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Mirativity and rhetorical structure

The development and prosody of disjunct and anaphoric adverbials with '*no*' *wonder*

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This paper studies from a synchronic-diachronic perspective the formal and semantic-discursive properties of adverbial expressions with a negative quantifier + *wonder* (henceforth '*no*' *wonder*). They are used as mirative qualifiers which assess a proposition as 'not surprising', typically motivated by an explicit justification. As a result, the '*no*' *wonder* adverbials function in a larger rhetorical structure, within which they convey the 'causally justified expectedness' of a state-of-affairs. We point out that in Present-day English, there are two types of '*no*' *wonder* adverbials that are in different ways 'outside of the clause' they assess. On the one hand, there are disjunct uses of '*no*' *wonder*, which in our data always occur in sentence-initial position, scoping over the following proposition, with the justification either preceding or following the miratively qualified proposition. On the other hand, there is the anaphoric adverbial '*no*' *wonder*, which retrospectively qualifies a proposition in a preceding clause or sentence, but is itself part of a separate complex containing the justification. We argue that historically these two adverbial subtypes are related to different multi-clausal patterns involving clauses with *be* + *no wonder*: disjuncts to extraposition constructions and anaphoric adverbials to clauses that qualify a preceding clause. We also show that in Present-day spoken data the anaphoric mirative qualifier is prosodically more independent, while the disjunct uses tend to be prosodically integrated with the proposition.

1. Introduction[1]

This paper focuses on two types of adverbials with negative quantifier + *wonder* (henceforth '*no*' *wonder*). They are used as mirative qualifiers (DeLancey 2001) which

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assess the proposition in their scope as 'not surprising'. The two types we deal with are in two different ways 'outside of the clause' they qualify. On the one hand, there is the disjunct type (Quirk et al. 1985: 612ff), which is structurally integrated with the proposition it takes in its scope. In our Present-day English data, disjunct '*no' wonder* always occurs in sentence-initial position, as in (1) and (2). This is, according to Quirk et al. (1985: 491, 612ff), the normal position for "content disjuncts" expressing a speaker comment on the content of the following proposition. On the other hand, there is the – hitherto largely neglected – anaphoric type, which retrospectively qualifies a proposition in a preceding clause, as in (3), or a preceding sentence, as in (4). In such instances, the proposition over which *no wonder* takes scope has to be retrieved anaphorically. In (3), for instance, *no wonder* does not qualify the state-of-affairs described in the *if*-clause. Rather, the interpretation of the adverbial requires relating it to the preceding proposition, *his wife was an alcoholic*, as its "anchor" (Kaltenböck, Heine & Kuteva 2011). Example 4 shows that through this retrospective relation, anaphoric *no wonder* may even qualify the proposition of another speaker in the dialogue. In view of this particular cohesive relationship to the anchor, we call this second type the 'anaphoric' adverbial.

(1) Poverty remained the fate of most of those who stayed. … *No wonder* emigrants continued to stream out of the country in record numbers. (WB)[2]

(2) *NO wonder* model Sophie Dahl has health problems if she has dieted down from size 16 to size 8.   (WB)

(3) "Banks!" Constance exclaimed. "Isn't that the name of the man who used to live in the cottage the Gleesons have now and who was sent to prison for receiving stolen scrap iron? And his wife was an alcoholic, and *no wonder*, if she knew what kind of man he was.   (WB)

(4) "They didn't touch the wine or flowers." "Yeah, but with a wine cellar like theirs, *no wonder*! Great place."   (WB)

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2. The examples marked with (WB) were extracted from Wordbanks*Online* and are reproduced with the permission of HarperCollins.

In this paper, we investigate these two distinct subtypes of adverbials more closely. We will show that their current formal and semantic-discursive properties are historically inherited from different multi-clausal patterns involving clauses with *be* + '*no*' *wonder* involving various paths of grammaticalization. We will also provide evidence from prosody for the different ways in which they relate to the proposition they qualify.

While disjunct and anaphoric *no wonder* show important differences, they convey the same general qualificational and discursive meanings. Besides expressing speaker assessment of a proposition, i.e. "lack of surprise" (Simon-Vandenbergen & Aijmer 2007: 37), *no wonder* adverbials also have a cohesive function. Crucial in this respect is the fact that they are part of larger rhetorical units which typically include an explicit justification for the speaker's mirative assessment with respect to the proposition. In (1), for instance, the speaker's lack of surprise at a large-scale migration flow from early 20th century Scotland is justified on the grounds of the country's poor economic situation at the time. Similarly, in (3), the qualification of a woman's drinking problem as unsurprising is accompanied by an explicit justification, which in this case refers to the knowledge that her husband is a criminal. The justification either precedes the miratively qualified proposition, as in (1) and (4), or follows it, as in (2)–(3).

The mirative adverbial welds the justification and the proposition together into a larger text unit, or 'rhetorical structure'. As a rhetorical structure, it can be understood – much as in Mann & Thompson (1988: 243–245) – as being defined by relations "among clauses in a text, whether or not they are grammatically or lexically signalled" (Mann & Thompson 1988: 244). These relations include various types of linkage such as "the meanings of conjunctions, the grammar of clause combining, and non-signalled parataxis" (Mann & Thompson 1988: 244). The rhetorical relation central to the larger unit with *no wonder* is one of justified – and hence emphatic – expectedness. *No wonder* emphasizes the expected relation between justification and proposition: it invites the addressee to infer a rhetorical relation of reason. Reason is generally viewed as a discourse-internal (Halliday & Hasan 1976: 240) or speaker-related (Verstraete 2002: 51) causal relation: it gives the reason why the speaker arrives at his or her assessment with regard to the proposition, which is a mirative assessment in the case of *no wonder*. In example (2), for instance, the reason why the speaker assesses the model's health problems as wholly to be expected is that she dieted from size 16 to 8. *No wonder* serves as an explicit marker of this causally justified 'expected' relation. The disjunct uses can be paraphrased by *of course*, as illustrated by reformulation (2′) of (2). The anaphoric uses require substitutes that can function anaphorically, such as *predictably* (*so*), as shown by reformulation (3′) of (3).

(2′)   *Of course* model Sophie Dahl has health problems if she has dieted down from size 16 to size 8.

(3′)   And his wife was an alcoholic, and *predictably so*, if she knew what kind of man he was.

In this paper, we will zoom in on the two types of *no wonder* adverbials from two different perspectives, diachronic (Section 3) and synchronic (Section 4). From a historical point of view, we will show that the two types of adverbials developed analogously from two distinct multi-clausal source patterns containing clauses with *be + no wonder*, viz. extraposition structures for the disjunct adverbials, and juxtaposed clauses qualifying a preceding clause for the anaphoric adverbials. This historical reconstruction is divided into two stages. Section 3.1 briefly describes the distinct multi-clausal patterns with *be + no wonder* which came to express mirative qualification in Old English. Section 3.2 traces the emergence from Middle English onwards of the two types of adverbial mirative qualifiers, which increasingly replaced the distinct multi-clausal patterns in which they originated. From a synchronic perspective, it will be shown in Section 4 that the distinction between the disjunct and anaphoric adverbials is also manifested in their distinct behaviour in terms of prosodic integration with the proposition they qualify. Section 5, finally, will spell out some of the wider theoretical implications of this study by way of conclusion.

2.   Data extraction and methodology

The earliest attestation of the noun *wonder* in the *Oxford English Dictionary* (OED) dates back to *c.*700. The data for our corpus study include diachronic data sets for the Old, Middle and Modern English periods as well as a written and spoken data set for Present-day English.

For the diachronic data sets, we consulted various historical corpora, namely the *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE) for the period 750–1150 (Taylor et al. 2003), the *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2) for 1150–1500 (Kroch & Taylor 2000), the *Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME) for 1500–1710 (Kroch, Santorini & Delfs 2004) and the *Corpus of Late Modern English Texts* (CLMETEV) for 1710–1920 (De Smet 2005, 2008).[3] As the corpora for Old and Middle English (YCOE and PPCME2) cover a larger time span than those of Early and Late Modern English (PPCEME and CLMETEV), they were subdivided into two subperiods. As a result, the early and late subperiods of the three historical time periods (Old, Middle, and Modern English) cover comparable time spans of 150 to 210 years each. An overview of the resulting data sets is given in Table 1. From these corpora, all occurrences of the noun *wonder* were extracted, in the various morphological forms (singular/plural forms and case variants) and spelling

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3.   De Smet (2005, 2008) motivates the choices made in compiling the Corpus of Late Modern English Texts and provides detailed information about its primary sources.

variations attested in the OED. In this way, no a prioristic choices were made with regard to the question of what morphosyntactic expressions could convey mirative meaning. We manually sorted the data to retain only those instances in which a NP or adverbial with *wonder* is related to the description of a state-of-affairs, as in (1)–(4) above. It is only for such examples that the question presents itself as to whether the expression with *no/a wonder* is used lexically or grammatically. Other types of constructions, e.g. ones in which NPs with *wonder* are the direct object of a verb, as in (5), were excluded from further analysis as they invariably feature lexical uses of the noun.

(5)   To see the *wonders* of the world abroad (Shakespeare, 1591, *The two gentlemen of Verona*)

The written data were coded for the following features: (i) lexical or grammaticalized use, (ii) formal realization pattern of the expression with *wonder*, (iii) position of the justification with respect to the qualified proposition.

Table 1. Overview of diachronic data sets

Period	Subperiod	Extracted per subperiod	Relevant tokens per subperiod	Total extracted per period	Total relevant tokens per period
Old English (750–1150)	Early (YCOE, 750–950)	111	30	807	113
	Late (YCOE, 950–1150)	696	83		
Middle English (1150–1500)	Early (PPCME2, 1150–1350)	117	44	228	102
	Late (PPCME2, 1350–1500)	111	58		
Modern English (1500–1920)	Early (PPCEME, 1500–1710)	97	23	1002	302
	Late (CLMETEV, 1710–1920)	905	279		
Present-day English	written (WB, 1960–2005)	–	–	500	428
	spoken (Jacobs 2014)	–	–	99	96

The synchronic, Present-day English data set consists of two parts. For comparison with the earlier stages of the diachronic development, we compiled a random sample of 500 tokens from the written, British English subcorpora of Collins WordBanks*Online* (WB). Again, the extraction and manual sorting concerned instances of the noun *wonder* that occurred in an expression relating to the description of a state-of-affairs,

yielding a data set of 428 tokens. For the prosodic analysis, we resorted to a corpus of spoken British English data created by Jacobs (2014). The corpus is based on extractions of transcribed segments of dialogue and monologue containing *no wonder* from various spoken Present-day British English corpora.[4] The transcribed corpus attestations were read aloud by four native speakers of English and recorded in laboratory conditions. This yielded a corpus of connected speech containing 99 audio files with *no wonder* adverbials, of which 96 were of good enough quality for the instrumental analysis. The prosodic analysis was conducted in Praat (Boersma 2001, Boersma & Weenink 2015), using the ToBI annotation system (Beckman, Hirschberg & Shattuck-Hufnagel 2005) to identify the relevant pitch accents, pitch directions and intonation unit boundaries. The ToBI tails are translated into tonal contours (or British tone movements) following the correspondence table found in O'Grady (2013: 140).

To guarantee consistency of analysis, the written and spoken data sets were all analysed independently by two of the various authors of this article before the resulting labels were integrated into a final analysis.

3.   Diachrony of *no wonder* adverbials

3.1   Multi-clausal source patterns in Old English: Extraposition construction vs. juxtaposition of clauses

The two types of mirative adverbials illustrated in (1)–(4) above are not attested yet in Old English. Besides lexical uses of *wonder* in the sense of 'miracle' or 'marvel', as in (6) below, the Old English data do already contain instances allowing for a mirative, grammatical reading, i.e. as qualifying a proposition as highly 'expected' from the speaker's point of view. The grammatical uses, illustrated in (7)–(9) below, all involve clausal expressions of the form 'copular verb (mostly *be*) + *no/what wonder*'. These mirative clauses occur within two main types of larger multi-clausal patterns,[5] i.e. extraposition

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4.   More specificallly, the transcribed segments were extracted from the following corpora: Collins Wordbanks*Online* (WB): 50 million words total, *British National Corpus* (BNC) (Burnard 1998): 10 million words, the *International Corpus of English, British English* (ICE-GB) (Nelson, Wallis & Aarts 2002): 600K words, *British Academic Spoken English* (BASE) (Thompson & Nesi 2001): 1,6 million tokens, *London-Lund Corpus of Spoken English* (LLC) (Svartvik 1990): 500K words. These corpora have been compiled with texts from a wide range of British English speakers and registers, except for BASE and LLC. The first one consists solely of lectures and seminars, while LLC contains texts spoken by London academics and professionals but in a variety of registers.

5.   A third, very infrequent, type is that of adverbial comparative clauses, as in *Þanne þe camel, as it was no wonder, gan to lepe and to sterte* (PPCME2, 1350–1420). This type of

constructions and juxtaposition of clauses. In this section, we will give arguments for the classification of the clauses as grammatical expressions and briefly discuss the rhetorical effects of the two types of multi-clausal patterns. The discussion of the two types will focus on those structural and pragmatic-discursive properties that were later inherited by the mirative adverbials, for which they served as source patterns. Table 2 presents the proportions in the Old English data of, on the one hand, the lexical uses and, on the other hand, the grammatical patterns that were the source constructions of the mirative adverbials, i.e. extraposition and juxtaposition.

(6)   Hi woldon þa ferian mid folclicum wurðmynte þone halgan lichaman, and lægcan innan þære cyrcan. Þa *wæs micel wundor* þæt he wæs eall swa gehal swylcehe cucu wære mid clænum lichaman, and his swura wæs gehalod þe ær wæs forslagen, (…)

   'They wanted then to carry the holy body with public honour, and lay it in the church. Then it was much wonder that he was all whole just as he were alive with a clean body, and his neck that was hewn off before was healed […]'   (YCOE, 950–1050)

Table 2. Absolute and relative frequencies of lexical and grammatical uses of (*no*) *wonder*

	Lexical		Extraposition		Juxtaposition		Total gramm.		Total	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Early OE	13	44.8	7	24.2	9	31	16	55.2	29	100
Late OE	46	55.4	31	37.4	6	7.2	37	44.6	83	100
Total	59	52.7	38	33.9	15	13.4	53	47.3	112	100

*(Columns 4–9 grouped under heading: **Grammatical/mirative**)*

The mirative extraposition construction, illustrated in (7) and (8), is a complex sentence in which *be no/what wonder* takes a complement clause introduced by an explicit complementizer (*that*, *if* or *though*). In Old English, the constructions with *be no/ what wonder* all had postverbal clausal complements, which can hence be referred to

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clause has been identified by Brinton (2008) as a possible source of grammaticalized comment clauses, which scope, like disjunct adverbials (Quirk et al. 1985:618–628) over the proposition they comment on. However, in the case of clauses with *be no wonder*, this type is so infrequent (6 instances in the total of our data sets) that it is unlikely to have been entrenched as a primary analogical model. By contrast, the extraposition construction is very frequent (with 393 (non-)elliptical instances in the total of our data sets). We propose the extraposition construction is the source of the disjunct adverbials (see Section 3.2).

as 'extraposed'[6] (cf. Visser 1972: §898; Traugott 1992: 217). In these extraposition constructions, the mirative qualifier and the proposition it qualifies are component units of one larger grammatical structure.[7]

(7)   Be ðæm is awriten, Se wisa suigad, oð he ongiet ðæt him bið nyttre to sprecanne. *Nis hit nan wundur*, ðeah he swugie, & bide his timan.

'On this it is written: the wise man is silent until he thinks that it is more useful for him to speak. *It is no wonder*, that he is silent and waits his time.'
(YCOE, 850–950)

(8)   Nu cwæð se halga Beda þe ðas boc gedihte, þæt *hit nan wundor nys*, þæt se halga cynincg untrumnysse gehæle **nu** he on heofonum leofað.

'Now said Bede the Holy, who wrote the book, that *it is no wonder* that the holy king heals weaknesses **now** that he lives in heaven.'   (YCOE, 950–1050)

We propose that the grammaticalization of their matrix resulted from the reanalysis of its primary, lexical use as in (6) into a secondary grammatical use qualifying the proposition in the complement clause as in (7)–(8). Boye and Harder (2007: 581–585) relate the shift from primary (propositional) status to secondary (qualifier) status to restrictions on how the grammaticalized unit can be 'addressed' by, for instance, interrogatives. Lexical matrices as in (6) can be probed by a *wh*-question such as 'how much wonder was it?', which naturally receives the answer 'it was great wonder'. By contrast, the mirative qualifying clauses in (7) and (8), *it is no wonder*, cannot be probed by a question such as 'how much wonder is it?', even though a parallel lexical use with negative polarity can be: *How much trouble is it? It is no trouble*. Moreover, mirative uses can be replaced by an adverbial such as *of course* as illustrated by the following reformulation of (8): *Now that the Holy King lives in heaven, of course, he heals weaknesses*. This reveals that *it's no wonder* has a function comparable to a disjunct adverbial (Quirk et al. 1985: 618–628) with regard to the proposition (Brinton 2008: 131). As we will see, the clausal qualifiers of mirative extraposition constructions effectively came to be replaced by disjunct adverbials in the stages following Old English.

In terms of rhetorical structure, the mirative extraposition constructions all functioned – from OE on – in larger text chunks which included a justification for the

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6.   Without implying any claims about a prior or more basic 'non-extraposed' variant (p.c. Bettelou Los).

7.   In Old English, the extraposition construction was not yet fixed in its present form, i.e. with non-salient *it* as its subject. The realization of the matrix subject allowed for variation: in our data, the subject could be realized by non-salient *it*, cataphoric *ðæt*, or it could be left implicit. The latter two options are generally regarded as the historical precursors of the extraposition construction with non-salient *it* (Traugott 1992: 216–219; Denison 1993: 73–96; Hulk & van Kemenade 1993; Van linden 2012: 129–133). Van linden, Davidse & Matthijs (2016) present a detailed reconstruction of the grammaticalization of these various patterns.

qualification of the proposition as non-surprising (see Section 1). The justification could either precede the proposition, typically as part of a separate sentence, as in (7), or it could follow the proposition, as in (8). These two basic sequences differ slightly in terms of their argumentative value. In the first sequence the justification comes first and presents the proposition as self-evident. This is conceptually the logical and most iconic order, as a cause naturally precedes its effect (Diessel 2008). In this order, the proposition concludes the rhetorical unit, and is hence the most foregrounded element. Studies of complex sentences have explained the prominence of the final clause in such terms as focal position (Chen 2003: 160) or "rhematic position", i.e. the 'point' of the whole sentence (Schmidtke-Bode 2009: 156). By contrast, the second sequence introduces the justification only after the qualified proposition. The justification is then typically realized by a relative or adverbial clause, which is linked to the qualified proposition by an explicit structural marker. In (8), the clause introduced by *nu*, 'now that he lives in heaven', gives the reason[8] for the speaker's qualifying the proposition 'the holy king heals miracles' as wholly unsurprising. (The theology behind this specific argumentative sequence is as follows: because "the holy king", referring to Christ, gloriously ascended into heaven after having saved mankind, *of course* he intervenes from heaven to heal human weaknesses.) As in such patterns the justification is placed in final position, but within a subordinate clause (typically associated with backgrounded information, see e.g. Tomlin 1985), both the proposition and the justification tend to stand out as rhetorically prominent. Because of their different rhetorical effects, we will treat the two sequences in which extraposition constructions with *'no' wonder* occur as two different discourse schemata:

i.   justification + (mirative qualifier + proposition)
ii. (mirative qualifier + proposition) + justification

The mirative juxtaposition pattern also revolves around a clause with *be no wonder*, but in contrast to that of the extraposition pattern, it retrospectively qualifies a proposition in a preceding clause or sentence, and is itself part of a separate unit containing the justification. We refer to this as a "juxtaposition" structure[9] to capture the placing side by side of the separate units of proposition (which may be internally complex)

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8.   As pointed out by Traugott and König (1991: 194ff), *now* may have an ad hoc conversational implicature of causality.

9.   Brinton (2008: 129) uses the term "appositional structure" for the similar case of qualifying and linking *I mean* in an example like *It makes no difference what you say. I mean, the damage is already done.* Here too, we first have a proposition, which is followed by the separate complex of *I mean*, marking a retrospective relation of reformulation, and *the damage is already done*, which "expresses the reason for the speaker having made the previous statement". We do not use this term because of its strong association with the apposition of NPs.

and anaphoric mirative qualifier + justification. The units that are being juxtaposed are not necessarily sentences,[10] but they are separate units, the first sometimes and the second always a 'complex' in Halliday's (1994: 193ff) terms. A clause complex is a larger structure of component clauses combined with each other through relations of coordination and subordination. In (9), for instance, the proposition is a clause complex, with the causal *for*-clause itself consisting of two coordinated clauses: it states that humans all have the same origin, because they go back to Adam and Eve and all are born in the same way. This unit is followed by the complex containing *that's no wonder*, to which two more *for*-clauses relate. Anaphoric *that* refers back to the previous (complex) proposition and qualifies it as not surprising in view of the fact that God is the father of all creatures, and created all and rules all. It is precisely because the proposition on the one hand and the mirative qualifier + justification on the other hand form separate complexes that they can be related anaphorically, which in (9) is done explicitly by *that*.

(9)   & cwæð: Hwæt, ealle men hæfdon gelicne fruman, forþam hi ealle coman of anum fæder & of anre meder, & ealle hi beoð git gelice acennede. *Nis þæt nan wundor*, forþam þe an God is fæder eallra gesceafta forþam he ealle gesceop & ealra welt.

'& said: All men had the same origin, for they all came from one father and one mother, and all are born in the same way. That is no wonder, for one God is the father of all creatures, for he created all and rules all.'

(YCOE, 850–950)

The speaker comment and linking meanings expressed by the clause with *be no wonder* in juxtaposition patterns such as (9) involve the emphatic, speaker-related and abstract meaning components that are typically associated with grammatical elements. The question is whether they also have formal characteristics on the basis of which they can be viewed as grammatical elements? In contrast with the extraposition constructions discussed above, no nucleus-margin reversal (Hopper & Traugott 2003: 207–209) can be posited. We propose, however, that a clause such as *Nis þæt nan wundor* in (9) qualifies as a thetical element in the sense of Kaltenböck, Heine and Kuteva (2011). Its meaning relates to the preceding proposition as its 'anchor', which it follows as a structurally and prosodically separate unit (Kaltenböck, Heine & Kuteva 2011: 856). This retrospective relation may be expressed by an explicit phoric link to the anchor

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10.   As pointed out by one of the anonymous referees, the modern notion of sentence relies strongly on punctuation (see also Halliday 1994: 193ff), but this was not the case in the history of written English prior to the eighteenth century (Parkes 1992). Most punctuation of earlier texts has been added by modern editors.

(2011: 870) such as anaphoric *it* or *that* in (9).[11] In a discursive and text-cohesive sense, *nis þæt nan wundor* is a 'dependent' of the anchor. In this respect, we would argue that a notion of 'secondariness' does apply to it, but it goes further than envisaged by Boye and Harder (2007) in that it transcends the clause complex, operating between two clause complexes. The fact that *nis þæt nan wundor* does not add lexical material to the preceding proposition, but grammatically qualifies it, is reflected in restrictions on its addressability. Just as with the matrices of the extraposition constructions, it does not make sense to probe them by polar questions ('was it or was it not a wonder?') or *wh*-questions ('how much wonder was it?'). And, like the extraposition matrices, they can be, and historically indeed were, replaced by adverbials, as we will see in Section 3.2.

In such juxtaposition patterns, the complex of mirative clause and justification inherently follows the proposition. The justification for the mirative assessment is in Old English always expressed in a clause following *be no wonder*. The most prototypical conjunction in this context is *forþam* (*ðe*) (10 out of 15 tokens). As illustrated in (9), *forþam* (*ðe*) functions as a speaker-related causal conjunction ('for'), which stresses the causally justified expected nature of the proposition. At the same time, *forþam* (*ðe*) integrates the justification into a clause complex with the mirative qualifier, thereby assigning it the final position in the whole rhetorical structure. The juxtaposition pattern thereby seems to grant the justification at least as much, or even slightly more, rhetorical prominence than the proposition. The juxtaposition pattern is thus associated with a third discourse schema, i.e.

iii.   proposition + (anaphoric) mirative qualifier + justification.

3.2   The rise of mirative adverbials from Middle to Present-day English

From Middle English onwards, our data bear witness to the emergence of adverbials with *'no' wonder*, which increasingly superseded the mirative multi-clausal patterns that were described in the previous section. As noted in the Introduction, the adverbials from the start come in two distinct subtypes, disjunct and anaphoric adverbials, which share basic structural and discursive-rhetorical features with the extraposition and juxtaposition pattern respectively. In this section we reconstruct the further developments manifested by the multi-clausal patterns, looking for possible explanations of both the emergence and increasing competition of the adverbials. We also focus on the structural and discursive features of the two adverbial types, which, we argue, they inherited from the multi-clausal patterns. Table 3 shows the distributions of the two

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11.   In Old English the juxtaposed mirative clause is also found in the form *Nis nan wundor*, as no overt syntactic subject was structurally required in that period (see also Footnote 6 above).

types of multi-clausal patterns and of adverbials and how their frequencies developed through time relative to each other. The anaphoric adverbial ended up basically replacing the juxtaposition pattern in Modern and Present-day English. The disjunct adverbial ends up as an equal option to the extraposition pattern in Present-day English, but in order to fully appreciate this development we have to bring the elliptical form of the extraposition construction into the picture as well.

Table 3. Distribution of grammatical uses of (*it is*) '*no*' *wonder* as realized over time by (elliptical and non-elliptical) extraposition, juxtaposition, and adverbial patterns

	disj. adv.		anaph. adv.		elliptical extr.		non-ellipt. extr.		juxtapos.		total	
	n	%	n	%	n	%	n	%	n	%	n	%
EOE	0	0.0	0	0.0	0	0.0	7	43.8	9	56.3	16	100
LOE	0	0.0	0	0.0	0	0.0	31	83.8	6	16.2	37	100
EME	1	5.9	0	0.0	0	0.0	12	70.6	4	23.5	17	100
LME	1	3.8	1	3.8	5	19.2	11	42.3	8	30.8	26	100
EModE	1	7.7	1	7.7	2	15.4	9	69.2	0	0.0	13	100
LModE1	19	25.3	4	5.3	14	18.7	38	50.7	0	0.0	75	100
LModE2	17	20.7	19	23.2	28	34.1	17	20.7	1	1.2	82	100
LModE3	36	38.3	17	18.1	21	22.3	18	19.1	2	2.1	94	100
PDE	164	38.3	71	16.6	48	11.2	132	30.8	13	3.0	428	100

Indeed, the most important development affecting the '*no*' *wonder* extraposition construction is the emergence in Late Middle English of an elliptical form, illustrated in (10) and (11).

(10)   if þe irþe tremble and quake, *what wundur* þey þu tremble?
       'If the earth trembles and quakes, *what wonder* that you tremble?'
                                                          (PPCME2, 1420–1450)

(11)   She, and not the street, was out of place and in the wrong. *Little wonder* that the neighbours lifted their shoulders when they spoke of her!
                                                          (CLMETEV, 1850–1920)

We analyze such examples as elliptical variants of the extraposition construction for the following reasons. They contain complementizers, þey ('though') in (10) and *that* in (11), which entails that they have the same structurally determined sequence of mirative marker followed by proposition as the extraposition constructions. As the pattern has a single matrix constituent followed by a complement clause, it is a clear instance of "semi-autonomous insubordination" (Aelbrecht 2006, Van linden & Van de Velde 2014). Because the semi-autonomous insubordination variant appeared after

the full construction, it confirms the diachronic scenario of semi-insubordination that is generally assumed, viz. that it derives by ellipsis from complex sentences with a full-blown matrix clause (Van linden & Van de Velde 2014: 247). As shown in Table 3, the elliptical variant was quantitatively an important one: by Late Modern English 2 and 3, it had become as common as the full extraposition constructions, before dropping again sharply in Present-day English.

We venture that the elliptical form provided the (initially preferred) shorter form of the extraposition construction. As a short form, it is similar to the adverbial. In fact, the OED subsumes the elliptical form under adverbial *no wonder*. For the reasons given above we do not think that this categorization holds in a strict grammatical sense, as adverbials cannot take complementizers in English: *probably that* …, *perhaps that* …. However, stylistically, the similarity between the elliptical form and the adverbial is obvious. When we consider the relative frequencies of the disjunct adverbial and elliptical extraposition in Table 3, we see that the latter outnumbered the former in Late Middle English, Early Modern English, and Late Modern English 2. However, by Present-day English, the disjunct adverbial has become the preferred short form by a long stretch, i.e. 40% versus 2% of elliptical extraposition. The elliptical form can thus be seen as having transitionally served the function of providing a shorter realization for the mirative marker in the two first discourse schemata, but has now been superseded by disjunct adverbials in this function.

Let us now look more closely at the disjunct adverbials, as illustrated in examples (12)–(15). In terms of function this type of adverbial is similar to "content disjuncts" (Quirk et al. 1985: 612ff), which express a speaker comment – in this case the speaker's mirative assessment – with respect to the propositional content in their scope.

(12) And the lordys before wretyn fledde, the substance in to Schotlond with the Kynge Harry and Qene Margarete, and sone the Prynce with hym, fulle of sorowe and hevynys, *no wondyr*.

'[After a fierce battle in which many knights and commoners died.] And the before written lords, fled, the majority into Scotland with king Harry and Queen Margaret, and soon the Prince with them, full of sorrow and heaviness, no wonder.'   (PPCME2, 1420–1500)

(13) Dryden alone (*what wonder*?) came not nigh, Dryden alone escaped this judging eye: But still the great have kindness in reserve, He helped to bury whom he helped to starve.   (CLMETEV, 1710–1780).

(14) "No wonder the earth has quaked," said one, "when it held such a monster!"   (CLMETEV, 1780–1850)

(15) Stopping or even seeking to downsize a new supermarket development is a daunting task. *No wonder* really organised community opposition is rare.   (WB)

(16)   *No wonder* Fred said 13 was his lucky number when our room in the hotel
        turned out to be that.   (WB)

Such disjunct adverbials are at least loosely integrated into clause structure: they syntagmatically relate to the proposition they qualify as an interpersonal modifier (McGregor 1997:236). This syntagmatic property is reminiscent of the discursively secondary nature of the extraposition matrices of (7)–(8), which, we argued, function as modifiers to the qualified proposition. In principle the disjunctive adverbials have the positional flexibility inherent in their grammatical class. They can, besides in clause-initial position as in (14)–(16), occur in clause-final (12) and clause-medial (13) position. However, they occur only rarely in non-initial position in the historical data and even lose this flexibility completely in Present-day English, where in our data they always occur before the proposition. This positional tendency further underscores their similarity to the extraposition matrices, which, barring very rare exceptions, are fixed in front of the proposition.

The juxtaposition pattern also underwent some changes in comparison with Old English. In some cases a coordinator, such as *and* in (17) and *but* in (18), occurs in front of the unit formed by the mirative qualifier and the justification, and that unit could (17) or could not (18) be part of the same orthographic sentence, as far as this can be ascertained in data featuring original punctuation.

(17)   "She has had no sleep for many nights," said the girl to Mrs Davenport, "*and*
        all this woe and sorrow, *it's no wonder*."   (CLMETEV: 1780–1850)

(18)   Some people said – Lyle Derwent first – that Miss Rothesay did not look so
        well as she used to do. *But indeed it was no wonder*, she was so engrossed in
        her painting, and worked far too much for her strength.
                                                              (CLMETEV: 1850–1920)

On closer examination, these changes turn out not to affect the basic structural characteristics we identified for the Old English examples of the juxtaposition pattern (see Section 3.1). Examples such as (17) and (18) still feature a proposition (which may itself be a clause complex, as in (18)), and a mirative clause and justification that constitute a separate clause complex defined by its own internal structural ties (Halliday 1994:193ff). It is precisely the separateness of these two units that allows the anaphoric relation characteristic of this pattern to operate between them. Importantly, the meaning of coordinators such as *and* (17) and *but* (18) is not state-of-affairs-related but speaker-related. In (17) for instance, *and* does not express a real-word relation of addition between states-of-affairs referred to by *She has had no sleep for many nights* and *it's no wonder* in the real world. Rather, the use of *and* implies a rhetorical act by the speaker, paraphrasable as 'and I argue that with all this woe and sorrow, it's no wonder (that she had no sleep for many nights)' (cf. Martin 1983:2). In (18), *but* and *indeed* are also used in a speaker-related sense, linking the complex of mirative qualifier and

justification to the proposition in terms of concession and emphasis. These conjunctive items add argumentative meanings to the qualifying and cohesive relation *it's no wonder* has with the preceding proposition.

The anaphoric adverbial emerges in Late Middle English in the same contexts as the juxtaposed 'it is no wonder' clauses, that is, either as part of the same orthographic sentence as the proposition, e.g. (19), (21), or of a different sentence (20). It may as in (19), (21) or may not, as in (20), be linked to the preceding proposition by a connective with speaker-related meaning such as *and*. As in the juxtaposition pattern, the proposition and the qualifying adverb + justification form two separate units in terms of their internal structural and cohesive relations. The mirative adverbial is part of a separate complex containing a justification causally linked to it – e.g. the *since*-clause in (19) and the *considering* phrase in (20) – that it relates to the preceding proposition as its "anchor" (Kaltenböck, Heine & Kuteva 2011). The qualifying unit does not, of course, feature an anaphoric subject *it* or *that*, but it can be related to the preceding proposition by speaker-related connectives such as *and* (19) and *but* (21). The adverbial itself "gives an instruction to include the presupposed proposition in the interpretation" (Halliday & Hasan 1976: 216) of the structural and rhetorical unit it is part of, analogously with the use of adverbials such as *probably* in (22) and *hardly* in (23).

(19)   the Master of the House … came running up Stairs as fast as his legs would carry him, but being about to enter the door, he could not, and no wonder, since the oldest Man living never saw a larger pair of Horns than he had on his Head.   (PPCEME, 1640–1710)

(20)   "My dear Catharine," quoth her mother that evening, "you look worried and done up. No wonder, considering what we have gone through.
                                                       (CLMETEV, 1850–1920)

(21)   "They didn't touch the wine or flowers." "Yeah, but with a wine cellar like theirs, *no wonder*!"   (WB)

(22)   Will he be elected? – *Probably* (*so*). ('Probably, <u>he will be elected</u>.')
                                             (cf. Halliday & Hasan 1976: 216)

(23)   I can afford a D4S, but only *hardly so* ('but I <u>only</u> hardly can afford <u>it</u>.')
       〈www.dpreview.com/forums/post/56147364〉

With adverbials such as *probably, perhaps* and *hardly*, whose anaphoric use is well established, the point that they presuppose a preceding proposition is shown by their ability to be followed by the clausal pro-form *so* (Halliday & Hasan 1976: 92ff, 136). *So* substitutes for a whole proposition, which has to be anaphorically retrieved. It is because anaphorically used adverbials stand for a whole proposition that they can either be used on their own, as in (22), or can be linked with a connective to the proposition that they presuppose, but modify, as illustrated by (23).

With anaphorically used *no wonder*, the proposition similarly has to be 'presupposed' in the interpretation of the unit containing the adverbial. For instance, example (20) can only be paraphrased by (20′), since the *but*-phrase does not modify the mirative qualifier as such, but gives the justification for the mirative qualification of the proposition.

(20′)   "They didn't touch the wine or flowers." "Yeah, but with a wine cellar like theirs, *no wonder* <u>they didn't</u>!"

Anaphoric *no wonder* can also be used in a sentence of its own, as in (20), or linked with a connective to the proposition it presupposes, as in (19). It is in view of this specific cohesive relationship to the anchor proposition that we call this type 'anaphoric' *no wonder* adverbials. They always follow the proposition they qualify and the interpretative slot they project for inserting the retrieved proposition always follows them. The justification for the mirative qualification typically occurs in sentence-final position, as in (19) and (20), but it may also precede *no wonder*, as in (21). In these respects, the anaphoric adverbial is fully parallel with juxtaposed *it's no wonder*, as illustrated by (17) and (18) above. It therefore seems reasonable to regard the anaphoric adverbial as an elliptical form of the juxtaposed qualifying clause.

As argued in the above paragraphs, the two types of adverbials took over the basic syntagmatic and cohesive relations of the multi-clausal patterns. Like the matrix of the extraposition construction, disjunct *no wonder* relates to the proposition it qualifies as an interpersonal modifier (McGregor 1997: 236). And like the juxtaposed mirative clause, anaphoric *no wonder* follows the proposition which it gives instructions to 'presuppose' in the interpretation of its own unit, within which the justification relates to the qualified proposition. Importantly, the two types of adverbials also realize the same discourse schemata as the multi-clausal patterns: they exploit in parallel fashion the relative ordering of the three component parts of the larger unit – the justification (J), the mirative qualifier (MQ) and the proposition (P) – for additional rhetorical effect. If we consider these relative orderings together with the scopal and cohesive linking relations defined by the two structural subtypes of adverbials, we see that they realize the same three basic discourse schemata that originally developed in the Old English multi-clausal patterns. The three discourse schemata are given in (24i) to (24iii), exemplified by (rewrites of) example (2). The scopal and cohesive relations are represented with conventions indebted to McGregor (1997). In all three discourse schemata, the justification is related to the miratively qualified proposition by cohesive means. Cohesive linking relations are visualized by an arrow (McGregor 1997: 70–73).

(24)   (i)   justification + mirative qualifier + proposition
[If she has dieted down from size 16 to size 8,]$_{JUST}$ [*no wonder*]$_{MQ}$
[model Sophie Dahl has health problems.]$_{PROP}$

| If she has dieted down from…JUST | *no wonder* MQ | Sophie Dahl has health problems PROP |
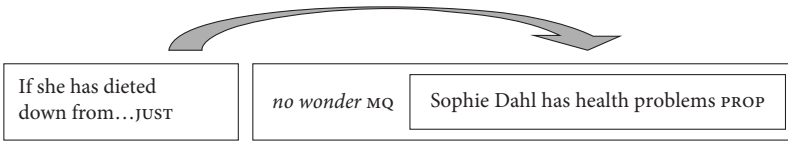
(ii) mirative qualifier + proposition + justification
[*No wonder*]$_{MQ}$ [model Sophie Dahl has health problems]$_{PROP}$
[if she has dieted down from size 16 to size 8.]$_{JUST}$ (WB)

| *no wonder* MQ | Sophie Dahl has health problems PROP | If she has dieted down from…JUST |

(iii) proposition + (anaphoric) mirative qualifier + justification
[Model Sophie Dahl has health problems]$_{PROP}$ [*and no wonder.*]$_{MQ}$
[She has dieted down from size 16 to size 8.]$_{JUST}$

| Sophie Dahl has health problems PROP | *and no wonder.* MQ | She has dieted down from…JUST |
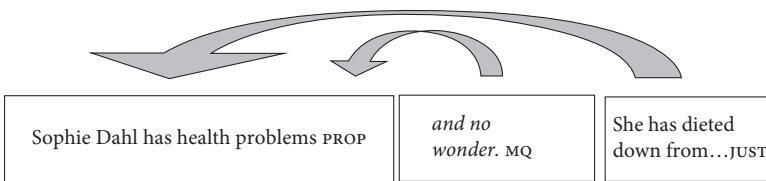
Where the mirative qualifier relates to the proposition as an interpersonal modifier, with its meaning overlaying that of the proposition in its scope, this scopal relation is visualized in a box representation, with the mirative qualifier enclosing the proposition (McGregor 1997:64–70). The scopal relation was argued to be characteristic of the disjunct adverbials, both when the justification precedes the qualified proposition, as in discourse schema (i), and when it follows the proposition, as in discourse schema (ii). These two relative orderings for the disjunct adverbials, illustrated in (15) and (14) respectively, seem to be fixed from their historical development out of discursively secondary *extraposition* matrices as in (7) and (8): the extraposition matrices occupy a clause-initial position, directly preceding the qualified proposition, and realize the same two discourse schemata, with the justification preceding (7) or following (8) the complex sentence.

The relevant difference between discourse schemata (i) and (ii) lies in their distinct rhetorical effects. Within the larger discourse context, *no wonder* specifies the speaker's assessment of a proposition as 'unsurprising' or 'not unexpected' as it logically follows from the contextually given justification. As such, *no wonder* serves as a discourse-organizational cue inviting the hearer to infer a rhetorically 'causal' relation

between justification and proposition (Halliday & Hasan 1976: 240). The conceptually most logical and iconic order to express this rhetorically causal, 'expected' relation is represented by the first discourse schema (i): the justification precedes the proposition that naturally follows from it, as a cause logically precedes its effect. The justification can be a subordinated clause within a single clause complex realizing the whole rhetorical sequence, as in (24i). More often, the justification in this schema is a sentence or clause complex in its own right, as in (1) and (7) above, which is linked to the unit of mirative qualifier and proposition by the connective meaning components of disjunct *no wonder*. In this order, the proposition concludes the rhetorical unit, and is thus rhetorically most prominent. In discourse schema (ii), by contrast, the justification only comes after the qualified proposition, and is typically linked to the qualified proposition by an explicit marker such as *when* (14) or *if* (24ii). In this way, the justification is given the final, discursively prominent position within the rhetorical unit. At the same time, however, the justification is placed in a subordinate clause dependent on the proposition. As a result, both the justification and the proposition are given rhetorical weight in this discourse schema.

The anaphoric adverbials in (19) to (21), then, instantiate discourse schema (iii), in which the mirative qualifier relates to the preceding proposition by anaphoric, cohesive links, and the justification relates to the mirative qualifier with its presupposed proposition. In this respect, the anaphoric adverbials are rhetorically similar to the paratactic pattern illustrated in (9), from which they were argued to derive historically. The justification occupies the final position in this pattern, and can in the periods following Old English also be expressed in a separate sentence from the mirative qualifier. Hence, it is the justification that tends to be rhetorically most salient.

In view of their shared structural-cohesive and rhetorical features, it should come as no surprise that the two types of adverbials increasingly came to replace the multi-clausal patterns from which they derived. Crucially, this replacement appears to be determined by their shared functionality within the three basic discourse schemata: ever since their emergence in Late Middle English, the disjunct adverbials have increasingly replaced the extraposition patterns in discourse schemata (i) and (ii), while the anaphoric adverbials have largely replaced the juxtaposition patterns in discourse schema (iii). Table 4 gives a quantitative overview of the distribution of the three general discourse schemata over their multi-clausal and adverbial realizations. What is most striking is that discourse schema (i), which constitutes the most logical causal order with the justification preceding the proposition that logically follows from it, becomes increasingly predominant over time. As this schema involves the most iconic realization (Diessel 2008) of the causal relation between justification and proposition, its increase in frequency over time may be taken to testify to a further entrenchment of the rhetorical structure of 'causally justified expectedness', which combines causal (connective) with qualificational (mirative) meaning. In this context, the fact that the

disjunct adverbials have become fixed in initial position in Present-day English[12] is also relevant as it can be linked to their connective function.[13]

Table 4. Diachronic distribution of the three basic discourse schemata given in (24i) to (24iii)

	(i) J+MQ(P)			(ii) MQ(P)+J			(iii) P^MQ^J		
	Extrap.	Disj.	TOT DS %	Extrap.	Disj.	TOT DS %	Juxtap.	Anaph.	TOT DS %
OE	18	0	32.1	23	0	41.1	15	0	26.8
EME	9	0	60.0	1	0	6.7	5	0	33.3
LME	10	1	42.3	6	0	23.1	8	1	34.6
EModE	8	1	69.2	3	0	23.1	0	1	7.7
LModE1	41	14	73.3	11	5	21.3	0	4	5.3
LModE2	38	9	57.3	7	8	18.3	1	19	24.4
LModE3	32	28	65.2	6	8	15.2	2	16	19.6
PDE	159	142	70.3	21	22	10.0	13	71	19.6
Total	**315**	**195**	**64.8**	**78**	**43**	**15.4**	**44**	**112**	**19.8**

4. Prosody of anaphoric and disjunct *no wonder* adverbials

In Section 3, which reconstructed the development of mirative *no wonder* expressions by grammaticalization, we saw that the "younger" adverbial uses inherited their

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12. *No wonder* behaves very differently in this respect from *no doubt*, which has preserved the positional flexibility characteristic of adverbials in Present-day English (Davidse, De Wolf & Van linden 2015).

13. Brinton (2008:112–132) observed similar tendencies in her reconstruction of the history of *I mean*, which also combines connective (reformulating) and rhetorical (causal) meaning. Brinton (2008:129–130) characterizes this dual discursive function of *I mean* as follows. "Most of the extended meanings of *I mean* can be understood as invited inferences arising in appositional structures, where a previous element in the discourse is restated or reformulated. (…) The 'causal' meaning expresses the reason for the speaker having made the previous statement, as in *It makes no difference what you say. I mean, the damage is already done.*" About the position of *I mean* in Present-day English she (2008:118) observes: "While studies generally agree that *I mean* occurs initially and medially, but rarely in final position the PDE corpora show that parenthetical *I mean* occurs overwhelmingly in initial position".

distribution from the "older" multi-clausal patterns (cf. Bybee, Perkins & Pagliuca 1994). In this section, we investigate whether the proposed development receives further support from prosody, which as advocated by Wichmann (2011) can profitably be brought to bear on the study of grammaticalization. The issue to be investigated is whether the structural and discourse-functional differences between the two adverbial types also correlate with distinct prosodic features. The main questions that informed the prosodic analysis of the spoken Present-day English data were (i) whether the mirative adverbials had the potential to form a separate intonation unit, and (ii) which tonal contours where preferred for the anaphoric and disjunct adverbials. For the identification of an Intonation Unit (IU) and, more in particular, all prosodic boundaries in the vicinity of *no wonder*, we have followed the criteria listed in Dehé and Wichmann (2010) and those in Dehé and Braun (2013) (see Table 5). As mentioned in Section 2, the sound files from the spoken data sets (Jacobs 2014) contained 96 usable instances of adverbial *no wonder* in context. The discussion below first focuses on the anaphoric adverbials (16 tokens) and disjunct adverbials (80 tokens) and then compares the two in terms of their prosodic features.

Table 5. Criteria for the identification of an IU/intonation domain (Dehé & Braun 2013: 137)

a.	Domain-internal criteria	
	a.1	complete tonal contour (CTC)
	a.2	domain across which declination applies
	a.3	creaky voice
b.	Criteria at a potential boundary	
	b.1	presence and nature of pauses (structure-related vs. hesitation)
	b.2	pitch on unaccented syllables following a nuclear tone
	b.3	domain final lengthening
	b.4	presence or absence of segmental processes

The *no wonder* anaphoric adverbials, firstly, were all found to be realized by a separate intonation unit (IU), as defined by Dehé and Wichmann (2010) and Dehé and Braun (2013). In terms of the criteria for the identification of IUs listed in Table 5, each case shows a complete tonal contour, with a rise-fall (L+H* L–L%), a fall (H* L–L%) or a high level tone (L+H* H–L%). The first syllable of <u>wonder</u> carries the nuclear tone, which is either H* (see Figure 1 (example (25)) or L+H* (see Figures 2 (example (26) and 3 (example (27)), with each subtype accounting for about half of the cases. All cases

but one[14] show a fall (L–L%) on the second unstressed syllable of *wonder*. Moreover, *no wonder* is often preceded or followed by structure-related pauses, and its IU – as well as the IU preceding it – are typically characterized by final lengthening. In addition, the end of the IU often has creaky voice, yielding irregular pitch lines, as exemplified in Figure 3. Finally, the prosodic analysis revealed that the IU may contain only *no wonder* (see Figure 3) or it may also include one or more discourse markers such as *so* in Figure 1. Figure 2 illustrates a case in which *no wonder* constitutes its own IU, but is immediately followed by a comment clause representing a hesitant phase. The mirative qualifier on its own is classified as one IU because of the presence of final lengthening on the unstressed syllable of *wonder* and the fact that the fall is not continued over the comment clause. The comment clause *I mean*, then, "represents a transitional planning phase which serves as a floor-holding link" (Dehé & Wichmann 2010: 14) between the mirative qualifier and the justification. In sum, the prosodic phrases of anaphoric *no wonder* can all be analysed as separate intonation units. Hence, the anaphoric adverbials are characterized as prosodically separate and prominent.
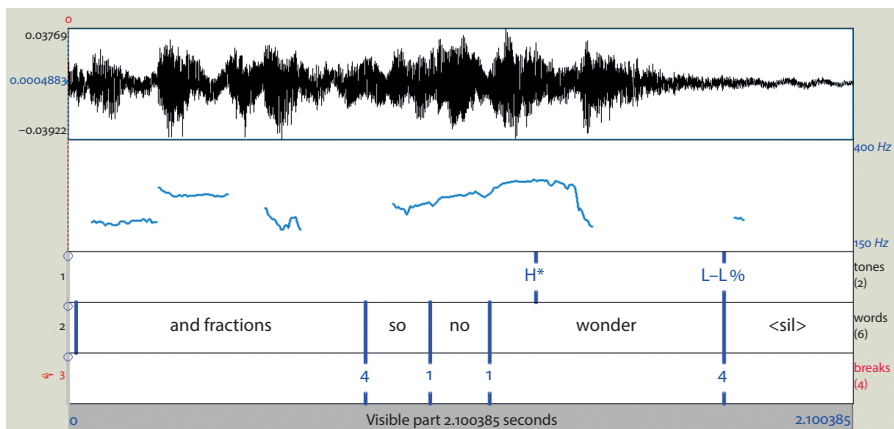

Figure 1. Prosodically separate anaphoric adverbial no wonder with nuclear fall

(25)   Sp 1: And I can remember sobbing 'cos I couldn't understand it.
       Sp 2: Mm
       Sp 1: And I was thinking. Oh no. But the point is the reason I couldn't do
             them was because I hadn't been taught them.
       Sp 2: (laughs)
       Sp 1: I hadn't been taught about fra percentages and fractions so no wonder.

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14. The example with a level tone as tail is one where *no wonder* is immediately followed by discourse marker *then*. Together they form one IU.
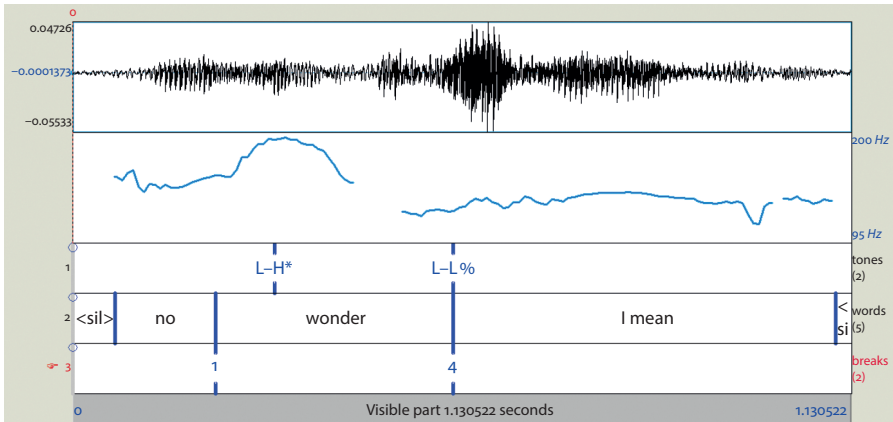
Figure 2. Prosodically separate anaphoric adverbial no wonder with nuclear rise-fall followed by a hesitant phase

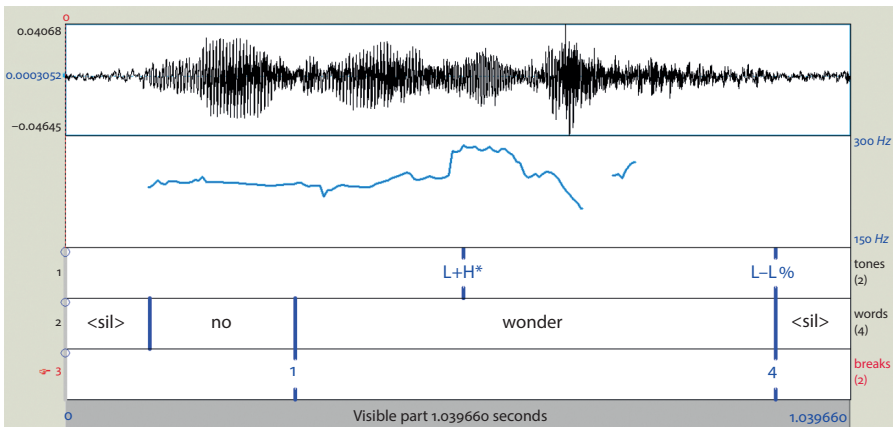(26) you er had a lot of in-invitations to work. no wonder I mean. er you've told me you were invited to go abroad

Figure 3. Prosodically separate anaphoric adverbial *no wonder* with nuclear rise-fall

(27) Sp 2: Listen (pause) this is a bloody good paper this!
Sp 4: (laugh)
Sp 1: Only if it's got a special offer in it!
Sp 2: Just look at the headline!
Sp 1: (laughing) Yeah!
Sp 2: (unclear)
Sp 3: Andrew and Fergie split!
Sp 1: No wonder

Sp 2: Who cares!
Sp 1: they didn't put (pause) (unclear) Andrew has finished

The disjunct adverbials, secondly, make up the majority of the connected speech data. A small subset of the disjunct adverbials, representing only 7 out of all 80 tokens, show *no wonder* as prosodically separate. The prosodic pattern of these 7 cases, as illustrated in Figure 4 (example (28)), is similar to that of the anaphoric adverbials with either a fall (H⋆ L–L%) or rise-fall (L+H⋆ L–L%) as tonal contour. The most common prosodic pattern for disjunct adverbial *no wonder*, however, is for the mirative qualifier and the following proposition to be prosodically integrated (73 tokens, see Figure 5, example (29)).
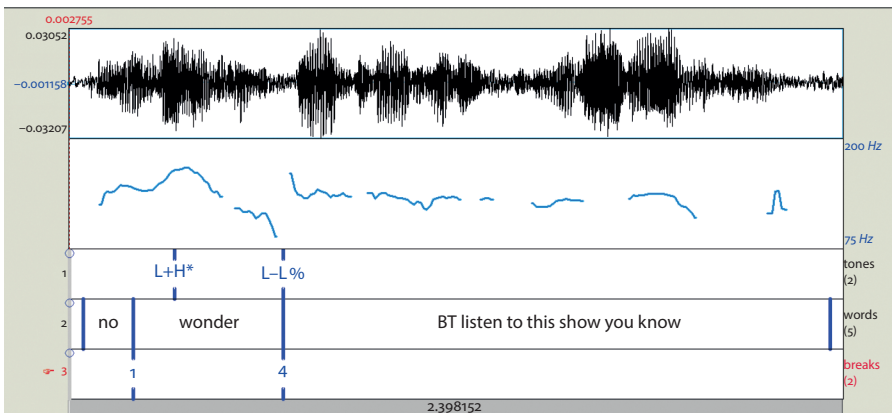

Figure 4. Prosodically separate disjunct *no wonder* with nuclear rise-fall

(28)   Sp 3: Yeah. We're all complaining about credits on the phone calls we should have
       Sp 2: Yes.
       Sp 3: and of course we're all phoning you up so we're complaining and actually adding to the er
       Sp 2: (laughs)
       Sp 3: add- er adding to the profits.
       Sp 2: It's all good fun isn't it.
       Sp 3: But that's not that's not – that's not what I'm (unclear) you (unclear) phoning up about (unclear).
       Sp 2: No wonder B T listen to this show you know.
       Sp 3: (laughs) – spoke to er Talking Pages
       Sp 2: Yes.
       Sp 3: and erm I wanted er sort of a some skips so I thought well best thing is phone up Talking Pages and find out the nearest place for skip hire.
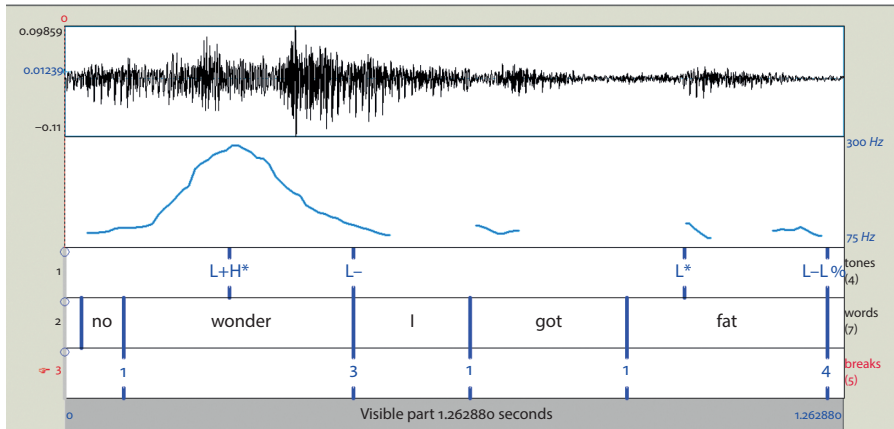   Sp 2: This is this costs you doesn't it to phone Talking Pages.

Figure 5. Prosodically integrated disjunct *no wonder* with non-nuclear rise-fall

(29)   Sp 1: (– – –) I heard him saying there one day er (pause) where's, what no fry
        today mother? Cos he only got sandwiches.
        Sp 4: (unclear) (pause)
        Sp 3: (unclear) used to go on a Sunday (unclear) say come on we'll go
        (unclear) (pause) and I used to (unclear) my dinner, oh fucking hell
        (unclear) my dinner (pause) (unclear) this is desperate, them wee
        (unclear) were gorgeous too.
        Sp 2: (unclear) way she done her steak and all, an- and her chops they was
        beautiful.
        Sp 3: And then I'd go home and have my dinner too, no wonder I got fat.

The bulk of the disjunct adverbials (87%) are not only prosodically integrated but also
show a recurring prosodic pattern (see Figure 5) consisting of a high pitch accent and
a steep fall on the mirative qualifier, with a continuation of that fall in the first part of
the proposition and an overall decline over the rest of the proposition. The end of the
proposition contains the nucleus, and may be preceded by one or more pitch accents.
We have classified the tone movement on *no wonder* as a head instead of a nucleus
because of the absence of potential boundary criteria.[15] There are, for instance, no
pauses between the mirative qualifier and the proposition, nor is there final lengthen-
ing at the end of the mirative qualifier. Furthermore, there is no change in pitch direc-
tion on the unaccented syllables at the beginning of the proposition. On the contrary,
there is a continuation of the fall started on the second syllable of *wonder*. As with

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15.   As a rare variant pattern, we found 3 instances of prosodically integrated disjuncts for
which the qualified proposition lacks stressed syllables. As a result, the pitch accent (H* or
L+H*) on the mirative qualifier can in these cases be considered the nucleus.

the anaphoric mirative adverbials, the pitch accent on the stressed syllable of disjunct *no wonder* is either L+H* or H* with often a fairly late rise in the syllable. The tonal contour of the proposition's nucleus is predominantly a fall (77%). The other 23% is divided over rises, fall-rises, rise-falls and high level tones. Thus, instead of classifying the disjunct mirative qualifier as an IU with a full phrase boundary, we have classified it as a head with a (rising-)falling contour and an intermediate phrase boundary (ToBI break index 3).

So far, we have described how anaphoric adverbial qualifiers are prosodically separate, constituting their own IU, while the majority of the examples of disjunct *no wonder* are prosodically integrated. There is, thus, a strong contrast between the two adverbial types with respect to their prosodic patterns. The distinction, which is already clear from the absolute numbers in Table 6, was also confirmed by a Pearson χ^2-test with Monte Carlo simulation (B=5000, $\chi^2 = 60.9391$, df = NA, p-value = 2e-04).

Table 6. Absolute frequencies of *no wonder* per adverbial type per prosodic pattern

		Prosodically integrated		
	Prosodically separate	**Not nucleus**	**Nucleus**	**Total**
anaphoric	16	0	0	16
disjunct	7	70	3	80
Total	23		73	96

Interestingly, the prosodic features also seem to tie in with features that have more generally been associated with grammaticalized uses, i.e. modal/discourse particle uses, of adverbs such as *of course* (Wichmann, Simon-Vandenbergen & Aijmer 2010). For instance, the stressed non-nuclear status correlates with delexicalization, while integration in the IU containing the proposition correlates with a qualifying function (cf. Kaltenböck 2008). The latter is particularly present in examples where the disjunct mirative qualifier is also the nucleus. Furthermore, the rigidification of order in Present-day English by which the disjunct adverbial came to predominantly precede the proposition enabled the entrenchment of the prosodic pattern with initial rise-fall or fall on *no wonder*, as illustrated in (22) and (23) above. All these convergent features contribute to the clear realisation of the first and predominant discourse schema (i) ((J+)MQ+P), which rhetorically foregrounds the proposition. This contrasts clearly with the less common discourse schema (iii) (P+MQ+J) and prosodic pattern (separation) associated with anaphoric *no wonder*, which foregrounds the justification.

In spite of their differences, the two adverbial types also show similarities with regard to the nature of the tonal contours, which can be related to their shared attitudinal and rhetorical functions. The two most common tonal contours on *no wonder*

are rise-falls and relatively high falls with the high pitch accent produced rather late on the stressed syllable. Both contours are typically associated with discursive contexts of unexpectedness or contrast in the literature. Attitudes and features attributed to the *rise-fall* tonal movement are, for instance, being "impressed" or "challenging" (Cruttenden 1986:101–102), "something sustained as overriding opposition" (Bolinger 1947:136), "impressed, awed" (O'Connor & Arnold 1961:214), "definite outcome – impressed" (Crystal 1975:38). Brazil, Coulthard & Johns (1980:56) hold that by using the rise-fall, "the speaker signals that he is simultaneously adding information to the common ground but also to his *own store of knowledge*". This association of rise-fall with unexpected and contrastive contexts is insightfully formulated by Halliday (1985:281–282), who says that the meaning of a rise-fall is "'seems uncertain, but turns out to be certain'. It is used on strong, especially contradicting, assertions, and […] often carries an implication of 'you ought to know that'". Similarly, Halliday and Greaves (2008:112) point out that rise-falls typically mean "'seems, or seemed, uncertain, but isn't'" including, as a special subtype, the meaning of "'surprising, but is so'". For the high falls similar associations have been proposed in the literature, which Tench (1996:126) summarizes as follows:

> The high fall is variously glossed as 'intense, unexpected' (Pike), 'personal concern, involvement, liveliness … more emotional, etc.' (O'Connor and Arnold), 'vigorous agreement or contradiction … strong surprise, etc.' (Gimson 1989), 'strong', 'unexpected' (Halliday), 'surprise/redundancy contour' – which includes a low but ascending head (Liberman; 'redundancy' in the sense that the speaker is protesting that the information content of the message should be regarded as self-evident).

The above features fit in nicely with the meaning of 'causally justified expectedness of the proposition' expressed by the larger structures in which *no wonder* functions: the speaker treats the content of the proposition as self-evident, and points out that although the propositional content seems unexpected, it should not be viewed like this, given the justification. The shared preferences of tonal contour highlight the shared rhetorical structure of causally justified non-surprise in which the two types of adverbials function.

5.   Conclusion

In this paper, we have focused on two types of adverbials with negative quantifier and *wonder*, that are in different ways 'outside of the clause': a disjunct type, which is structurally integrated in the proposition it takes in its scope, and a – hitherto largely neglected – anaphoric type, which relates to the proposition it qualifies via anaphoric retrieval. We have shown that the current distribution of these two adverbial types is

historically inherited from earlier multi-clausal patterns. We have also implemented the proposed grammaticalization scenario with reference to prosody.

The theoretical importance of this study lies, in our view, in the central role played by larger rhetorical structures in the grammaticalization of all the types of *'no' wonder* expressions. The rhetorical relation at stake here, the causally justified 'expectedness' of a proposition, combines the speaker's qualification of the proposition with the discursive linking of proposition and justification. The relation marked by *'no' wonder* may involve units in different clause complexes, orthographic sentences or different turns in dialogue, that is, it clearly transcends the boundaries of the 'complex sentence'. The phenomena investigated are also interesting because they involve the actual historical development of adverbials from 'comment clauses' (Quirk et al. 1985: 1112; Brinton 2008), which are generally accepted to qualify propositions much like adverbials do.

In this article we have shown that the motivation and mechanisms of grammaticalization of all expression types with *no wonder* extend beyond the boundaries of the complex sentence. So far, proposals regarding the mechanisms underlying the grammaticalization of comment clauses have mainly considered developments occurring *within* the boundaries of the complex sentence (e.g. Thompson & Mulac 1991; Hopper & Traugott 2003: 207–209), whereby an original matrix clause such as *I think* first became 'discursively secondary' (Boye & Harder 2007) to its complement and then – through this modifying function – acquired a positional flexibility characteristic of the syntactic category of adverbs. Mechanisms of change within the complex sentence, such as Hopper and Traugott's (2003: 207–9) nucleus-margin reversal and Boye and Harder's (2007) shift from discourse primariness to discourse secondariness, are involved in the grammaticalization of the extraposition constructions with *be 'no' wonder*. However, the development to increased sequential fixation of the extraposition constructions (see Table 3 in Section 3.2) can be explained only by considering their functioning in larger rhetorical structures concerned with a cause predicting an expected proposition. The juxtaposition pattern, then, inherently transcends the boundaries of the complex sentence, and therefore cannot be accounted for in terms of a nucleus-margin reversal (Hopper & Traugott 2003: 207–209). We proposed that the paratactically related mirative clauses qualify as "theticals" in the sense of Kaltenböck, Heine and Kuteva (2011). Even if they form a structurally separate clause from the qualified proposition, the paratactic patterns are 'discursively secondary' to it, as proven by tests for 'addressability' (Boye & Harder 2007): the grammatically used clauses cannot be probed by, for instance, polar interrogatives such as *Was it a wonder*? Their discursive dependency crucially goes beyond the boundaries of the complex sentence. The mirative clauses are discursively dependent on the qualified clause as its 'anchor', which they follow as a structurally and prosodically separate sentence (Kaltenböck, Heine & Kuteva 2011: 856) within the larger rhetorical schema of the proposition being unexpected in view of the justification.

These larger rhetorical structures also constituted the environment within which the two types of adverbial emerged, inheriting distinct formal and rhetorical-discursive characteristics from the historical source patterns: the extraposition construction led to disjunct adverbials and the juxtaposition pattern to anaphoric adverbials. A prosodic analysis comparing the two types highlighted their formal and rhetorical-discursive differences, as reflected in opposing tendencies for prosodic integration or separation with respect to the intonation unit containing the qualified proposition. At the same time, however, the shared rhetorical meaning associated with both types is supported by their similarity in preferred tonal contours, which signal that even though the proposition seems unexpected, it is not, given the justification. It is, further, remarkable that the *'no' wonder* adverbials hardly show positional variation: though rare instances in final or medial position with respect to the qualified proposition could be found from Middle to Late Modern English (examples (13) and (12) above), in Present-day English even this limited positional flexibility is lost. The reason for this, we argue, is that the mirative adverbials emerged and continue to function within larger rhetorical units for the expression of both speaker stance (qualifying the proposition as unsurprising) and discourse organization (specifying the text-cohesive, rhetorically causal link between the justification and the proposition). The (relatively) fixed position of the mirative adverbials within the three basic discourse schemata (24) they appear in, plays a crucial role in foregrounding certain component parts of the larger anti-concessive schema. The discourse schema that constitutes the clearest realization of the causal justification of unexpectedness (see (24i) above), is also the one that over time becomes more dominant as the adverbial position of the adverb becomes increasingly fixed. We take this to point towards a further entrenchment of the rhetorical structure of the causal justification of an expected proposition.

The grammaticalization processes affecting *'no' wonder* can thus be seen as crucially driven by the rhetorical schema of linking a justification to a predictable proposition (Van linden, Davidse & Matthijs 2016). As such, the case of *'no' wonder* lends support to the theoretical claim that changes such as grammaticalization can be triggered by interactional, rhetorical strategies that transcend sentences or turns in dialogue. This claim has recently been convincingly made both for comment clauses by e.g. Dehé and Wichmann (2010) and for adverbials with discursive and interpersonal meanings, by e.g. Schwenter & Waltereit (2010), Waltereit (2012), Wichmann, Simon-Vandenbergen & Aijmer (2010) and Haselow (2012, 2013). The grammaticalization of all the *no wonder* expressions shows that this motivation applies across the different structural types of clause and adverbial. Future work will have to look in more depth into their corresponding semantic-pragmatic developments from objective to subjective and intersubjective meaning (in the sense of taking into account both the social and the epistemic needs of the hearer) (Traugott & Dasher 2002).

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