

# 5 The Evolution of Connectives’ Meanings

## 5.1 INTRODUCTION

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“How did connectives emerge in the languages’ grammar?”, is the key question underlying this chapter. Before answering it, we will start with some trivia regarding language evolution and diachronic research. First and foremost, all languages change, they change constantly, but change in progress is extremely difficult to detect. It follows that linguistic change is primarily observed once it has occurred, rarely when it is occurring. The aim of diachronic research is to explain **how** the linguistic system evolves from one stage to the other, going beyond the mere description of successive synchronic stages of language. Linguistic evolution being a largely invisible process that is described and reconstructed on partial data, it remains a largely hypothetical enterprise. In this regard, the uneven availability of historic (written) resources across the languages of the world invites researchers to be aware of the risk of a (strong) Indo-European bias in the development of theories and models of linguistic change.

A strong assumption in diachronic research is that language change is the indirect result of human linguistic interactions to which researchers have an incomplete and restricted access (Marchello-Nizia, 2006). Especially functional approaches to language assume that the locus of language change is primarily within language in use, that is, “une langue change parce qu’elle fonctionne” [a language changes because it works] (Martinet, 1955/2005: xiii, cited in Babinot, 2009: 27). In addition to this usage-based perspective, much of diachronic work is based on the premise of uniformitarianism stating that we reconstruct the past on the basis of the present, assuming, for instance, that the cognitive processes underlying language production and comprehension are diachronically stable (Bergs & Hoffmann, 2017). In Labov’s (1972: 101) words: “[T]he linguistic processes taking place around us are the same as those that have operated to produce the historical record” (cited in Traugott, 2017: 290). This premise allows us

to project today's interpretations of linguistic phenomena onto diachronic accounts, paying attention especially to interactional practices. These include findings in the field of sociolinguistics, where seminal work by Weinreich, Labov and Herzog (1968) established that linguistic variation is a fact of life, where extralinguistic factors are key in the explanation of language variation and change. While all types of variation are not necessarily indices of ongoing change, sociolinguistic observations concerning linguistic varieties and variants are indeed an interesting source of diachronic investigations, where language variation is viewed as a potential locus of linguistic change. Next to sociolinguistic variation, semantic variation and syntactic variation are considered as potential indices of (ongoing) diachronic change. Thus, both the well-described polysemy of discourse connectives and their syntactic versatility form the starting point of many diachronic studies (see Section 5.3.3, for an illustrative case study). Many of these studies aim to explain synchronic polysemy in terms of different (successive) stages of the semantic change of the item. Discourse markers, including connectives, have indeed been described as "ideal for observing variation and change: they originate in different grammatical categories, they often compete with many other forms, and they are sensitive to trends regarding language use" (Vincent, 2005: 191).

As far as possible, this chapter will focus on the diachronic description of discourse connectives only. However, the boundary between connectives and discourse markers is a tiny one (see Chapter 1). In addition, the literature on the semantic evolution of discourse markers is greater than that on discourse connectives strictly speaking. It follows that we will occasionally cross this fuzzy boundary when accounting for the principles and methods underlying their evolution in the history of languages.

This chapter is organized as follows. In Section 5.1, we review the discussion about the theoretical framework underlying the diachronic evolution of discourse connectives, that is, in which conceptual terms this linguistic process is best accounted for. In Section 5.2, a general description is given of the evolution from clause-combining strategies to coordinating and subordinating connectives. Section 5.3 reviews a number of case studies in order to illustrate typical and less typical cases of language change in the area of connectives: the semantic evolution from temporal meaning to concessive meaning of French *cependant* ('yet') (5.3.1), the peculiar semantic evolution from cause to contrast of Italian *però* ('but') (5.3.2), and a diachronic account of the synchronic polysemy of French *alors* (5.3.3). Concluding remarks close the chapter with Section 5.4.

## 5.2 HOW DID CONNECTIVES EMERGE IN THE LANGUAGES' GRAMMAR?

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According to Heine et al. (2021: 8), there is “massive evidence and wide agreement to the effect that DMs are as a rule historically derived from sentence grammar units”. In other words, discourse markers, including discourse connectives, derive from lexical and grammatical material expressing propositional meanings at sentence or clause level. While the cline from sentence internal to sentence external uses over time is in itself not really contested, there has been much debate in the DM literature whether this path should be described in terms of grammaticalization, pragmaticalization, cooptation or something else (see, e.g. Heine, 2013; Degand & Evers-Vermeul, 2015; Heine et al., 2021).

In a nutshell, the discussion boils down to considering DMs as belonging to the grammar (grammaticalization) or out of the grammar (pragmaticalization, discoursization, cooptation). Indeed, according to the fairly standard definition, grammaticalization is “the change whereby lexical items and constructions come in certain linguistic contexts to serve grammatical functions, and once grammaticalized, continue to develop new grammatical functions” (Hopper & Traugott, 2003: 18). As Degand and Evers-Vermeul (2015: 60) observe, if DMs are considered to serve such new grammatical functions, that is, to belong to the grammar, the diachronic process by which they develop must be grammaticalization, and there is no need for any other distinct process of pragmaticalization. Yet, the discussion goes beyond the divide between what is to be considered grammatical and what is not (Diewald, 2010). Diachronic change involves a series of linguistic processes of which a number have been described as typical of grammaticalization. A very influential model in this area is that of Lehmann (1995), according to which grammaticalization involves a set of characteristic features or parameters used to determine the degree of grammaticalization of a linguistic item. Examples are: *desemanticization* (loss of semantic substance), *paradigmaticization* (evolution to minor word class), *condensation* (reduction of syntactic scope), *coalescence* (morphological bonding), *fixation* (decrease in syntactic freedom), to name the most prominent ones. In addition, the stage of grammaticalization can be represented on several clines representing the evolution from less grammaticalized to more grammaticalized, where linguistic items move from the left to the right on Hopper and Traugott's (2003: 7) “cline of grammaticality”, represented in Figure 5.1.

content item > grammatical word > clitic > inflectional affix

Figure 5.1 Cline of grammaticality (based on Hopper and Traugott, 2003: 7)

Lass (1997: 267–68, cited in Norde, 2001: 234) exemplifies this cline with more concrete clines, such as the sequence Noun > Postposition > Case ending, but also, Free Morph > Bound Morph, or more generally Lexical Category > Grammatical Category, etc. The discussion of the theoretical and empirical validity of such clines is beyond the scope of this chapter, but see, for example, Fischer, Norde and Perridon (2004), Nørgård-Sørensen, Heltoft and Schøsler (2011), Carlier, De Mulder and Lamiroy (2012).

In her seminal paper, Traugott (1995) advocates that grammaticalization theory would add to its inventories a discourse cline: Clause-Internal Adverbial > Sentence Adverbial > Discourse Particle. This proposal has led to much debate in the “grammaticalization community”, especially because some of the principles frequently associated with grammaticalization, like bonding and reduced scope (*fixation*), appear to be violated. Yet, Traugott (1995: 1) motivates her claim by stating that this cline

illustrates a cluster of other long-attested structural characteristics of early grammaticalization, specifically decategorialization, phonological reduction, and generalization; it also illustrates a number of more recently recognized characteristics, especially pragmatic strengthening and subjectification.

In other words, “lexical material in highly constrained pragmatic and morphosyntactic contexts becomes grammatical” (p. 1) through interactions between syntax and semantics, primarily through local reanalysis. Thus, while it seems clear that the development of DMs is by no means a prototypical case of grammaticalization, many researchers are reluctant to give an alternative, more specific status to their diachronic evolution (Beijering, 2012: 56–57), even if this means to bend the boundaries of what is grammatical and what is not. In other words, although the diachronic evolution of discourse connectives does not check all of the typical boxes of the grammaticalization process, it is similar enough to qualify the process as a type of grammaticalization (see also Degand & Simon-Vandenbergen, 2011).

Yet, according to Heine et al. (2021: 64), another process could be a more suitable candidate to account for the diachronic rise of DMs. The process they refer to is called cooptation.

Cooptation is a fully productive operation whereby a chunk of sentence grammar, such as a word, a phrase, a reduced clause, a full clause, or some other piece of text, is deployed for use on the metatextual level of discourse processing, thereby turning into a thetical. Its functions are determined by the situation of discourse, serving (a) to overcome constraints imposed by linearization in structuring texts, (b) to provide the source of information, (c) to place a text in a wider perspective, e.g. by elaborating, proffering an explanation, a comment or supplementary information, (d) to describe the attitudes of the speaker, and/or (e) to interact with the hearer.

[Heine et al., 2021: 51]

The outcome of the cooptation process strikingly fits the behaviour of many items belonging to the DM class. In particular, it seems that the specific grammatical behavior that DMs exhibit, often viewed as violating some of the basic principles of grammaticalization (such as their variation in position, extension of scope, optionality) do actually align with that of coopted elements. More precisely, when a linguistic expression undergoes cooptation, it changes from a sentence-internal element to an element with syntactic independent status, that is less constrained in terms of position. Heine et al. (2021) observe that this more extended placement freedom, including at the periphery of their host, opens up a range of different contexts of occurrence. “And since new contexts tend to trigger the rise of new functions, DMs are likely to develop distinctly larger sets of grammatical functions than other grammaticalizing expressions” (p. 64). Traugott (2022: 96) agrees that use in pre-clausal position is prone to the emergence of new meanings and structures for text structuring markers. Yet, she insists that such changes from clause-internal to clause-external elements are the result of a continuous process involving structural, phonological as well as semantic factors that occur gradually to the extent that category shift is actually imperceptible. Many authors insist on the gradualness of the diachronic processes leading to the conventionalization of discursive expressions (Traugott & Trousdale, 2010; Giacalone Ramat & Mauri, 2012; Musi, 2016). This contrasts with the view put forward in Kaltenböck et al. (2011: 875) that cooptation is an instantaneous operation. In their more recent work, Heine and colleagues acknowledge that cooptation is only part of the puzzle, referring to cases that cannot be explained in terms of this shift from sentence grammar to discourse. Most importantly, they invite for further research in this area given “that these observations are not based on appropriate empirical evidence” (Heine et al., 2021: 64).

To conclude, it will suffice here to note that the discussion concerning the diachronic processes underlying the emergence of the specific category of discourse connectives is less controversial than that of the broader category of discourse markers. As will become clear in the remainder of this chapter, the evolution of discourse connectives is described most and for all in terms of grammaticalization (see, e.g., König, 1985; Evers-Vermeul et al., 2011; Musi, 2016; Rysová, 2017; Lewis, 2018, and the contributions in Lenker & Meurman-Solin, 2007). This will be illustrated in a number of case studies in Section 5.3, but first we give an overview of the general grammatical and semantic paths that lead towards the emergence of connective devices.

### ***5.3 FROM CLAUSE-COMBINING TO DISCOURSE CONNECTIVES***

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Clause-combining is considered by many as one of the key building blocks of language in use, and thus a field where a wide range of syntactic, semantic, pragmatic and cognitive phenomena meet (Lenker & Meurman-Solin, 2007: 1). In Chapter 1, we described discourse connectives as clause-linking devices expressing a semantic (discourse) relation. When it comes to combining clauses, two main options are available across the world's languages: (i) *asyndetic* juxtaposition where the relation between the two clauses is left implicit (example 1) and (ii) *syndetic* combination in which the clause-linking device is made explicit (example 2). Thus combined or juxtaposed clauses may express a relation of coordination or subordination. Coordination relations are generally described as relating functionally equivalent states of affairs, expressed in clauses that have some illocutionary force and are cognitively autonomous (Haspelmath, 2007; Mauri, 2008; Mauri & Van der Auwera, 2012, among many others). Subordination relations, then, are characterized by an asymmetric relation of dependency, where one clause is dependent (syntactically, semantically, functionally) on the head clause (Cristofaro, 2003; Haspelmath, 2007; Otori, 2011; Visapää, Kalliokoski & Sorva, 2012, to name but a few). As already illustrated in Chapter 4, these explicit clause-linking devices may come in different morphosyntactic forms, but as far as their diachronic evolution is concerned, we will focus here on coordinating and subordinating conjunctions only.

- (1) Mary is ill. She needs to rest for a few days.
- (2) Mary got contaminated **but** she shows no symptoms.  
[constructed examples]

Regarding the morphosyntactic emergence of sentence conjunctions, Diessel (1999) observes that they “are frequently formed from a pronominal demonstrative and some other element (e.g., an adverb or adposition) that indicates the semantic relationship between the conjoined propositions” (p. 125). In other words, as already mentioned above, a sentence-internal element evolves to become a sentence-external expression driven by semantic reanalysis. This grammatical path *DEMONSTRATIVE* > *CONJUNCTION* is illustrated in Heine and Kuteva's *World Lexicon of Grammaticalization* (2002: 107) with data from several typologically different languages, where sentence connectives of cause, time, and consequence are cross-linguistically built on this pattern. Grammatical fixation in the form of a conjunction seems to follow from the need to make semantic relations between conjoined parts explicit. This explicitly marked relational meaning is subject to change through speakers' pragmatic inferential processes. More precisely, in specific contexts, speakers will infer additional, implicit meanings through implicatures or other pragmatic inferences (Breul, 2007). A typical example is the semantic evolution from temporal connective to contrastive and/or concessive connectives, where speakers infer that what is happening simultaneously in time can be or should be interpreted as being in contrast. Thus, in (3), the French connectives *alors que* and *tandis que* (corresponding to English *while*) receive a temporal meaning that is extended to a contrastive/concessive one in the context of (4) (see also Bat-Zeev Shyldkrot, 2008).

- (3) Il est sorti **tandis que/alors qu'**il faisait beau.  
'He went out **while** (when) the weather was nice'
  - (4) Il est sorti **tandis que/alors qu'**il pleuvait.  
'He went out **while** (but, although) it was raining'
- [constructed examples]

König (1985, 1988) makes similar observations regarding the evolution of English concessive connectives. He states that the development of connectives like *nevertheless* or *yet* “from expressions originally asserting remarkable co-occurrence is based on pragmatic principles of interpretative enrichment and the conventionalization of an originally pragmatic inference” (König, 1988: 159, cited in Breul, 2007: 168).

In the two following sections we review how coordinating and subordination conjunctions emerged as discourse connectives across a variety of languages through different linguistic processes involving semantic and syntactic mechanisms.

5.3.1 *From Coordination to Coordinating Connectives*

Mithun (1988: 331) sees coordination to be “the most basic and universal” syntactic construction. At the same time, she observes “surprising variety in the types of coordinating constructions exhibited by different languages, and even in the degree to which coordination is grammaticized at all” (p. 331). In other words, not all languages have developed grammaticalized forms of coordination, and when they have, they come with a high degree of both cross-linguistic and intra-linguistic variation, some paths being widely shared, others being specific to some languages or language families (see also Haspelmath, 2007; Mauri & Van der Auwera, 2012). Giacalone Ramat and Mauri (2011: 654–55) focus on the three main types of coordination relations recognized in the literature: conjunction (‘and’), disjunction (‘or’), and adversativity (‘but’). Diachronically, the three groups of coordinating connectives show partially distinct paths of evolution.

According to Giacalone Ramat and Mauri (2011: 661), conjunctive ‘and’-connectives often find their source in spatio-temporal adverbs and prepositions “typically indicating a linear succession in time ‘before, after’ or a linear organization in space ‘in front, beside’.” Thus, through a metaphorical process concrete temporal and spatial notions evolve into more abstract, logical notions. While this metaphorical process is a fairly standard process of meaning extension (Xu, Malt & Srinivasan, 2017), Traugott (1986: 137) already noted that the precise details of exactly which spatial and temporal meanings are selected to express which logical connectives deserve more attention. This grammaticalization path from (spatial or temporal) linearization expression to coordinator can proceed at lower or higher levels of syntax.

Conjunction between nominal phrases typically starts in focal additive particles (‘also, too’) or comitative markers (‘with’) (see Brill (2011) for an illustration of this phenomenon in contemporary Austronesian languages, and Mithun (1988: 339–43) for a detailed illustration of the diachronic processes involved in this grammaticalization path in Sarcee (Athapaskan), Kwa languages (West Africa) and Cayuga (Northern Iroquoian)). Beyond the nominal phrase, paragraph-linking devices, discourse markers, verbs with dislocative meaning (‘go, bring’) or anaphoric pronominal roots may “grammaticalize at the higher levels as connectives between clauses” (Giacalone Ramat & Mauri, 2011: 661). We again refer to Mithun (1988) for detailed descriptions in typologically diverse languages. Of importance here is her observation that for many of these emerging forms, “[t]heir primary function is to provide a semantic or pragmatic link to previous



discourse, not to specify a syntactic one" (Mithun, 1988: 346). This explains that in many languages discourse adverbials and syntactic conjunctions are often difficult to tell apart because of this common functionality. Finally, while there is not a single path leading to coordinating conjunctions, Mithun (1988) points out two additional noteworthy observations: (i) nowadays differences in placement of conjunctions (pre-posed or post-posed) can stem from the different diachronic origins of the markers themselves (p. 351), (ii) coordinating conjunctions grammaticalized fairly recently across languages over the world, with some still in progress, and other clearly relating to borrowing in language contact situations (pp. 351–52).

As for the diachronic sources of disjunctive connectives, Giacalone Ramat and Mauri (2011) present a list comprising distal elements, interrogative particles, free choice verbs, dubitative particles, negative particles and denied conditionals. According to the authors, these elements may acquire a disjunctive meaning

by virtue of the inherent duality and exclusivity that characterizes both the notion of alternative and the notion of 'otherness' (...) [or] the irrealis potential status of the two alternatives, which cannot be presented as facts, but need to be overtly indicated as *possibilities*. (p. 662)

In other words, disjunctive connectives emerge in a context where an alternative is presented between two possible choices for the hearer.

For adversative connectives, Giacalone Ramat and Mauri first observe that they come with a higher degree of intra-linguistic variation. In other words, in most languages the stock of adversative connectives is more important than that of conjunctive or disjunctive markers. They illustrate this with French "which only shows *et* for conjunction and *ou* (*ou bien*) for disjunction, but a number of different connectives for contrast relations, e.g. *toutefois*, *mais*, *par contre*, *alors que*, *pourtant*" (p. 658). Furthermore, they observe that adversative connectives are more prone to renewal over time and that they are more easily borrowed than conjunctive and disjunctive ones, which may be related to the fact that adversative meaning is strongly intersubjective, with speakers "constantly in search of new and expressive ways of conveying contrast, determining a high synchronic intra-linguistic variation and a quicker renewal" (p. 659). The diachronic sources for adversative connectives are expressions of spatial distance or opposition, expressions of temporal overlap or continuity, causals, comparatives and emphatic expressions. In the case of spatial and temporal source expressions, adversative meaning emerges from the contrast or

opposition of two simultaneous states of affairs that may appear as surprising or unexpected. In her study of Italian adversative connectives *anzi* ('rather', 'on the contrary') and *invece* ('instead'), which both find their source in the spatio-temporal domain of posteriority and anteriority, Musi (2016) shows that the emergent notion of oppositive and counterexpectative contrast encodes the speaker's inferred link between (staged) simultaneity and contrast. Thus, "the contrastive meaning emerges as an invited inference in so-called bridging contexts, where occurrences present a set of recurrent semantic and syntactic features that favor the reanalysis" (p. 27) (see also Section 5.3.1). Causal meanings may also give rise to adversative meanings through denial of expectation, while comparative and emphatic expressions put a contrast between two elements of which one is more in focus (see also Section 5.3.2).

Tracing the evolution of any (coordinating) connective involves analysing its context of occurrence through time, where changing contexts reveal changes of function and meaning. Typically, the grammaticalization of connectives starts in contexts that are semantically and syntactically ambiguous between the original (concrete, propositional) meaning and the emerging (abstract) connective function. In such 'critical' contexts (Diewald, 2002) or 'bridging' contexts (Heine, 2002), speakers will activate pragmatic inferences concerning the presence and/or type of interclausal relation (see also Musi, 2016).

Concerning Lehmann's (1995) grammaticalization criteria (see Section 5.2), Giacalone Ramat and Mauri observe that phonological reduction and coalescence are very often attested in the early stages of the diachronic evolution of coordinating connectives, for example, Old English *be utan* > Engl. *but*. Yet, as already mentioned, other grammaticalization features do not readily apply. The authors mention obligatorification, paradigmaticization, and scope reduction, that seem incompatible with the function and morphosyntactic properties of interclausal connectives as such (p. 664). Scope reduction does not apply because coordinating connectives typically link two clauses, taking wide scope over the two segments. Obligatorification, in the sense of obligatory presence of a linguistic element (e.g. inflectional morphemes), seems inconsistent with coordinating connectives because in many contexts they may be left out (cf. Chapter 1), that is, speakers have the choice between the syndetic and asyndetic options, even in languages with a well-developed connective system. Finally, paradigmaticization is a problematic feature because, while they form a closed set, coordinating connectives do not really form a paradigm in the sense of number or gender inflection paradigms. It follows that

these three features cannot be taken as indicators of the degree of grammaticalization of interclausal connectives.

### 5.3.2 From Subordination to Subordinating Connectives

It is cross-linguistically widely acknowledged that subordinate clauses arise from simple, main clause structures, whereby propositional lexical material grammaticalizes into markers of clause subordination (Hopper & Traugott, 2003: 184–90; Givón, 2009). Grammatically, subordinate clauses come in three main types: (i) a complement clause functions as either subject or object of the main clause; (ii) a relative clause modifies a noun, similarly to an adjective does; and (iii) an adverbial clause occupies an adjunct position modifying the main clause. These three types of subordinate clauses seem to be cross-linguistically and typologically confirmed (Gast & Diessel, 2012a). Ohori (2011: 636) further observes that adverbial subordination is less homogeneous than the other two, both structurally and semantically, and that the border between adverbial subordination and coordination may be viewed as a continuum. Structurally, Ohori summarizes the general tendency that dominates the grammaticalization of subordination as one of “less to more clause integration”, that is, an evolution from syntactically independent, juxtaposed, simple clauses to a syntactically integrated complex clause (see, e.g. Lehmann, 1988; Muller, 1996, but see Combettes, 2013 for a more nuanced view). Here, we will focus on adverbial subordination mainly when reviewing the emergence of subordinating conjunctions used as discourse connectives.

Regarding the historical development of adverbial subordinators, Kortmann (1996: chapter 10) presents an overview study based on exhaustive inventories in Old English (OE: 10th–11th c.), Middle English (ME: 14th–15th c.), Early Modern English (EModE: 16th–17th c.) and Present-Day English (PDE: 20th c.). The study is presented as illustrative of the diachronic path of subordinating connectives in European languages. His focus is on the evolution of the inventories, sketching the major morphological and semantic changes through time. Quantitatively, the “stock” of available subordinators rises between the OE and the EModE periods and then drops in PDE, with markers emerging, changing and disappearing over time. Regarding the markers that “survived”, Kortmann finds that most subordinators go back far in time (OE and mainly ME) and that more recent innovations (last 500 years) are less numerous. In particular, many highly frequent PDE adverbial subordinators find their source in the OE ancestors, among them markers such as *after*, *as*, *as long as*, *as soon as*, *if*, *since*, *so that*, *though* and *while*. This being said, the ME period appears

to be even more important for today's subordinator inventory, with a massive increase in the number of markers, including borrowings (from French) and functional innovations of existing markers, of which more than 50 percent made it to the present time. Among these, we find again highly frequent markers, such as *although*, *because*, *before*, *until*, *when*, *where*. Kortmann links the emergence of markers in this period to the development of a written standard language for which "the development of an inventory of clause-connecting devices specifying interpropositional relations, such as adverbial subordinators, was indispensable" (p. 303).

From a morphological point of view, the evolution of subordinators is characterized by the following features. First, the preferred categorical sources of adverbial subordinators in OE are adverbs and demonstratives. This is a feature OE shares with other old Germanic dialects for the formation of adverbial subordinators. From ME on, the inventory sees a considerable increase in prepositions, nouns, verbs, and complementizers as source categories. The increasing importance of verbs as a source of adverbial subordinators follows from the reanalysis of participles with or without complementizer *that*. Examples are: *considering (that)*, *notwithstanding*, *in case (that)*, *provided (that)*, *seeing (that)*, etc. "In addition, Middle English and Early Modern English employ several subordinators incorporating the base form of the verb *be* (e.g., EModE *be it so (that, as)*, *(if) so be (that, as)*, *if case be (that)*, *albeit (that)*, *howbeit (that)*)" (p. 307). Another "new" source category for subordinators in ME are nouns (often as part of a prepositional phrase) following from direct and indirect borrowings and calques from French. Examples are *by (the) cause (that)*, *to that forward (that)*, *to the end (that)*, *in respect (that)*, not all of which survived. Kortmann further observes that "the inflationary use of phrasal subordinators involving the complementizer *that* in Middle English times, should not be viewed entirely independently of the formation pattern in Old French producing phrasal subordinators with *que* as final element" (p. 309). Furthermore, the often obligatory use of complementizer *that* in OE and ME became optional over time and has now mostly disappeared giving rise to "one-word subordinators", such as *after*, *because*, *before*, *if*, *in case*, *since*, *though*, *till*, *unless*, *until*, *when*, *where*, *while*, *whilst*, *as though* (p. 309).

The second morphological feature that we will present here concerns the syntactic polyfunctionality of adverbial subordinators. It is worthwhile noting that "Old English did not have a single primary adverbial subordinator, i.e. no one-word item serving exclusively as adverbial subordinator" (p. 310). Such "special-purpose" subordinators did not

develop before the ME period and have remained stable with around 14 percent of the inventory of adverbial subordinators until today. Compared to the other West-Germanic languages, this proportion is remarkably low and in contrast with Present-Day Dutch (approx. 38 percent) and German (approx. 40 percent) (p. 311).

Concerning the semantic evolution of adverbial subordinators, there is a clear general tendency towards decreasing polyfunctionality (or increase in semantic precision) throughout the history of English, in the sense that the proportion of polyfunctional subordinators compared to the monofunctional ones decreases, especially (again) between the OE and ME periods. More precisely, comparing the proportion of mono- and polyfunctional subordinators for the whole subordinator inventory, Kortmann finds that "the proportions of polyfunctional items decrease and those of the monofunctional items increase from Old to Early Modern English" (p. 314), especially for the one-word and monomorphemic adverbial subordinators. Yet, this is not to say that polyfunctionality disappears in the individual markers. To the contrary, "there are many instances of polyfunctional subordinators whose meaning range has not become smaller or has, indeed, grown larger over the centuries (Kortmann, 1996: 315). To illustrate this, Kortmann compares the semantic evolution of *so* and *as*, which he describes as the markers "which have undergone the most dramatic changes in their meaning range in the history of English" (p. 315). Whereas both markers have modality as their core meaning in OE, from ME on their semantic paths diverge: the (subordinator) meaning range of *so* decreases, while that of *as* increases. Concretely, *so* lost all of the meanings it had as an adverbial subordinator in OE, among them 'simultaneity', 'condition', 'similarity', 'place', and others. In ME, it gained 'result' and 'purpose' meanings, which are still the only subordinating meanings available today, as illustrated in (5–6):

(5) It was dark, **so** I couldn't see what was happening.

(6) I packed him a little food **so** he wouldn't get hungry.

[from Kortmann, 1996: 317]

Other PDE interclausal uses are not subordinating. In this area, we do indeed witness a decrease in semantic polyfunctionality. For a counter-example, namely one of polyfunctionality increase in this area, we refer the reader to Kortmann (1996: 317–18) for "the success story" of *as* in English, "i.e., one that is characterized by an enormous expansion of the range of interclausal relations it came to express in later periods than Old English."

A second general finding concerning adverbial subordinators is that semantic changes involving 'cause', 'condition', 'concession' (or

“CCC relations”, also including ‘purpose’ and ‘result’) emerge later, and generally derive from locative, temporal or modal senses. In Kortmann’s dataset “there is not a single subordinator which expresses some CCC relation before it (additionally or alternatively) comes to be used as a locative, temporal, or modal marker” (p. 319). These include the development of causal markers from temporal markers of anteriority or simultaneity, as observable for English *since* or *now (that)*, but also German *weil*. In the following Section, we will see that this development seems to be attested cross-linguistically. Noteworthy is also the development of contrastive-concessive *whereas* from a locative marker, and the observation that ‘concession’ is generally the last meaning to emerge (see Section 5.3.1, for a case study in French). About such “CCC markers”, Kortmann finally observes that their proportion steadily expands in the inventory of adverbial subordinators, at the expense of the markers expressing temporal relations.

### 5.3.3 Reconstructing Semantic Paths towards Relational Meanings

Before turning to a number of illustrative case studies, we would like to emphasize the fact that the emergence of subordinating and coordinating conjunctions shares many features. In particular, there is striking evidence across typologically different language families that discourse connectives follow a semantic path that starts off with concrete propositional meanings that give rise to abstract relational meanings through metaphorical extension and pragmatic strengthening. To illustrate this point, we will take as our starting point the “Target-Source List” in Heine and Kuteva’s (2002) famous *World Lexicon of Grammaticalization*. This list gives an overview of present-day (semantic and syntactic) concepts and relates them to possible source forms in over 500 (documented) languages across the world. With an eye on uncovering the semantic paths leading towards nowadays connective use, we retrieved all target concepts related to the diachrony of connectives. We restricted our retrieval to relational meanings also found in the main taxonomies of discourse relations (Chapter 3). These are (in alphabetical order): adversative, cause, concessive, conditional, purpose, and temporal.

When it comes to the (lexical) source of these relational meanings, Heine and Kuteva distinguish the following:

- ADVERSATIVE < TEMPORAL
- CAUSE < BACK, HERE, LOCATIVE, MATTER, PURPOSE, SAY, SINCE (temporal), TEMPORAL

- CONCESSIVE < CONDITIONAL, TEMPORAL
- CONDITIONAL < COPULA, S-QUESTION, SAY, TEMPORAL
- PURPOSE < ALLATIVE, BENEFACTIVE, COME TO, COMPLEMENTIZER, GIVE, GO TO, MATTER, SAY
- TEMPORAL < ALLATIVE, COMITATIVE, HOUR, IN (spatial), INTERIOR, LOCATIVE, TIME

For the sake of illustration, we will review here the evolution towards causal relational meanings only (marked in bold in the list above), that is, those source items that have given rise to causal connectives, very often expressed by means of coordinating and subordinating conjunctions.

The lexical source *BACK* (body part) is a “successful” source for several grammatical forms. According to Heine and Kuteva (2002: 46–50), this process is an instance of a more general process whereby body parts are grammaticalized to spatial concepts and markers, which again are used to express temporal concepts, but also markers for more abstract grammatical relations, such as *CAUSE*. A striking illustration comes from Wolof *ginnaaw*, which synchronically expresses three different grammatical categories: as a noun with the meaning ‘back’ (body part), as a preposition with the meaning ‘behind’ and as a subordinating conjunction meaning (causal) ‘since’. Robert (1997) proposes a unitary semantic analysis according to which *ginnaaw* refers to a location behind a given structured space marked by a landmark. “When *ginnaaw* is in nominal function, no other term in the utterance plays the role of the landmark; the morpheme has an extra-linguistic reference (...) i.e. the human body. In prepositional use, the landmark is the noun governed by *ginnaaw*. In subordinating use, the landmark is the clause introduced by *ginnaaw*” (Robert, 1997: 125). Thus, the causal subordinating use proceeds from the conceptualization of causality in spatial terms, that is, one event behind the other, but also from the metaphorical structuring of “discourse as landscape”, in which argumentative sequences are located behind and following one another, thus creating argumentative inferences (Robert, 1997: 124).

Other “spatial concepts” that give rise to causal conjunctions are *HERE*, and more generally *LOCATIVES*. For *HERE*, Heine and Kuteva (2002: 171) cite examples from Lingala and Albanian, where the locative adverb ‘here’ (respectively *áwa* and *ke*) comes to be used as a causal conjunction corresponding to ‘since’, ‘because’. As for *PURPOSE*, the authors observe that it is often part of “the same polysemy set” as *CAUSE* (Heine & Kuteva, 2002: 247). While there is no conclusive historical evidence to support their hypothesis, the authors nevertheless

argue on the basis of data available to them that diachronically purpose precedes cause in time. Causal subordinating conjunctions may also result from a path that takes *SAY* as its source item. According to the authors, *say*-verbs may develop into markers of purpose, cause, and temporal adverbial clauses at later stages of grammaticalization (Heine & Kuteva, 2002: 261–70). They see this as “an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers used for clause combining” (p. 269). Examples are given for languages as diverse as Baka or Lezgian. Finally, temporal expressions are an important source for causal conjunctions. “This appears to be an instance of a widespread process whereby spatial and temporal markers are grammaticalized in specific contexts to markers of ‘logical’ grammatical relations, such as adversative, causal, concern, concessive, and conditional relations” (Heine & Kuteva, 2002: 275–76). A well-known example is Latin *posteaquam* ‘after’, ‘ever since’ > French causal subordinator *puisque* ‘since’. Other instances described by Traugott and König (1991: 194–97) include the semantic paths: Old High German *dia wila so* ‘so long as’ > German *weil* ‘because’, English temporal *since* > English causal subordinator *since*. They also mention the regular polysemy of conjunctions with temporal and causal meaning: French temporal subordinator *quand* ‘when’ also used with causal meaning ‘because’, Finnish temporal subordinator *kun* ‘when’, ‘as’ also used with causal meaning ‘since’, ‘because’, Estonian temporal *parast* ‘after’ also used as causal ‘because of’ or temporal *kuna* ‘while’ with causal meaning ‘as’, ‘since’, ‘because’, or Romanian *din moment ce* ‘from the moment’ or ‘because’, and so on.

## 5.4 THE EMERGENCE OF DISCOURSE CONNECTIVES: SOME ILLUSTRATIVE CASE STUDIES

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In this section, we present a number of case studies that will develop in more detail how specific discourse connectives may have emerged in the history of different languages.

### 5.4.1 From Temporal to Concessive in French

Marchello-Nizia (2009) studies the development of the French concessive connectives *cependant* (‘yet’), *toutefois* (‘however’) and *pourtant* (‘though’). She shows that these linguistic forms first change their syntactic category through a process of grammaticalization (from verbal and nominal expressions to adverbials), in absence of any concessive meaning. Then, through what she calls a process of



pragmaticalization, these adverbials acquire a concessive meaning. Originally, none of these linguistic expressions were neither adverbs, nor connectives, and they did not express a concessive meaning. Rather, stepwise, they changed their grammatical category and their semantic meaning. To illustrate this, we will focus on her analysis of *cependant* ('yet') (see also Marchello-Nizia, 2007).

The origin of *cependant* lies in the anaphoric demonstrative *ce* ('this') followed by the present participle of the verb *pendre* ('to hang'). This corresponds to Diessel's (1999) observation mentioned above that many connectives find their source in the combination of a pronominal demonstrative and some other element expressing a semantic relation. Here, *pendant* ('hanging') is at the origin of the temporal (durative) meaning, that developed with its adjectival use in technical judicial vocabulary at the end of the thirteenth century, for example, *le jugement pendant*, meaning 'while waiting for the judgment'. In the course of the 14th–15th c. durative (adjectival) *pendant* extends to new, non-judicial, contexts. During the fifteenth century, *pendant* starts occurring in prenominal position leading to a reanalysis and recategorization as a preposition (adjective > preposition). In parallel, from the end of the thirteenth century, *pendant* is used in the combination: *en* [preposition] *ce* [anaphoric demonstrative] *pendant* [verb], with durative meaning in judicial contexts. In the course of the fourteenth and fifteenth centuries, the expression *ce pendant* or *cependant* gains a clear temporal (concomitant) meaning ('during that same time') in non-judicial contexts as exemplified in example (7) from the fifteenth century.

- (7) ... il ne feroit que demy guet, c'est assavoir depuis la mynuyt jusques au matin seulement, et [que] si **ce pendant** il vouloit venir parler a elle, elle orroit volontiers ses devises. (*Cent nouvelles nouvelles*, 1460, p. 389)

'He would keep only half a period of watch, namely from midnight to morning only, and if *ce pendant* ('during that time') he wanted to come and talk to her, she would gladly listen to his words.'

[from Marchello-Nizia, 2009: 12]

When this temporal meaning occurs in concessive contexts, either explicitly marked by concessive connectives such as *mais* ('but') or in contexts where the temporal simultaneity receives meaning nuances of opposition or contrast, *cependant* is in a favourable position to add the concessive value to its temporal meaning. These are contexts referred to by Heine (2002) as "bridging contexts", that is, contexts in which the

source meaning is still available, but in which the target meaning is more likely to be inferred. Thus, at this stage, *cependant* has not yet acquired its new concessive meaning. According to Marchello-Nizia, this does not happen before the mid-sixteenth century, when the temporal meaning leaves room to the encoded concessive meaning and *cependant* is used independently as a concessive connective.

Summarizing the grammatical and semantic evolution of *cependant*, we witness a case of polygrammaticalization where *pendant*, on the one hand, evolves from verbal phrase to adjective to preposition, and on the other hand, from verbal phrase to adverb (combined with *ce*). Semantically, the evolution is from spatial (the verb *pendre* ‘to hang’ is originally spatial) to temporal to concessive logical meaning, in line with the semantic path identified by Heine and Kuteva (2002) (cf. Section 5.2.3). A final note is in place here concerning the present-day (restricted) polysemy of *cependant*, which until today may occur with its temporal meaning of simultaneity, but only in formal writing.

Strikingly similar semantic paths have been described for Italian *anzi* and *invece* (Musi, 2016), the Romance markers Fr. *toutefois*, It. *tuttavia*, Sp. *todavía* and Port. *todavia* (Giacolone Ramat & Mauri, 2012), English *nevertheless*, *nonetheless*, *notwithstanding*, *still*, *yet* and counterparts in many languages (König, 1985), English *while* (among others) (Traugott & König, 1991), etc.

#### 5.4.2 From Cause to Contrast: Italian Però

In their study, Giacalone Ramat and Mauri (2008) reconstruct the semantic evolution of Italian *però* from causal to adversative marker. They find this evolution “intriguing” because it involves a so-called functional reversal, from cause to *counterexpectative contrast*, or *denial* of an expected causal sequence (Giacalone Ramat & Mauri, 2008: 304), rather than the more classical evolution from temporal to causal and/or concessive/adversative (see Sections 5.3.2 and 5.4.1; Heine & Kuteva, 2002: 291). A present-day example of the adversative *però* is (8). It is a use that is fairly recent in Italian with first unambiguous attestations in the seventeenth century.

- (8) Mario gioca bene **però** perde in continuazione.

‘Mario plays well però (but) always loses.’

[from Giacalone Ramat & Mauri, 2008: 303]

Reconstructing the history of *però*, Giacalone Ramat and Mauri indicate that the connective is attested from its earliest occurrences in the twelfth century with a resultative function, thus directly continuing the meaning of its late Latin antecedent *per hoc*. In Old Italian, *però*

expresses both causal ('since') and resultative ('therefore') meanings. It is the occurrence of this latter resultative meaning in specific contexts with negative scope that will give rise to the adversative meaning. The details of this evolution are as follows (Giacalone Ramat & Mauri, 2008: 307–12):

In Old Italian (13th c.–15th c.) *però* occurs with causal meaning in the widespread sequence *però que* ('since, because'). This use becomes rarer in the sixteenth century, almost disappearing from the seventeenth century on, when it gets replaced by the forms *perché* and *poiché*. During this same period of time, *però* is also very frequent in its resultative function, being replaced by *perciò* from the early eighteenth century on. Thus, after the seventeenth century, *però* loses its causal and resultative meanings to give way to its adversative use. The emergence of this new meaning occurs in contexts that are characterized by the presence of some wide scope negation. "In such cases, *però* introduces some consequence that does not take place despite expectations, determining a contrast between the cause and the denial of the expected effect" (Giacalone Ramat & Mauri, 2008: 307). An example is (9).

- (9) Si fu la loro immensa gloria spesso dalla invidiosa fortuna inter-  
rupta, **non però** fu denegata alla virtù (16th c.)  
'If their immense glory was often obstructed by adverse fortune,  
non però (not for that) was it denied to virtue.'  
[from Giacalone Ramat & Mauri, 2008: 303]

While *però* is not contrastive *per se* in such negative contexts, speakers may have reanalyzed it as a marker of a specific type of contrast generated by the denial of an expected causal sequence. In other words, negated causality is reinterpreted as concession (cf. König & Siemund, 2000). Giacalone Ramat and Mauri see an increasing frequency of the form *non però* from the fifteenth and especially sixteenth century onwards. Before the fifteenth century this negated form is rather rare. These negated resultative constructions frequently occur in the environment of other contrastive markers (concessive clauses or the connective *ma* 'but'), thus strengthening the adversative interpretation through an invited inference (see also König, 1988; König & Traugott, 1988). During this long period of time, the adversative interpretation of *però* was strictly connected to the presence of negation. It is not before the early seventeenth century that occurrences are found of adversative *però* without negation. At that point, "the process of reanalysis is complete and *però* has been re-semanticized as a marker of counter-expectative contrast" (Giacalone Ramat & Mauri, 2008: 311). For two additional centuries, *però* is semantically ambiguous between its

resultative meaning and its adversative one, with the two coexisting. Yet, the syntactic context in which the two meanings are expressed is different, with resultative *però* being restricted to clause-initial position, so that the ambiguity is resolved through the syntactic context. From the second half of the nineteenth century, the resultative meaning of *però* starts to fade, and the syntactic contexts of the item with adversative meaning starts to include the clause-initial position too, which was hitherto reserved to its resultative use.

From the above-sketched evolution, it appears that the grammaticalization of *però* as an adversative coordinating marker (occurring mainly in clause-initial position) has fairly recently come to completion (between the end of the nineteenth and twentieth century). Several factors played a role in this evolution including competition between two forms, specific semantic and pragmatic contexts of use, including syntactic restrictions. In the following section, we will see that similar positional constraints have played a role in the semantic evolution from French temporal *alors* to its causal and discursive uses. Yet, in contrast with *però* where the semantic ambiguity has disappeared with the completion of the grammaticalization process, this is not the case with *alors* which remains polysemous in present-day French.

#### 5.4.3 Today's Polysemy Explained: The Case of French *Alors*

Degand and Fagard (2011) take as their starting point the polysemous and polypositional use of the French connective *alors* ('then', 'so', 'now/well', 'right'). They are interested in finding out how this linguistic expression acquired both new grammatical affordances and new meanings. Grammatically, *alors* evolved from a sentence adverbial with temporal meaning, to a (syntactically detached) connective marking temporal, causal or conditional relations, and eventually to a discourse-structuring marker with conversational management uses. The three main uses are illustrated in examples (10), temporal sentence adverbial, (11) causal (consequential) connective, and (12), discourse structuring marker:

- (10) Mais le soir tomba sans que la pluie eût cessé. **Alors**, la Comtesse commit une imprudence ... (20th c.)  
'But the night fell and the rain still hadn't stopped. *Alors*, the countess got careless ...'
- (11) ah il adore ça **alors** ben tu penses bien avec moi euh il était aux aux anges hein  
'oh he loves it *alors* well you'll guess that with me he was in seventh heaven'

- (12) mais **alors** ce qui était marrant c'est que euh / tout à coup il s'arrêtait / et **alors** euh / assez vite **alors** xx se disait maintenant vous vous dirigez vers telle porte // mais **alors**  
 'but *alors* the funny thing was that er / suddenly he stopped / and *alors* er / quite quickly *alors* xx was saying now you go towards the door // but *alors*'

[from Degand & Fagard, 2011: 31–35]

The original meaning of *alors* is one of temporal simultaneity. It appeared in twelfth century Old French as a compound of the preposition and prefix à 'at' and *lors* 'then', which in turn originates in the Latin ablative form 'illa hora' with the meaning 'at that hour' (see example (13)).

- (13) ... selonc la costyme romaine. Et sachiés que c'estoit une feste qu'il coltivoient **alors** mout hautement. (Tristan en prose, 13th c.)  
 '... according to Roman customs. And you should know that this celebration was *alors* held in the highest regards.'

[from Degand and Fagard, 2011: 31]

Grammatically, in its use as a temporal adverbial, *alors* is restricted to a clause-internal position (integrated, syntactically dependent, adjunct). At the end of the thirteenth century, it appeared in contexts where it retained its temporal meaning but could take causal meanings, and occasionally also conditional meanings (from the fourteenth century on). In their corpus-based study, Degand and Fagard show that the frequency of these non-temporal uses rose steadily to 35 percent at the beginning of the fourteenth century, while 65 percent were still clearly temporal. In terms of grammaticalization, there was no recategorization (no shift of word class), yet the marker gained syntactic detachment moving from sentence-internal to sentence-peripheral (initial) position.

From the Middle French period on (15th–16th c.), clause-initial position became the preferred position for *alors*. Strikingly, it is in this new syntactic position that new meanings emerged: first temporal, causal and conditional meanings with a connecting function (from the seventeenth century on), then new discourse structuring meanings (mainly topic shifters and transition markers) from the twentieth century on. Thus, this new syntactic position with extended grammatical scope gave way to new meanings with extended scope over the whole clause. This is in line with Heine et al.'s (2021: 64) observation that new contexts of use raise new functional meanings (see Section 5.1). It is also confirmed by the many studies observing the movement from

sentence-internal to sentence-peripheral position, with a tendency for the expression of subjective meanings in the left periphery (LP) and for intersubjective meanings in the right periphery (RP). This phenomenon was described first in the contributions in Beeching and Detges (2014), and has, since, been labelled the Subjectivity, Intersubjectivity and Peripheries Hypothesis (SIPH; Salameh, Estéllés & Pons Bordería, 2018), giving rise to quite some discussion regarding its generalizability (Pons Bordería, 2018). Notwithstanding this discussion, there is agreement that peripheral position plays an important role in the development of discourse markers and discourse connectives as a locus for the development of new meanings (see, e.g. Onodera & Traugott, 2016; Heine et al., 2021; Van Olmen & Šinkūnienė, 2021). The connective *alors* is but one of the many examples of this phenomenon.

## 5.5 SUMMARY

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In this chapter, we have given an overview of the way discourse connectives emerge in language over time, with a focus on the diachronically well-documented languages French, Italian and English. We first sketched a number of general observations regarding diachronic research and reviewed the main characteristics of grammaticalization theory, which developed as one of the mainstream theoretical frameworks in historical linguistic work, especially in the area of studies on the evolution of discourse connectives.

The core of the chapter concerned the emergence of coordinating and subordinating connectives as resulting from the (grammatical) explicitation of interclausal semantic relations, that is, as markers of clause combining. Syntactically, the general pattern is that of a sentence-internal element that evolves to become a sentence-external expression driven by semantic reanalysis. A typical example is the grammatical path DEMONSTRATIVE > CONJUNCTION with sentence connectives of cause, time, and consequence cross-linguistically built on this pattern. Semantically, the meaning expressed with the relational marker is subject to change through speakers' pragmatic inferential processes. Thus, in specific contexts, speakers will infer additional, implicit meanings through implicatures or other pragmatic inferences. These general processes are further described and illustrated for coordinating and subordination conjunctions. For coordination, the three main types of relations were reviewed, namely conjunction, disjunction, and adversativity. Diachronically, the three groups of coordinating connectives show partially distinct paths of

evolution. For subordination, the general grammaticalization path was described as the integration of simple, main clause structures, that is, an evolution from syntactically independent, juxtaposed, simple clauses to a syntactically integrated complex clause. Focus was on adverbial subordinators, that is, markers introducing a clause in adjunct position modifying the main clause. Several syntactic and semantic paths leading towards subordinating conjunctions were described on the basis of the exhaustive inventory of English adverbial subordinators over time. We also presented three case studies illustrating typical as well as less typical cases of the evolution of connectives over time: French *pendant* from locative/temporal to concessive; Italian *però* from causal to contrastive, and polysemous French *alors*, retaining temporal, causal, conditional and discourse organizing meanings.

## DISCUSSION POINTS

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- To what extent are the case studies presented in Section 5.4 illustrations of the more general semantic path towards discourse connectives?
- What could explain the striking similarities in the semantic evolution of discourse connectives across languages?
- Based on Kortmann's (1996) study, what would be your prediction regarding the evolution of the inventory of adverbial subordinators in another language? What could be different? What could be the same?
- Can you think of another area in the language where metaphorical extension and pragmatic strengthening have played a role in the diachronic evolution?

## FURTHER READING

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Heine (2002) is a seminal study on the role of context in the evolution of grammatical meanings. He demonstrates that different stages of evolution tend to be reflected in the form of different context clusters. He focuses on one stage in particular, called the switch context, which is characterized by an interaction of context and conceptualization, leading to the rise of new grammatical meanings. This is illustrated in the comparative diachronic study of Giacalone Ramat and Mauri (2012) on the way interclausal adversative connectives may evolve parallelly

in different Romance languages, developing roughly the same function from the same Latin lexical source through similar paths, but at different time rates. The study convincingly shows that regularities in semantic change can indeed be captured through the observation of micro-changes correlated to different types of contexts and to different frequencies of occurrence of the items at issue. Lenker and Meurmann-Solin (2007) present an overview of corpus-based studies on the history of individual connectives in English, drawing on a variety of methodological approaches including grammatical analysis, pragmatics, text linguistics and discourse analysis. The mix of qualitative and quantitative studies offers an insightful view on the importance of clause-combining as the locus where syntactic, semantic, pragmatic and cognitive phenomena meet.