admissible for interpersonal uses, as illustrated by the example in (25).

(25) Yes. I think, **just so** your listeners know, there is the possibility now of screening embryos to make sure they do not have certain mutations. (COCA:2012:SPOK:NPR\_TalkNat)

Apart from first- and second-person pronouns, the interpersonal uses of *just so* are also associated with present tense, as a result of their discourse deictic function, and typically occur with verbs of cognition such as *know*, *understand*, *be clear*, *be aware*, *remember*, *forget* (e.g. *just so I/we/you know*, *just so we/you're aware*, *just so I/we/you don't forget*) and other cognitive expressions, such as (26) and (27).

(26) **Just so** we can all be on the same page, here's the scene. (COCA:2017:MAG:Gizmodo)

(27) **Just so** you're completely informed, Nash, according to the specialist who was on Queen Oprah the other day, straight women everywhere are suddenly wanting to be with other women – to experience their newfound, um, sexual fluidity. (COCA:2010:MOV:ElenaUndone)

Apart from the full-blown discourse marker *just so you know* (to be discussed in section 5), two interpersonal expressions stand out in the corpus data. These are combinations

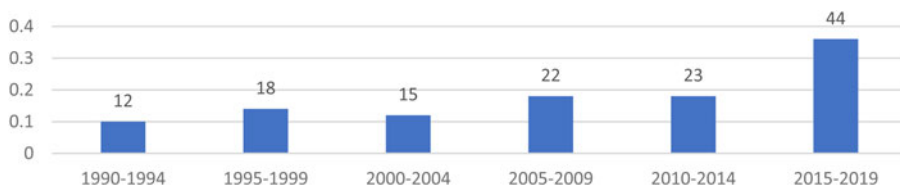


Figure 10. Development of the string *just so [word] ([word]) understand* in COCA (per 1 million words and raw figures; excluding blog and web)

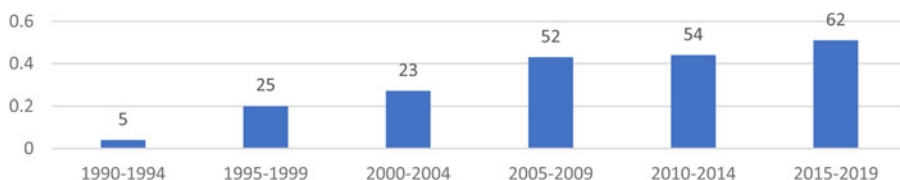


Figure 11. Development of the string *just so [word] ([word]) clear* in COCA (per 1 million words and raw figures; excluding blog and web)

with the predicates *understand* (e.g. *just so I/you/we (can) understand*) and *be clear* (e.g. *just so we/you're clear*), as in (28) and (29) respectively. These semi-fixed strings are the most frequent interpersonal uses (apart from *just so you know*) and show a steady increase in frequency in the COCA data, as indicated by figures 10 and 11.

- (28) **Just so you understand**, it's the single greatest witch hunt in American history (COCA:2019: SPOK:ABC\_Nightline)
- (29) And **just so we're clear**, princess, this is the nice version of things. (COCA:2019:MOV: Teacher)

Based on the COCA and COHA findings presented above, we can thus conclude the following: with increasing grammaticalization and the possible involvement of cooptation (see Heine *et al.* 2021), the *just so* purpose clauses develop more interpersonal, pragmatic uses. These are syntactically independent clauses which are attached to a host clause in initial, final, or medial position and may also occur without an obvious host clause. Functionally, they relate to the speaker–hearer interaction. This rise of interpersonal *just so* purpose clauses eventually results in the creation of a new discourse marker, which will be discussed in the following section.

## 5 The discourse marker *just so you know*

The emergence of interpersonal uses noted in the previous section culminates in the rise of a new discourse marker at the end of the twentieth century: *just so you know*. It is first attested in COHA (post-2021 expansion) in the 1940s with only a single instance. Its frequency remains extremely low until the end of the twentieth century and it is only at

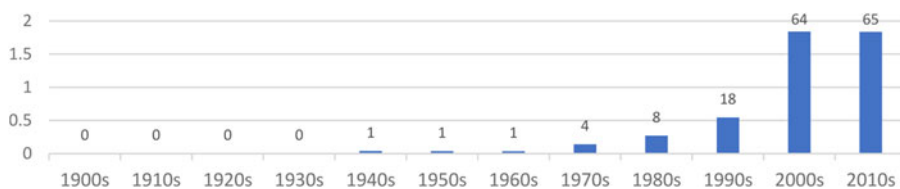


Figure 12. Discourse marker *just so you know* in COHA (post-2021 update); per 1 million words and raw figures

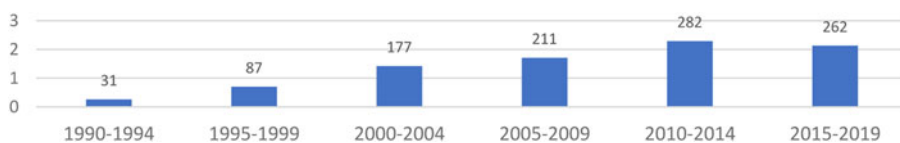


Figure 13. Discourse marker *just so you know* in COCA (post-2020 update, but excluding blog and web); per 1 million words and raw figures

the beginning of the 2000s that the emergence of this discourse marker gains momentum (see figure 12).<sup>9</sup>

The picture in COHA is confirmed by the data from COCA (figure 13), where the frequencies show a steady rise from the 1990s. The total number of instances in COCA is 1,050, of which 148 occur in spoken text types, 143 in written (viz. fiction, magazine, newspapers) and 759 in the categories movies/tv.

As a highly formulaic form of the interpersonal use of a *just so* clause, *just so you know* represents the most advanced stage in the development of the *just so* purpose subordinator.<sup>10</sup> In terms of frequencies, the steady rise of the discourse marker *just so you know* in recent decades contributes substantially to the overall increase of the *just so* purpose subordinator, together with the emergence of the interpersonal uses. It should be noted, however, that the increase in frequency observed for *just so* in section 4.1 is not exclusively due to the discourse marker *just so you know*, nor to the interpersonal uses (section 4.2). As demonstrated in figure 14, there is still an increase, although much less pronounced, if the discourse marker uses and the interpersonal uses are subtracted.

As a discourse marker the phrase *just so you know* is not only invariable, but also positionally mobile, occurring in initial, medial and final position with regard to its

<sup>9</sup> Structural variations such as *just so you know it/the score/what you are missing*, *just so you know up front* and *just so you know that...*, i.e. including an object, an adverbial, or a subordinator, were excluded from the count as they are not discourse markers.

<sup>10</sup> The original purpose meaning of *just so* is probably most noticeable in *just so you know*'s interpersonal function of 'cancelling a (potentially negative) implicature' (as discussed in this section). Its meaning can be paraphrased as: 'I'm telling you this simply for the purpose of informing you (so that you can update your knowledge), not so that you draw any further inferences. Don't read too much into it.'

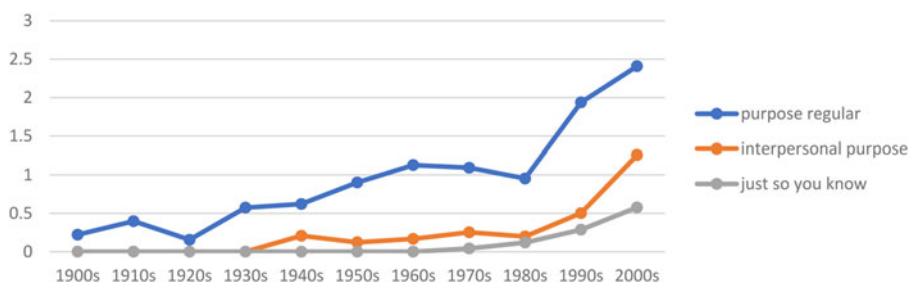


Figure 14. Development of *just so* purpose clauses in COHA (pmw) independent of *just so you know* discourse marker uses and interpersonal uses

host clause (81.4%, 1.2%, 14.7% respectively in COCA; 2.7% are unclear).<sup>11</sup> It is most frequent in spoken language with 1.78 instances per 1 million words (200 tokens) and frequently collocates with other discourse markers, which further attests to its pragmatic function: In the spoken section of COCA, 38 per cent of all *just so you know* are immediately preceded or followed by another discourse marker (e.g. *well, oh, ok, now*).

The discourse marker *just so you know* has adopted a range of textual and interpersonal functions (e.g. Brinton 2017: 11). For *just so you know* in initial position, that is, preceding its host clause, these functions include the following: (i) indicating a topic or focus shift, (ii) indicating an elaboration on a preceding utterance, (iii) expressing emphasis, (iv) cancelling a (potentially negative) implicature. While the first two operate on the level of text organization, the latter two are interpersonal, expressing speaker attitude and regulating speaker–hearer interaction. Each of these uses is illustrated in (30)–(33) respectively and discussed below.

- (30) KOTB: You missed the Cutest Baby Contest and we're so bummed because – oh! Come on.  
 STOCKMAN: That's Juice-Juice.  
 KOTB: Is that what you call her? Why?  
 STOCKMAN: That's what I call her. Because of her cheeks. Look at those cheeks.  
 KOTB: Yeah.  
 STOCKMAN: She's got – it's filled with juice.  
 KOTB: Oh! Oh!  
 STOCKMAN: So that's why I call her Juice-Juice. That's my baby.

<sup>11</sup> For discourse markers we adopt the definition by Heine *et al.* (2021: 6), who see them as '(a) invariable expressions which are (b) semantically and syntactically independent from their environment, (c) set off prosodically from the rest of the utterance in some way, and (d) their function is metatextual ...'. The reason for not labelling interpersonal uses such as *just so you are clear* and *just so you understand* (see section 4.3) as discourse markers lies in property (a), viz. the fact that they allow for some degree of variation (e.g. in the choice of personal pronoun). The discourse marker *just so you know* allows for minimal variation too (as noted by a reviewer) in the form of *just so you'll know*, but with a mere 12 instances in the entire COCA (not all of which constitute discourse marker uses), this form is negligible.



- KOTB: **Just so you know**, Shawn's on the road all the time. I didn't realize that you guys were – you were still touring as often as you guys do. (COCA:2011:SPOK:NBC\_Today)
- (31) SPRINGER: Thank you. Welcome to the show. Oh, you're too kind. Thank you. Thank you very much. Thank you. Welcome to the show. Today we're going to make some holiday wishes come true by reuniting our guests with their long-lost family members. OK. Now **just so you know – just so you know**, our guests making the plea don't know that we've found their loved ones, so I'm going to ask everyone not to give it away when – when we bring our guests out. OK. (COCA:1996:SPOK:Ind\_Springer)
- (32) HODA-KOTB# All right. So if you want one of those, oh, my god, what a cute video pieces we have that for you. There is a baby elephant–  
 KATHIE-LEE-GIFFORD# That's what I feel like today.  
 HODA-KOTB#– in a kiddie pool. This is in Fort Worth, Texas. Her name is Belle. She was born on July 7th. She weighs three hundred pounds.  
 KATHIE-LEE-GIFFORD# Oh, my gosh. Look at that.  
 HODA-KOTB# Oh, my gosh. Okay. **Just so you know** that is the cutest three-hundred-pound baby.  
 KATHIE-LEE-GIFFORD# Oh, my gosh. (COCA:2013:SPOK:NBC\_TodayShow)
- (33) Honestly, it's probably weirder to me than it is to you. Look, I can't believe I have to say this, but **just so you know**, there's no way the two of you work. (COCA:2019:MOV:LongShot)

The first two uses are discourse organizational: example (30) illustrates the indication of a topic or focus shift, in this case from the topic of a baby called *Juice-Juice* taking part in a baby contest to that of *Shawn* being on the road. In this function *just so you know* is essentially prospective (i.e. forward-looking), announcing a shift in the further development of the conversation. Example (31) illustrates the addition of an elaboration on the preceding utterance, more specifically here the plea to the audience not to give anything away, which further elaborates on the previously announced topic of the TV show: reuniting the guests with long-lost family members. The utterance introduced by *just so you know* thus provides further information on the preceding utterance, which gives *just so you know* a retrospective (i.e. backward-looking) orientation.

The last two uses are interpersonal: in (32) *just so you know* expresses emphasis, underlining the subjective evaluation conveyed by the host clause (*that is the cutest three-hundred-pound baby*). In (33) the function is that of downplaying a potentially negative implicature: the speaker confronts the addressee with a very frank and critical assessment of his relationship with another person (*there's no way the two of you work*). *Just so you know* is used to mitigate the potentially offensive content of the host clause. More generally, in this use *just so you know* represents a rhetorical device which masks a potentially controversial or offensive comment as a simple act of providing information. In this way the speaker can cancel potentially negative implicatures ('don't read too much into this'), refusing to take responsibility for possible implications of insult an assertion could give rise to (although these may in fact be the covert reason for the assertion in the first place; hence the occasional passive-aggressive undertone of *just so you know*).

## 6 Explaining the change: the purpose subordinator network

To better understand the emergence of *just so* as a new purpose subordinator, as outlined in section 4, it is necessary to look at the larger picture of purpose subordinators, that is, the semantic competitors of *just so*. To do this, we take a constructional network approach (Traugott & Trousdale 2013; Barðdal *et al.* 2015; Torrent 2015; Traugott 2018; Diessel 2019; Sommerer & Smirnova 2020), loosely applied here, and look at *just so* as a competitor in a network with semantically (and formally) similar constructions (cf. van de Velde 2014; Zehentner 2019).<sup>12</sup>

Construction Grammar (e.g. Goldberg 1995, 2006) assumes that constructions are form–meaning pairings that are stored in a construct-i-con (e.g. Hilpert 2014). While they are independently stored units, constructions are not isolated entities but linked with other, related constructions of different levels of schematicity in a larger taxonomic network of constructions (e.g. Traugott & Trousdale 2010: 35–7; Traugott 2018; Sommerer & Smirnova 2020). As Diessel (2019: 248) puts it, ‘[c]onstructional relations can be characterized in terms of two general concepts: similarity and contrast ... semantically and/or formally similar constructions are organized in construction families that influence the use and the development of constructional neighbors in the network.’

What then are the links of purpose *just so* with related constructions in the larger network of subordinator constructions? As illustrated in figure 15, various links can be identified with the strongest being to the formally and functionally related high-frequency constructions *so* and *so that* (e.g. Quirk *et al.* 1985: 1070; Schiffrin 1987; Kortmann 1997: 332; Verstraete 2007). Weaker links can be postulated for the functionally related subordinators *in order that*, *with the purpose/aim/intention that* and the functionally and formally related *only/precisely/exactly so* on the basis of their considerably lower frequency as well as their less precise functional correspondence.

Let us look at the two main functional competitors, *so that* and *so*, in turn. *So that*, in addition to expressing purpose, as in (34), where it can be paraphrased by *in order that*, can also have the meaning of result, as in (35), where it can be paraphrased by *with the result that*. The semantics of *so that* is thus multifunctional (e.g. Quirk *et al.* 1985: 1070; Palmer 1987; Denison 1999: 295; Huddleston & Pullum *et al.* 2002: 968f.; Verstraete 2007; Schmidtke-Bode 2009: 152).

- (34) He promptly ordered loudspeakers mounted in certain sections of the ball park **so that** fans could go there... (COHA:1972:MAG:SatEvePost)
- (35) He touched his cheek in confusion, **so that** dabs of wet clay rubbed off on his fingertips. (COHA:1963:FIC:Centaur)

<sup>12</sup> The reason for focusing here on the purpose subordinator network rather than on the role of *just so* in a conditional subordinator network lies in the drop in frequency of conditional *just so* subordinators in the late twentieth century and particularly in the twenty-first century (see section 4.1). Given its low frequency, the *just so* condition now plays only a very minor role in such a conditional network.

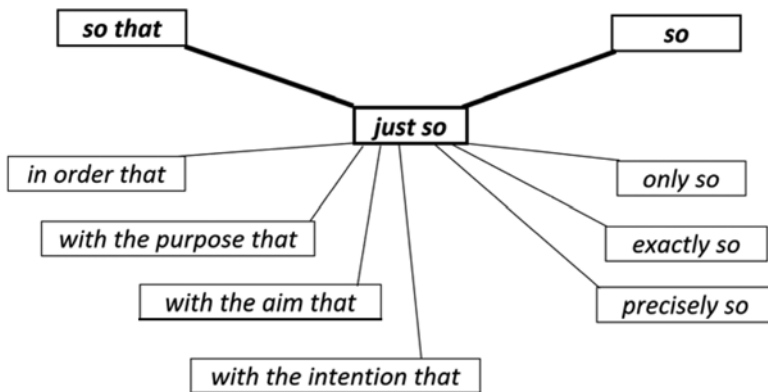


Figure 15. Network links of the *just so* purpose subordinator

The distinction between purpose and result is, however, far from clear-cut, with numerous instances being ambiguous, as illustrated by the example in (36). As noted by Huddleston & Pullum *et al.* (2002: 734), there are also cases where the difference between purpose and result is blurred, such as in (37), which is understood ‘to entail the subordinate clause governed by *so*, which makes it like a result construction, but at the same time the subordinate situation came about by design: the purpose or intention was realised’ (*ibid.*). A perusal of *so that* corpus data in COCA and COHA shows that such ambiguous or blurred uses are far from infrequent but firmly established as an intermediate category.

- (36) He folded the slip of paper **so that** Bracht’s half of the picture was kept from Pokh’s view as well. (COHA:1960:FIC:SecretMissionBangkok)
- (37) A relatively simple switching mechanism reverses the cycle **so that** the machine literally runs backward, and the heat is extracted from outdoor air and turned indoors. (Huddleston & Pullum *et al.* 2002: 734)

In addition to purpose and result, *so that* may also have a manner meaning, as in (38). As discussed by Huddleston & Pullum *et al.* (2002: 968), this use is, however, comparatively rare and usually interpreted as result or purpose, thereby further obscuring the distinction between result and purpose (Denison 2020: 209). The use in (38), for instance, is ambiguous between a manner and a result reading.

- (38) He’d arranged the programme **so that** we had lots of time to discuss the papers. (Huddleston & Pullum *et al.* 2002: 968)

With *just so* having specialized as a purpose marker (see section 4), the overlap with *so that* is thus restricted to its purpose meaning.<sup>13</sup> And even there the potential for overlap

<sup>13</sup> We are ignoring here the potential conditional overlap between *just so* and *so that* (see Kortmann 1997: 332) in view of the low numbers of conditional *just so* (see section 4).

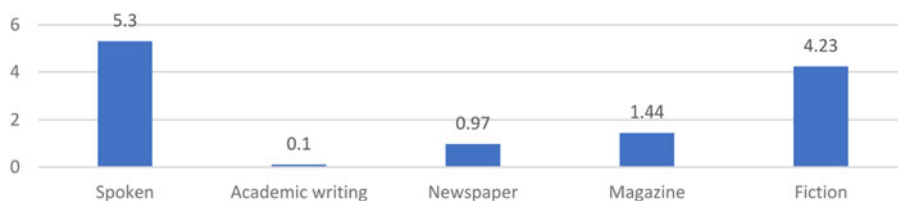


Figure 16. Normalized frequencies (pmw) of *just so* in different text categories of COCA 2015–19 (post-2020 update)

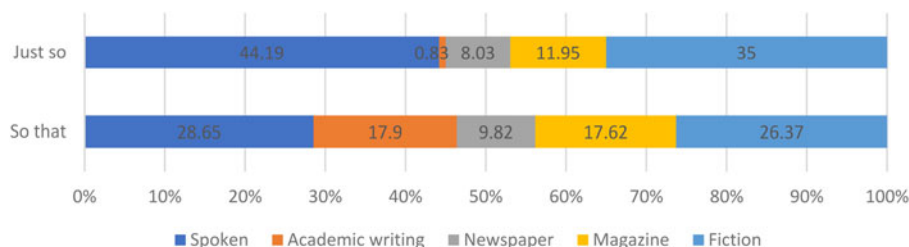


Figure 17. Relative frequencies (%) of *just so* and *so that* in different text categories of COCA 2015–19 (post-2020 update)

between *just so* and *so that* is only partial, owing to their difference in register: While *so that* is associated with formal text types, *just so* is more informal (e.g. Quirk *et al.* 1985: 1089–90, 1093; Kortmann 1997: 332). The greater informality of *just so* is also reflected in its genre distribution in COCA, as indicated in figure 16: while frequent in spoken language, it is extremely rare in academic writing, with newspapers and magazines also yielding low figures. The higher frequency in fiction can be attributed to its occurrence in direct speech. Comparing the relative frequencies of *just so* and *so that* (figure 17), we can see that *just so* occurs predominantly in spoken language and fiction (together they represent almost 80 per cent), with academic writing accounting for a mere 0.8 per cent. For *so that*, by comparison, the relative frequencies are more evenly distributed across the text types, with academic writing accounting for almost 20 per cent.<sup>14</sup>

Turning now to the second functional competitor, *so*, we can identify a similar multifunctionality as noted for *so that* (e.g. Denison 1999: 295; Huddleston & Pullum *et al.* 2002: 734). It is used for expressing purpose, as in (39), where it can be replaced by *in order that*, or result, as in (40), where it can be replaced by *with the result that*.

- (39) Experts say it's important for parents to be honest and open with their children **so** problems can be shared. (COHA:1987:MAG:Newsweek)

<sup>14</sup> For retrieval of the *so that* subordinator the search string '*so + that* (subordinating conjunction)' was used. Owing to the high frequencies (10,542 instances in 2015–19), the results could not be checked manually.

(40) It's a good party, **so** people are crashing it! (COHA:1942:FIC:ProdigalWomen)

As noted by Huddleston & Pullum *et al.* (2002: 734), there are also ambiguous uses such as (41). In the corpus data provided by COHA and COCA, we also find numerous cases where the distinction between purpose and result is blurred, as in (42).

(41) He's come home early **so** we can all go to the movies together. (Huddleston & Pullum *et al.* 2002: 734)

(42) Some topend models add convection heat **so** foods can be browned without moving to a conventional oven before serving. (COHA:1996:MAG:PopMech)

Apart from purpose and result *so* may also occasionally express manner, as illustrated in (43), where it can be paraphrased by *in this way*.

(43) The quality of wonder that is in the child too easily vanishes in the grown man as he becomes self-assured, and **so** age overtakes him; (COHA:1918:MAG:Harpers)

In addition to being a truly multifunctional marker of sentence grammar, *so* has recently also developed into a discourse marker in utterance/turn-initial position, as documented for instance by Johnson (2002) and Bolden (2006, 2008, 2009). Referring to Schlegl (2018), Denison (2020: 220) notes that 'turn-initial *so* has been on a long-term trajectory of increase at the expense of *well* and other discourse-particles in speech'.

What may have been conducive to the development of *so* into a discourse marker is not only its underspecified and malleable semantics (purpose, result, ambiguous/blurred) but also its syntactic status, which is less that of a subordinator but more that of a coordinator. Quirk *et al.* (1985: 645–6), for instance, argue that *so* is a conjunct adverb that resembles a conjunction. Similarly, Huddleston & Pullum *et al.* (2002: 1320–1) see it as being close to a coordinator.

As noted above for *so that*, the semantic overlap of *so* with *just so* is only partial, being restricted to the purpose meaning of *so*. Unlike *so that*, however, *so* shares with *just so* a similar informal register.

Before summarizing the network links of *just so* with its main semantic competitors, let us briefly look at the less frequent constructions in the network: viz. *in order that*, *with the purpose that*, *with the aim that*, *with the intention that*, *only/precisely/ exactly so*. Of all these potential contenders for semantic overlap only *in order that* and *only so* show any substantial frequencies, but even they are not very frequent: *In order that* has 1,124 occurrences in COCA (post-2020 update) but exhibits a steady decline in COHA in the twentieth century, as illustrated in figure 18, with the 2010s accounting for a mere 21 instances. Interestingly, this decrease neatly coincides with the rise of the *just so* purpose marker in the late twentieth century.

*Only so that* has a frequency of a mere 87 instances in COCA and 50 in COHA. Without a *that*-complementizer the frequencies in COCA are similar: 80 instances of *only so*. All the other complex subordinators are barely attested in COCA (post-2020 update): *with the purpose that* (2 instances), *with the aim that* (3), *with the intention that* (57); *precisely so*

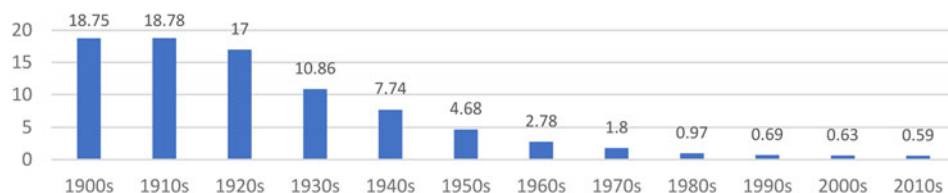


Figure 18. Development of *in order that* in COHA (post-2021 update) (per 1 million words)

(*that*) (50), *exactly so (that)* (8). Apart from their low frequencies *only/precisely/exactly so* are also semantically an imperfect match (see section 3).

To conclude, a constructional network approach to purpose subordinators suggests the following scenario for the recent development of *just so*. With its increasing semantic specialization, *just so* provides for an informal alternative to *so that*, the latter being a multifunctional marker of subordination (expressing purpose, result, manner) that lacks semantic precision. *Just so* also offers a useful alternative to the conjunction *so*, which, like *so that*, is multifunctional (expressing purpose, result, manner) and characterized by a similar lack of semantic clarity, further reinforced by its development into a discourse marker. *Just so*, by comparison, offers a clear semantic profile, filling the niche of an informal purpose subordinator. Its semantic specialization thus brings greater clarity to the fluctuating semantics of this family of constructions (Kortmann 1997) and is in line with the tendency of adverbial subordinators in the history of English to decrease polyfunctionality and increase semantic precision (Scheler 1982: 81; Fischer 1992: 287).<sup>15</sup> Finally, the emergence of an informal purpose subordinator also ties in with the process of colloquialization noted for the twentieth century (e.g. Mair 2006).<sup>16</sup>

## 7 Conclusion

The emergence of a new subordinator is a rare event, given its status as a closed (i.e. unproductive) syntactic category. When it does happen, as has been shown for *just so*, there has to be a clear functional need. In the case of *just so*, this need has been identified as one for an informal and semantically unambiguous subordinator of purpose. On a larger scale, the emergence of a new purpose subordinator fits in with two observations made for English adverbial subordinators: (i) Despite their status as function words, adverbial subordinators do not represent a completely static system but exhibit fluctuation in their inventory over time (e.g. Kortmann 1997; Denison 1999;

<sup>15</sup> The semantic specialization of *just so* raises the question (asked by a reviewer) whether such a development could not also affect *so that* and *so*, which are also multifunctional. Indeed, it has been shown by Kortmann (1997: 315–17) that *so* has reduced its polyfunctionality over time. While the exact semantic development of *so that* and *so* remains outside the scope of this article, it is in need of further investigation. It can be speculated, however, that both subordinators will be less susceptible to systemic pressures to reduce polyfunctionality than *just so* given their much higher overall frequencies (cf. e.g. Bybee 2006 on the conserving effect of high frequency).

<sup>16</sup> Compare in this context the typical use of the emphatic particle *just* in spoken English (Chafe 1982: 47) and the recent demise of the more formal purpose subordinator *in order that* (see above).

also Brems & Davidse 2010; Mair 2010; Peters 2012; Smith 2014; Davidse *et al.* 2017). (ii) They show a tendency towards semantic streamlining, that is, towards reducing polyfunctionality and increasing semantic precision (e.g. Scheler 1982: 81; Fischer 1992: 287; Kortmann 1997: 314).

Various steps have been observed in the recent emergence of *just so* as a purpose subordinator (section 4.1). Its first attestation in COHA is in the 1840s, only marginally predating its first use as a subordinator of condition in the 1880s. The process of grammaticalization responsible for this new subordinator seems to have affected first the sequence *just so that*, where subordination is explicitly signalled by the *that*-complementizer (section 4.2). Although predating the *just so* subordinator in COHA, *just so that* did not establish itself with any substantial frequencies. It did, however, prepare the ground for *just so* becoming a subordinator. Similarly, the emergence of *just so* as a subordinator may have been aided by sentence-initial manner uses of *just so*.

From the beginning of the twentieth century the *just so* subordinator displays a slow but steady increase in frequency with purpose and condition being equally represented at first. From the middle of the twentieth century, however, the purpose use increases its share, winning out over its semantic competitor, which all but disappears from use. This semantic specialization for purpose is accompanied by a sharp increase in frequency from the end of the twentieth century.

With increasing grammaticalization the *just so* purpose subordinator also shows signs of intersubjectification, being coopted for interpersonal uses such as *just so we're clear*, *just so I understand* (section 4.3). These are syntactically independent from the rest of the sentence, typically occur in initial position, and relate to the speaker–hearer relationship, notably the illocutionary force of the utterance (e.g. [*I'm asking you this*] *just so we're clear*). The culmination point of this development is the recent emergence of the discourse marker *just so you know* in the late twentieth and early twenty-first century (section 5).

To account for the emergence of purpose *just so*, it is thus necessary not to look at it in isolation but to adopt both an onomasiological and a semasiological perspective which places it in the context of its formal and functional relatives, conditional *just so* and *just so that*, respectively. In addition, it was argued that for a complete picture it is also necessary to include other purpose subordinators (notably *so that* and *so*), which are assumed to be taxonomically linked with purpose *just so* (section 6). Adopting a constructional network approach (e.g. Diessel 2019), it was shown that *just so* lacks the multifunctionality and potential ambiguity of its functional competitors *so that* and *so*. Instead, it offers a fairly isomorphic semantic profile, filling the niche of an informal purpose subordinator. Systemically, its semantic specialization brings greater clarity to the fluctuating semantics of this family of constructions (see Kortmann 1997).

Future research will need to look into the constructional links of *just so* with related constructions (*viz.* *so that*, *so*) in more detail, taking into account potential changes over time in the semantic profiles of these multifunctional constructions and how they might impact on the development of *just so*. In addition to the role of *just so* in a

purpose subordinator network, it would also be important to explore its place in a conditional subordinator network as well as the role of manner uses of *just so* (cf. König 2017; König & Vezzosi 2022) and their diachronic relationship with purpose and condition *just so*.

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