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The development of “digressive” discourse-topic shift markers in English

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ABSTRACT

Mittwoch et al. (2002:779) list *by the way*, *incidentally*, and *parenthetically* as clause adjuncts that in contemporary English “signal the informational status of their clause” and “indicate a change of topic or digression, generally suggesting that the new information is less important”. This supports Pons and Estellés’s (2009) argument that “digression” involves topic shift. I address the question how the three metatextual discourse markers and the now obsolescent marker *by the by* developed out of adverbials into topic shift markers. This development is a case of subjectification. *By the way* has recently also come to be used “transgressively” in the context of *Oh*, to signal disapproval of someone else’s actual or imagined statement. This is a case of evaluative intersubjectification evoking social norms. The approach is constructionalist (see Traugott and Trousdale 2013). After briefly outlining the history of the four “digressive” discourse markers, the question is posed whether it is reasonable to posit an abstract schematic construction for the markers that Mittwoch et al. regard as a set.

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1. Introduction¹

In this paper I outline the development in English of a class of “digressive discourse markers”, with focus on changes in the membership of the set. My perspective is broadly constructionalist (see Traugott and Trousdale, 2013). Mittwoch et al. (2002:779) list *by the way*, *incidentally*, *parenthetically* as clause adjuncts that in contemporary English “signal the informational status of their clause” and “indicate a change of topic or digression, generally suggesting that the new information is less important”. To this set I add *by the by*, which was relatively frequently used in earlier English but which has been obsolescing since about 1900 in standard UK and US English. Although the “digressive discourse markers” (henceforth DDMs) can be found in the standard positions for pragmatic markers, of which DDMs are a subset: clause-initial, -medial and -final, as well as in other positions, I focus on use in clause-initial position, as it is here that indexing topic shifts is clearest (see Fraser, 2009). More precisely, DDMs in clause-initial position are discourse-topic shifts since thematic content and coherence is at issue (Givón, 1983). As Ariel (2010: 36) shows, *by the way* can be used to make what would normally be incoherent discourse acceptable. Some contemporary examples from *The Corpus of Contemporary American English* (COCA) are:

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- (1) a. I'm happy I made it out alive from her annual checkup. **By the way**, you'll never guess what happened at the vet's office today. (2017 Levine, *Murder has nine lives* [COCA])
- b. "I didn't want you to have to spend it [Christmas] alone, old friend. Also, **by the by**, I want to see the workouts." (2010 Thomson, *Once a spy* [COCA])
- c. [about computer hacking] they are listening, they're looking, and potentially being positioned to take advantage of an opportunity. **Incidentally**, the United States is out, has these presences as well and we need to. (2017 Fox: *Sunday Morning Futures* [COCA])
- d. "The purpose of our struggles is to extricate ourselves from the pull of the past," an idea she said the Trump campaign slogan, "Make America great again," works against. Later, she added: "**Parenthetically**, someone was asking me if we cried when Nixon was elected ..." (2017 *Seattle Times* [COCA])

While the concept "digression marker" is fairly widely used, as Pons and Estellés (2009) point out, such markers rarely cue discourse that returns to the original topic, in a sequence such as *Topic_x, by the way Topic_y, Topic_x* in a way that "digression" implies. Prototypical DDMs in contemporary English cue a discourse-topic shift and implicate that the new topic is relatively unimportant and not necessarily coherent with what precedes. Without a DDM, all the examples in (1) would be incongruent to some degree. Quirk et al. (1985: 640) characterize the use of *by the way* and *incidentally* as "a polite way of changing the subject" and Yule (2013) refers to a "hedge on relevance". Historically, metatextual (in)coherence-marking has been its main use until recently. As will be discussed below in Section 3.1.4, hedging and other interpersonal uses were developed toward the end of the 19thC.

As is frequently the case with discourse markers in English, the DDMs under discussion derive from adverbials.² A recurrent theme in this paper will be the conditions under which the original adverbials, which served as adjuncts, came to be used as DDMs as well as adjuncts. Of particular interest is the fact that the older DDMs, *by the way* and *by the by*, are spatial in origin, while the later ones are manner adverbs.

This paper is intended as a contribution not only to an understanding of "digressives" in English but also to aspects of historical construction grammar, most especially, the importance of including pragmatic, discourse-related phenomena in constructional work (see also Enghels, 2018). The structure of the paper is as follows. After a brief discussion of data and methodology (Section 2), I turn to the history of each DDM, first *by the way*, by far the most frequent and richly diversified DDM (Section 3.1), then *by the by(e)* (3.2), *incidentally* (3.3), and *parenthetically* (3.4). The theoretical discussion that follows in Section 4 zeroes in on two questions: whether the set can be considered to be a constructional schema (4.1), and whether the source constructions restricted the later DDM functions (4.2). A brief Envoi (5) points to a crucial semantic difference between *by the way* and *by the by(e)* on the one hand and French *d'ailleurs* and *par ailleurs* on the other and calls for cross-linguistic study of digressives.

2. Terminology, data and methodology

The methodology is qualitative, supported by manual searches of several electronic corpora and data bases. The main data sources are: *The Corpus of Contemporary American English* (COCA), a 540 million word balanced corpus of speech, news, magazines and fiction from 1990 to 2017; *The Corpus of Historical American English* (COHA), a 400 million word balanced corpus of historical texts from 1810 to 2009; *The Corpus of Late Modern English Texts*, version 3.0 (CLMET 3.0), about 34 million words from 1710 to 1920; and especially *Early English Books Online* (EEBO-BYU), about 755 million words from the 1470s–1690s. In addition, a number of other corpora and online dictionaries were consulted, and are acknowledged where quotations from them are cited.

It is widely held that discourse markers are limited to spoken language and therefore unlikely to be found in historical texts. However, sources such as diaries, drama, and trials are a relatively good source of information about historical spoken usage (Culpeper and Kytö, 2010) and evidence for the rise of pragmatic markers is in fact not especially difficult to find (Traugott, 2016). The set investigated here is metatextual, signaling text coherence, and therefore is in fact likely to be attested in written sources (see Biber and Gray, 2011, 2012 on the potential for the influence of writing on speech). Therefore, although *Early Books Online* is a corpus largely made up of noninteractional texts, it has proved useful for the study of the early period in addition to more informal texts such as are found in the small *Corpus of English Dialogues 1560-1760* (CED), consisting of 1.4 million words.

It is also widely held that pragmatic markers are separated from their anchors ('hosts') by comma intonation in speech and comma in writing. However, this is not always the case in present day English (see Dehé and Wichman, 2010) and in historical work it is hard to assess since punctuation practices were very different in earlier centuries (see Parkes, 1992 on early punctuation and the rise of the concept of syntactic sentence).³

Spelling in the Middle English and first part of the Early Modern English (EModE) periods is variable. Whereas older text editions often normalize spelling and punctuation, attempts are made in contemporary corpora to reproduce manuscript and early printed text (Kytö and Pahta, 2012), so the following spellings were searched: *by/bi the way/waye/wei/vey*, and *by/bye/bi*

² Another major source is "comment clauses" (Brinton, 2008), e.g. *as I guess > I guess*.

³ In earlier English *sentence* meant 'judgment'.

the *by/bye/bi*. *Incidentally* and *parenthetically* do not appear until the Modern period and are not subject to variability in spelling.⁴

Since discourse markers in general and DDMs in particular are typically “clause-initial”, it is necessary to explain how this term has been interpreted. An expression is considered to be clause-initial if it precedes the argument structure. A slot is posited that can host several pragmatic markers. The DDMs under discussion may follow e.g. *and*, *but*, *Oh* and other pragmatic markers.

3. The history of four digressive discourse-topic shift markers in English

In this section I outline the histories of *by the way* (3.1), *by the by* and *by the bye* (3.2), *incidentally* (3.2), and *parenthetically* (3.4). Section 3.5 summarizes.

3.1. *By the way*

This study is restricted to singular *by the way*. Although plural *by the ways* occurs, it is always spatial and is not relevant to the history of the DDM *by the way*.

3.1.1. *The early history*

In Old English (OE) the definite article was coming into being, derived from the demonstrative *se* ‘that’ (Sommerer, 2012), so relevant precursors of *by the way* do not necessarily appear with an article. *Bi* was a preposition meaning ‘by, near to, at, in, upon’ (Bosworth-Toller *bi* prep. dat.). In Middle English (ME) the definite article came to be entrenched and *bi* was used primarily of “location, position, or direction: near, close to, next to, at, alongside, along” (MED *bi* prep. 1.a). *Wei* meant ‘road, path’. By the later ME period MED shows that *by the way* could be used as part of a complex preposition in the figurative sense of “a course, path, or manner of life involving moral, ethical, or spiritual choices”, as in *by the way of virtue* (MED *wei* 7a).

Our concern in this first subsection is with the adverbial phrase *by the way*, which meant ‘beside/on the road’, or ‘along the way’. I call the latter the ‘*en route*’ use. Static or dynamic meaning of adverbial *by the way* is derived from the verb or general context with which it collocates. MED (*wei* 2.b, a) suggests that certain combinations with verbs were conventionalized, e.g. with *gon* ‘go’, *faran* ‘go’, *riden* ‘ride’. For the most part, *bi the wei* occurs in medial or final position as an adjunct. Some examples from Chaucer in MED are cited in (2). The phrase appears in final position in (2a, b), medially in (2c, d) and initially in (2e). The variants in (2c, d) are both part of direct quotations of what the Host, the organizer of the pilgrimage, is represented as saying.

- (2) a. Thus pleyneth Iohn as he goth **by the wey**
Toward the mille.
'Thus complains John as he goes along the road/Toward the mill'
(c.1390 Chaucer, *CT*, *Reeves Tale*, A. 4114 [MED]).
- b. Who so wole my iuggement withseye
Shall paye all that we we spend **by the weye**.
'Whoever will my judgement contradict/Shall pay all that we spend along the way'
(c. 1387-95 Chaucer, *CT*, *Prol.* A. 806 [MED])
- c. Who so be rebel to my iuggement
Shall paye for al that **by the wey** is spent.
'Whoever may be a rebel against my judgement/Shall pay for all that by the way is spent'
(c. 1387-95 Chaucer, *CT*, *Prol.* A. 806 [MED])
- d. And **by the weye** his wif Creusa he les.
'And along the way his wife Creusa he lost'
(c. 1430 (c.1386) Chaucer, *LGW* 945 [MED])

3.1.2. *Contexts for the development of DDM use*

Most morphosyntactic changes occur in definable distributional contexts. Discussing grammaticalization, Traugott and König (1991) proposed that pragmatic invited inferencing arising in the syntagmatic flow of speech enabled change, and Bybee et al. said (1994: 197) “Everything that happens to the meaning of a gram happens because of the contexts in which it is used”. These insights were later theorized in various ways by Heine (2002), Diewald (2002) and Diewald and Smirnova (2010), who emphasized the role of ambiguity, pragmatic implicatures, and the scope of these implicatures. While these studies focused on the role of meaning, Himmelmann (2004) focused on form, arguing that elements grammaticalize in “syntagmatic context”.

⁴ Traditional dating of periods of the history of English is Old English (OE) c. 650–1100; Middle English (ME) c.1100–1500; Early Modern English (EModE) c. 1500–1700; Modern English c.1700–1970 (ModE); Present Day English (PDE) c. 1970–present. Since the history of any language is continuous, periodization is debatable. It has traditionally been based mainly on external factors such as the Norman Conquest, the invention of printing or colonial expansion rather than on linguistic factors. However, Gries and Hilpert (2012) suggests approaching periodization from a bottom-up, statistical clustering perspective with focus on linguistic criteria. The traditional periods are satisfactory for a qualitative analysis of the DDMs under discussion, but a quantitative analysis would clearly zero in on more specific periods.

The history of *by the way* suggests that three types of context were crucial in this case. One involves syntagmatic collocations with a class of verbs. The other involves association with metaphors of discourse as a journey. The third involves use of this metaphor in relative clauses.

A collocation that can be characterized as ‘talking *en route*’ first appears with some frequency at the end of the 15thC, as in (3):

- (3) a. it was told him **by the way** that his wyf was deed in trauayll of child.
(1482 Caxton, *Prolicionycion* [EEBO-BYU])
‘it was told him on the road that his wife was dead in work of child (childbirth)’
- b. thus they rode sure talkynge **by the way** to gyders.
(1485 Malory, *Morte darthur* [EEBO-BYU])
‘thus they rode confidently talking together along the way’
- c. when he was led towarde rome by ten men of warre ... **by the way** he confirmed all christian men in the faith.
(1559 Lanquet, Cooper and Crowley, *The epitome of chronicles* [EEBO-BYU])
‘when he was led toward Rome by ten men of war ... along the way he confirmed all Christian men in the faith’
- d. Whereupon trauailing **by the way**, we fell into our olde accustomed talke.
(1597 D1FSHARP, CED)

Use of *by the way* to refer to a literal spatial context in which talk occurs continued to be increasingly favored. The *On-line OpenSource Shakespeare* (OSS) yields 14 hits of adverbial *by the way*. All can be interpreted literally as referring to a journey, 5 of them to talk or coming to understand *en route*, e.g.:⁵

- (4) a. Go with me to it, and I'll show it to you; and, **by the way**, you shall tell me where in the forest you live. Will you go?
(?1600 Shakespeare, *As you like it*, III. ii. 451 [OSS])
- b. Why, then, we are awake: let's follow him
And **by the way** let us recount our dreams.
(1594-95 Shakespeare, *Midsummer Night's Dream*, IV.i.[OSS])
- c. Then go with me to make the matter good.
This, **by the way**, I let you understand:
My father is here look'd for every day.
(1594 Shakespeare, *Taming of the Shrew*, IV.ii.114 [OSS])

3.1.3. Figurative use of *by the way*

In examples like those in (3) and (4), the route is background to the conveying of information, which is the focus of the clause. In the 16thC, when use of the ‘talking *en route*’ collocation was expanding, a new figurative use is attested, where *by the way* means ‘in the course of discussion, in passing’, and *way* is understood not literally as a road, but metaphorically as a textual journey. This is an example of the metaphor ARGUMENT IS A JOURNEY (Kövecses, 2002: 94) from which one may draw wisdom or from which one may digress.⁶ Many examples are from sermons, religious and philosophical writings and appear to be genre-based. Several occur in translations from Latin, such as Calvin's writing (5b).

- (5) a. their blindenes is rather to be lameted the to be derided, notwtstading this must i nedes say **by the way**, i wysh wt all my hert that ...
(1550 Becon, *The iewel of ioye* [EEBO-BYU])
‘their blindness is rather to be lamented than to be derided; notwithstanding this, I must necessarily say in passing, I wish with all my heart that ...’
- b. but because it is not my purpose at this present to set forth at large the creation of the worlde, let it suffice to haue ones agayne touched these few things **by the way**.
(1561 Norton, *The institute of religion* (trans. of Calvin from Latin [EEBO-BYU])
‘but because it is not my purpose at the present time to describe in detail the creation of the world, let it suffice to have once again touched on these few things along the way.’
- c. plato in his dialogue ... maketh mention **by the way** of a wonderfull earthquake
(1563 Fulke, *A goodly gallery* [EEBO-BYU])
‘Plato in his dialog ... in passing makes mention of a remarkable earthquake.’

This metaphorical use appears to build on or at least merge with ‘the talk *en route*’ pattern since typical verbs are *say* (5a), *touch* ‘touch on, mention’ (5b), *make mention of* (5c). The prevalence of the two patterns suggests that by the 16thC *by the way* had, in certain contexts, a meaning related to discourse organization. However, it was not yet a DDM since the scope of the adverbial is local (*talk/say/mention*), not the whole clause. Furthermore, although many examples have first person subjects, e.g. (4b, c, 5a), grounding in the Speaker's perspective (“subjectivity”) is not necessarily inferred. For example, in (5c) Plato is

⁵ Since OSS provides line numbers based on a continuous corpus, I have added Craig's (1951) traditional line numbers and dating to facilitate reference. Note that in the Craig edition, there are no commas surrounding *by the way* in (4a).

⁶ See also the conduit metaphor (Reddy, 1993[1979]), according to which the speaker/writer can ‘proceed’ with arguments on a path of reasoning (*proceed* < Lat. *pro* ‘forward’ + *cedere* ‘move’).

said to mention the earthquake in passing. It is, however, possible, as least with contemporary hindsight, to interpret this example as the author's subjective comment on Plato's discourse in his dialogues.

While subjectivity is only weakly associable with some readings of *by the way* in the 16th and 17th centuries, a strong implicature of subjectivity is, however, usually associated with the 'in passing' reading when it immediately follows a relativizer. This use is attested almost exclusively after 1600 in EEBO-BYU. Before 1600 most examples of *by the way* following a relativizer can only be interpreted as spatial, e.g.:

- (6) seynt aldeme brought wt hym fro rome an alterstone *which by the way* brake.
 'St. Aldhelm brought with him from Rome an alterstone which broke on the way'
 (1516 Hilton, *Epistle on the medled life* [EEBO-BYU])

However, after 1600 there are a large number of examples like those in (7), which illustrates use with *which*, and *who(m)* relativizers; it is, however, most frequently found with *which*. Here the writer marks the clause as a relatively unimportant elaboration.

- (7) a. so that both those titles were common to both those emperors (of the two first empires) but not that ceremony of Supremacie (*which by the way* I note; because it falls mongst things here treated of in storie) of demanding a portion of earth and water ...
 (1601 Seldon, *Titles of honor* [EEBO-BYU])
 b. the Clergie, who herein would not favour her grand favourite sir christopher hatton, (*who by the way* was master of this first-fruits office, and was) [sic] much indebted unto her for moneys received.
 (1655 Fuller, *Church-history of Britain* [EEBO-BYU])
 c. it may be also, that within these two or three hundred yeares one of their great Auncestors, *whom by the way* they repeat in their genealogies from their demigorgons, i would say demigods, might come in at the window indirectly.
 (1630 Vaughn, *Arraignment of slander* [EEBO-BYU])

This use in a relative clause of *by the way* invoking a textual journey is implicitly subjective because the writer/speaker, not the syntactic subject, is understood to be evaluating the importance to the general discourse of the clause at hand. In (7c) *whom by the way they repeat* can be roughly paraphrased as 'whom, I point out in passing, they repeat', not '*whom they in passing repeat'.

The relative clauses in question provide (or are represented as providing) extra, non-essential information. They are precursors of the type of relative clause variously known as "non-restrictive", "appositional", "adjoined", or, in Huddleston et al.'s (2002: 1064) terminology, "supplementary". Adamson (1999: 586) shows that a paratactic style came to be favored in Renaissance prose, and non-restrictive relatives were prominent features of several works in the 1600s, a time when distinctions between subordinate and in subordinate clauses were being worked out by grammarians.⁷ *By the way* 'in passing' appears to have been used in texts represented in EEBO-BYU to index the supplementary nature of the clause. Parenthesis markers may further index this, as in (7a, b, d).⁸

3.1.4. DDM use of *by the way*

Over time, some ambiguity appears in use of clause-initial *by the way*. Consider (8):

- (8) CAR. I'll never be drunk agen.
 LA. I hope you will say so, when you have heard all.
 GEO. but *by the way* your late stock being spent,
 here are ten peeces towards a supply.
 (1653 Brome, *The mad couple well matched* [CED: D3CBROME])

Since Careless (CAR.) forfeited £500 on an earlier described drunken adventure, *by the way* in (8) could be understood as in earlier texts to mean 'on the way', in which case it is anaphoric to the prior account of the journey and has local scope over *your late stock being spent*. But from a present-day perspective it could also be interpreted as 'incidentally', in which case it is cataphoric, has global scope over what follows (*your late stock being spent, here are ten peeces towards a supply*) and is subjective in that it expresses the speaker's point of view. The second interpretation attributes metatextual function to *by the way*, and minimizes the importance of the offer.

⁷ Citing Michael (1970: 473–478), Adamson says the concept of subordinate clause was not fully formulated until the 1670s.

⁸ Parentheses may also be used independently of relative clauses, as in:

- i) [discussing rules for seating arrangements]
 but here (by the way) it is to be considered that ...
 (1577 Robson and Rowlands, *The courte of ciuill courtesie* [EEBO-BYU]).

Some early examples of unambiguous DDM use of *by the way* appear about 50 years later and are exemplified in (9):

- (9) a. bees turn not droanes, nor courages ever abate or degenerate: **by the way**, I observe that none have ever arrived to an eminent grandeur, but who began very young.
(1661 Argyll, *Instruction to a son* [EEBO-BYU])
- b. Sympathy seiz'd Aurelian immediately: (For, **by the Way**, sighing is as catching among Lovers, as yawning ...
(1692 cong. f2b [ARCHER])
- c. MYRT. Do you know who are her council?
BEV. Yes, for your Service I have found out that too, they are Serjeant Bramble and Old Target - **by the way**, they are neither of em known to the Family.
(1723 Steele, *Conscious Lovers* [CED: D5CSTEEL])

In (9) a cluster of factors suggests DDM use:

- i) clause-initial position,
- ii) there is no mention of a path, either literal or textual,
- iii) subjectivity: the Speaker indexes the upcoming discourse as: a) a newdiscourse-topic, b) only partially relevant.

In (9c) *by the way, they are neither of em known to the Family* continues the syntactic topic (*they*), and also introduces a new discourse-topic, familiarity with the family. Since the question asked was *Do you know who are her council?*, the response *they are Serjeant Bramble and Old Target* is sufficient. The topic of familiarity is slightly irrelevant with respect to the question, supplementary to the answer, and in that sense “digressive”.

It seems reasonable to conclude that this new metatextual DDM use is directly related to the ‘in passing’ meaning, which is also information-oriented. It is only distantly related to the ‘talk *en route*’ meaning. Use in initial position allows it to be understood as indexing that the upcoming contribution is not only supplementary and added in passing, but also as implicating a discourse-topic shift, since by definition what is supplementary is often also new (if unimportant) information. The development of the topic shifting function is a case of subjectification (Traugott and Dasher, 2002, Traugott, 2010). It marks the writer’s shift from factual observation to subjective evaluative assessment (the discourse structuring meaning).

During the Modern English period some changes relevant to the further development of *by the way* occurred. One is that the manner meaning arose, as in (10). Distributionally, the manner construction is different since it requires a modifier (*by the way in which*) (10a) is one of two examples in EEBO-BYU, both from the same text of 1676, but the construction did not become entrenched until the mid eighteenth century (10b):

- (10) a. if we impos'd his death, we might bring his guilt to be doubted, **by the way in which** it is punish'd.
(1676 Orrery, *Parthenissa* [EEBO-BYU])
- b. About seven stone of beef, which I knew to be mine **by the way in which** it was cut.
(1817 Trial of William Jones, t18170115-29 [OBC])

This is not a wide-spread use in PDE. There are only 70 examples in BNC-BYU and 60 in COCA. Scattered examples without the relative appear like (11), but this is distinctly dispreferred in the data:

- (11) Gandhi said you can judge a country **by the way** it treats its animals.
(2008 *Houston Chronicle* [COCA])

The manner use appears not to be related to the metatextual developments, but to have arisen independently from the spatial sense.

A second change relevant to the later use of DDM *by the way* is that spatial *by the way* came to be almost completely replaced by *on the way*. While *on the way* is attested in EEBO-BYU from the first decade (1470), it is infrequent until the 18thC. Although used around 1600 in many of the same contexts as *by the way* (e.g. (12a)), it is not favored in contexts of locution. Instead, *on the way* is used primarily in idiomatic chunks like *bring X on the way*, as in (12b):

- (12) a. yet trusted nothing more his good words: passing **on the way**, diuersly discoursing, the spaniard courteous in words said ...
(1600 Roberts, *Haigh for Deuonshire* [EEBO-BYU])
- b. your father stayes to bring you **on the way**.
(1611 Tourneur, *Atheist's tragedy* [EEBO-BYU])

A third development, which will be discussed in the following subsections, involves changes in the digressive schema and the slow decline, particularly from 1900 on, of *by and by*, and the rise of *incidentally* and *parenthetically* as DDMs.

3.1.5. Interpersonal use of *by the way*

DDM use of *by the way* increased exponentially in the 19thC. Although COHA shows a steadier increase and an earlier start than CLMET3, the numbers in CLMET_3.0 in Table 1 are especially striking:

Table 1
The increase of DDM *by the way* in CLMET_3.0 drama.

| | Route | Manner | DDM |
|-----------|-------|--------|-----|
| 1710–1780 | 3 | 0 | 3 |
| 1780–1850 | 2 | 0 | 2 |
| 1850–1920 | 0 | 1 | 30 |

The 30 instances appear in 12 plays and are largely used strategically for plot and characterization purposes. The discourse-topic introduced by *by the way* may be what the speaker really wants to explore, for example, introducing a surprise (13a) or checking a suspicion while presenting it as unimportant (13b). The DDM can serve discursively as a wedge into a plot twist and be exploited as an interpersonal hedge, for example to sound polite as in (13a) (see Quirk et al.'s (1985: 640) characterization of *by the way* used as a “polite way of changing the subject”) even though the upcoming topic can be highly face-threatening (13b):

- (13) a. GERALD: My dear mother, let us wait a little longer. Lord Illingworth is so delightful, and, **by the way**, mother, I have a great surprise for you. We are starting for India at the end of this month.
(1894 Wilde, *A woman of no importance* [CLMET_3_1_3_261])
- b. RICHARD: So I hear you are married, Pastor, and that your wife has a most ungodly allowance of good looks. ... [discussion of the propriety of saying this in front of her]... All the same, Pastor, I respect you more than I did before. **By the way**, did I hear, or did I not, that our late lamented Uncle Peter, though unmarried, was a father?
UNCLE TITUS: He had only one irregular child, sir.
(1897 Shaw, *The devil's disciple* [CLMET_3_1_3_269])

In (13b) the probe is hedged not only by *by the way* but also by the double question *did I hear, or did I not?* In the examples *by the way* has undergone evaluative intersubjectification evoking social norms.

This type of use to introduce a potentially face-threatening topic can be found throughout the 20thC, usually following *say*, either explicit (14a) or implicit (14b), and introduced by *Oh*:

- (14) a. “A charming girl, at any rate,” Hayley smiled. “What of that? She's not so charming that one of those men will suddenly turn to her and say: *Oh, by the way*, I murdered your grandfather.”
(1930 Bigger, *Charlie Chan carries on* [COHA])
- b. Only two weeks later he told her at breakfast, with a studied casualness and without looking up from his paper: “*Oh, by the way*, I have to be out tonight. I'm dining with Mrs. Emlen.”
(1956 Auchincloss, *The great world and Timothy Cold* [COHA])

Oh in initial position has been defined as a change-of-state marker (Heritage, 1984, 2016). In this context, the discourse-topic shifting function of *by the way* is redundant. This, together with the use of *by the way* to casually introduce something of shock value may have recently led to what I call “transgressive use”, where disapproving or parodic representation of someone else's actual or imagined statement is more salient than topic shift.⁹

- (15) a. You can't go to your husband and say, “*Oh, by the way*, I just figured something out – I'm gay.”
(1997 ABC [COCA]).
- b. Dr. DIXON. She was like, hey, do you want to put this back together? And I was like, yeah, I do. And so let's plan a trip, blah, blah, blah. The next day she's like, hey, sorry, I'm in love with my dance partner. DETECTIVE: He still loves her. He's got a lot of feelings for her. But boom, she drops the hammer on him and says, *oh, by the way*, I'm in love with my dance partner.
(2016 ABC 20/20 [COCA])
- c. because what he seems to be doing in dealing with this problem is making it worse, by saying, *oh, by the way*, look at these women, insinuating that they weren't pretty enough somehow for him to sexually assault.
(2016 CNN Anderson Cooper [COCA])

In (15b) Dr. Dixon is referring to his ex-wife. He is under suspicion of having murdered her lover, the dance partner. Dr. Dixon presents the background and what his ex-wife said in controlled and relatively neutral terms (*she's like, hey sorry*) while the detective dramatizes the event (*boom, she drops the hammer on him*) and expresses his negative feelings about what she is alleged to have said by introducing it with *Oh, by the way*.

The interpersonal use of *by the way* recalls the locutionary contexts in which *by the way* was used in EModE, but in this case there is no sense of talking *en route*, only of saying something that the speaker considers socially problematic.

⁹ Thanks to an anonymous reviewer for pointing to the possible parodic function of *Oh, by the way*.

3.1.6. Summary of the history of *by the way*

My perspective so far has been semasiological, focusing on meaning changes, while form remained comparatively stable. The semasiological history of *by the way* outlined above is summarized as in Fig. 1. (in this Figure ... signals scattered evidence):

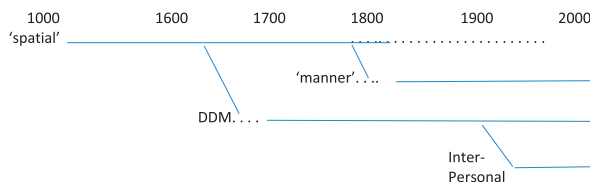


Fig. 1. Summary of semasiological changes to *by the way*.

The changes discussed did not occur in a vacuum. There were systemic changes such as the development of the definite article in later Old English, leading to *by the way* rather than *by way*.¹⁰ Furthermore, speakers developed additional markers that served digressive functions. It is to the latter that I now turn, adopting an onomasiological perspective on the alternative choices that became available to speakers,¹¹ first *by the by* and *by the bye* which, like *by the way*, originated in spatial adverbs (3.2), and later *incidentally* (3.3) and *parenthetically* (3.4), which originated in manner adverbs.

3.2. *By the by* and *by the bye*

By the way was not the only digressive discourse-topic shifter to be developed in the EModE period. An alternative was *by the by*, which was used, like *by the way*, mainly in religious and philosophical texts. In Modern English this and its variant *by the bye* have almost completely obsolesced. In COCA 1991–2017, for example, there are 13 hits of *by the bye* and 44 of *by the by* in all clause positions compared with 18,360 hits of *by the way*.¹² Several of the 44 *by the by* are *go by the by* ‘collapse’. Some examples of DDM use of *by the by(e)* in Present Day English (PDE) are:

- (16) a. between the four of us, believe me, we could fill a whole library from top to bottom. **By the bye**, darling, I want you to guess what Mortie said to your father only two days ago.
(2016 Lish, *For Jeromé with love* [COCA])
- b. She picked up a rose. “Is all this for me?” “Everything is for you. **By the by**, Buckingham has tried to fast himself into the shape you last saw him wearing.”
(2006 Koen, *Dark angels* [COCA])

For the most part, *by the by* and *by the bye* appear in written, not spoken texts in COCA. An entry for *by the by* in *Urban Dictionary* comments that it is “a snooty way of saying ‘by the way’”.

Evidence from EEBO-BYU suggests that both *by the by* and *by the bye* had their beginnings in the later 16thc, but neither was attested with any frequency until after 1600. *By(e)* meant ‘side’ (cf. *by-laws*). It appears that initially *by the bye* and *by the by* were kept apart, since only the former with *-e* appears in contrasting phrases such as ‘high ways and by ways’ (17a) and ‘not in the main but by the by’ (17b):

- (17) a. when to the woods so wilde, to the wilde beasts dangerus harbors, forsaking hye wayes, **by the bye wayes** passed amintas.
‘when to the woods so wild, to wild beasts dangerous habors, forsaking main roads, by side paths passed Amintas’
(1587 Watson, Fraunce and Tasso, *Lamentations of Amyntas* [EEBO-BYU])
- b. for it is a common custome with him, if not by the maine, yet surely **by the bye**, to breake the necke of great princes.
‘for it is a common custom with him to break the neck of great princes, if not in general, then certainly contingently’
(1624 Reynold and Scott, *Vox caeli* [EEBO-BYU])

¹⁰ Cf. examples from Old English, such as:

i) þæt hi ne teorian **be wege**
that they not faint by way
(c.1000 *ÆCHOM* 1.12.276.43)’

¹¹ For the distinction between semasiological and onomasiological perspectives on change, see Grondelaers et al. (2007).

¹² Numbers from COCA cited here are raw.

However, by the mid 17thC both *by the by* and *by the bye* were used primarily as adverbs meaning ‘as an aside, casually, contingently’, e.g.:

- (18) here knowledge is indeed sinned against, yet but collaterally, and as a standerby, but as a circumstance onely, shot at per accidens, concomitantly, and **by the by** ...
 ‘here knowledge is indeed sinned against, but only sideways, and as a standerby, as a circumstance only, shot at by accident, concomitantly, and by chance’
 (1637 Goodwin, *Aggravation of sinne* [EEBO-BYU])

They are sometimes found in the context of mention of locutionary or cognitive acts, as in (19), similar to *by the way* and possibly on analogy with it, as the latter was more frequent. However, there is no constellation of such examples as in the case of *by the way*.

- (19) a. [about defaming his mother] but that point was by buckingham thought, and so advised to bee but sparingly urged: and as it were but **by the bye**, but to give a touch that ...
 ‘but that point was thought and advised by Buckingham to be only sparingly presented, and as it were on the side, only to slightly insinuate that ...’
 (1636 Trussell, *Continuation of the collection of the history of England* [EEBO-BYU])
 b. i will not insist upon their customes, which is a subject of which many have treated, however **by the bye** let me say in few words, that in their division of the artificial day, they differ from the general practice of Europe.
 (1671 Gailhard, *Present state of the princes and republicks of Italy* [EEBO-BYU])

Further possible evidence for analogy is the fact that *by the by* begins to appear with subjective pragmatics in relative clauses in the 1670s and *by the bye* in the 1690s. *By the way* was used in relative clauses from the 1600s on (see Section 3.1.2) and was therefore already available as a model. However, since several of the texts in which the relative appear are translations from Latin or French, there may have been multiple sources for use with relatives.

- (20) yet as christ was preserved in idolatrous egypt (*in which by the by*, it's said the idols fell at his entry) so shall his gospel out live all heathen vanities.
 (1671 Annand, *Mysterie of godliness* [EEBO-BYU])

Most instances of *by the by(e)* appear clause-finally (except in relative clauses, where they appear immediately post-relativizer). But a few instances of *by the by* used in initial position with metatextual discourse-topic shift function appear in the 1670s, shortly after *by the way*, e.g.:

- (21) which number have been ever since continued (and **by the by** may afford us another argument of the legality of that statute) and have the sole power of choosing the president.
 (1676 Goodall, *Colledge of physicians vindicated* [EEBO-BYU])

By the beginning of the 19thC, as represented in COHA, initial DDM uses of *by the by* (and occasionally *by the bye*) appear mainly in fiction (including drama), which suggests that it had become entrenched. However it is infrequent: in the two decades 1810 and 1820, out of 18 examples of *by the by*, 7 are clause-initial DDM uses, and out of 12 by *and bye* 3 are clause-initial, e.g.:

- (22) a. Pray, sir, dont you remember, how handsomely Mr. Pepin treated Mrs. Wilmot, ... concerning her benefit, both in Baltimore and Philadelphia? – **By the by**, that is nothing to either you or I – but, my very dear friend, you know, that Mrs. Wilmot determined upon taking a benefit in this city.
 (1815 Hutton, *Fashionable follies* [COHA])
 b. we will set up a forge for you, as soon as we arrive. **By the by**, we shall want a mason for that.
 (1822 Judah, *Odofriede* [COHA])
 c. “it runneth in my mind your argument is erroneous; *by the bye* a painting of a duello or single fight might do very well.”
 (1827 Judah, *Buccaneers* [COHA])

Use of *by the by* peaked in the mid 19thC: for the 1860s there are 42 hits in COHA, including its use in all positions, but it is very sparsely represented from 1920 on (only 4 hits in the 2000s). Use of *by the bye* peaked at about the same time (for the 1840s there are 34 hits), and like *by the by*, it is used very sparsely from 1910 on (3 hits in 2000s). In COCA 2017 there is only one hit for *by the by*, and none for the year 2016; most others involve the idiom *has gone by the by* ‘has collapsed’ as in:

- (23) And the cease-fire itself has sort of **gone by the by**.
 (2016 NPR [COCA])

As for *by the bye*, all examples are in written registers, the last in COCA 2016 fiction.

3.3. Incidentally

By the way and *by the by(e)* were modeled on a spatial pattern that was productive for metatextual markers in EModE, cf. *as far as, anyway, besides*. In the 19thC a new pattern, manner adverbs in *-ly*, became a source for the development of further metatextual DDMs.

As an adverb, *incidentally* refers to chance occurrence. As a DDM, in PDE it is used mainly to introduce a statement that adds information and marks it as “not immediately pertinent” (OED *incidentally* 2., citing Fowler: “Incidentally is now very common as a writer’s apology for an irrelevance (1926 Fowler, *Dict. Mod. Eng. Usage* 262/2)”. Dictionaries such as Merriam Webster note that in this use it is equivalent to *by the way*. However, there are differences in register (*incidentally* is more formal), and frequency. In COCA there are 2333 (unanalyzed) hits of *incidentally* as against 18,360 of *by the way*, and DDM use of *incidentally* is proportionately far lower than for *by the way*. Some contemporary examples of *incidentally* used as a DDM are:

- (24) a. The issue always was about Goff’s ability to run an offense, not throw the ball. **Incidentally**, the two moments of the series that might be recorded for posterity both involve Goff.
(2017 *OCRegister* [COCA])
- b. “Did you design any big-box stores today? In one of those new beautiful Bauhaus strip malls they have now? ... Man, I do love strip malls. **Incidentally**, you kinda look like a vampire tonight.”
(2014 Baxter, *Chastity* [COCA])

To turn to its history, *incidentally* first appears in EEBO-BYU in the 1610s. It means ‘in passing’ and collocates with adverbs such as *casually, occasionally, transiently*. All 49 of the examples of *incidentally* in EEBO-BYU between 1610 and 1674 refer to discursive practices, e.g.:

- (25) that the hypothesis i proposed, was very **incidentally** and briefly discours’d of, upon an occasion ministred by a wrong explication given of suction by mr: hobbes.
(1674 Boyle, *Of the cause of attraction by suction* [EEBO-BYU])

Clause-initial uses of *incidentally* in the sense of ‘in passing’ appear in COHA in the 1860s, e.g.:

- (26) as to the ways in which property has been held and transmitted up to the present time. **Incidentally**, considerable light is thrown on the position of women in different countries and times.
(1866 Collins, *Armada* [COHA])

Here *incidentally* is grounded in the book’s content. In the 1870s we begin to find examples where *incidentally* is grounded in the speaker and, like DDM *by the way*, is used to introduce a discourse-topic shift:

- (27) a. But this is a danger belonging rather to the future than the present; in the existing condition of English scholarship there need not be much fear that any damage of this kind will be done And, **incidentally**, it may be well to mention here one positive benefit which ...
(1870 Lounsbury, *Study of English literature* [COHA])
- b. One might quote almost at random whole pages, and even whole chapters. **Incidentally** the absurdity of classical education for a boy, with no taste and no aptitude for it, engages her satire.
(1874 Wilkinson, *Literary and ethical quality of George Eliot’s novels* [COHA])

Incidentally came to be used like *by the way* to hedge a potentially face-threatening new topic, especially after *Oh*:

- (28) Thank you, my dear. Well, that is about all for now. *Oh, incidentally*, while we are in rehearsal, I wish you wouldn’t be so demonstrative.
(1949 *Barklays of Broadway* (movie) [COHA])

However, unlike in the case of *Oh, by the way*, when *Oh* began to be used with *incidentally*, *Oh* appears not to have become the main indexer of a discourse-topic shift. Furthermore, what I have called transgressive uses which negatively evaluate what someone has said, are not attested.¹³ Therefore, contemporary *incidentally* and *by the way* are far from adequate paraphrases of each other, although there are significant overlaps in their central DDM uses.

3.4. Parenthetically

Like *incidentally*, *parenthetically* is a manner adverb referring to discourse cohesiveness. It appears considerably less frequently in the corpora. There are only 4 hits in EEBO-BYU and 155 (raw) in COCA. Given that it refers to qualifying or explanatory material added as an aside, it unsurprisingly occurs at first in metalinguistic contexts.

¹³ Example (28) is not a counterexample as a negative is overtly present in the text (*I wish you wouldn’t be*).

Interestingly, in the first example in EEBO-BYU, *parenthetically* co-occurs with *by the way* ‘in passing’, suggesting that they were not considered equivalent. While at this point in its history, *by the way* is conceptually a linear trajectory, *parenthetically* is a textual side trip:

- (29) and in this place very fittely may i bring in that i omitted, but as (**parenthetically** to insert it **by the way**) that is, although men must regarde in all reuerence and feare, howe ...'
 'and here I may very fittingly bring in what I omitted, but as if parenthetically and in passing, how ...'
 (1591 Cottesford, *Treatise against traitors* [EEBO-BYU])

Parenthetically continues through the 19thC to the present to be used primarily in its literal meaning ‘in a parenthetical way’ as a comment on how a component of text relates to other components (30):

- (30) a. It is found in a graphic and striking figure of speech, thrown in almost **parenthetically** in the midst of his argument.
 (1850 Calhoun, *John C. Calhoun* [COHA])
 b. the thought bubble thing, where something that somebody's thinking or a little, like, flashback moment is kind of filmed almost **parenthetically** and inserted in.
 (2015 NPR [COCA])

By the mid 19thC this use is attested clause-initially. There are two examples in COHA, the first of which is (31). Here *parenthetically* appears to be used to mean ‘in passing’, much like *incidentally* (see (26) above):

- (31) But these matters do not properly come within the scope of this narrative, which is biographical and not historical. **Parenthetically** it may be well to remark that neither Carter nor Colburne ever referred to Miss Ravenel.
 (1867 De Forest, *Miss Ravenel's conversion* [COHA])

This kind of use comes to be fairly common in the early part of the 20thC. As in (32) writers tend explicitly to mention their role in developing the argument:

- (32) A narrative of facts is often more convincing than a homily; and these two letters of my correspondent carry their own lesson. **Parenthetically**, let me remark that ...
 (1913 Roosevelt, *Applied idealism* [COHA])

Other examples include *parenthetically I may add* (1918), and *parenthetically I wish to say* (1920). In none of these cases does the adverb appear to be being used literally. Rather, it serves, like *by the way*, as a hedge on introducing a point that the speaker wishes to make. However, the discourse–topic shift is typically only slightly digressive. This type of usage appears to be a precursor to use with the same function but no immediately adjacent explicit locutionary context:

- (33) And, of course, all this declamation is as silly as it can very well be. No one denies the nobility of such sentiments. No one in his senses could fail to approve the action of committee and Board. And, **parenthetically**, no sane member of either body could very well have reached a different conclusion.
 (1923 Time, *Triumph of platitude* [COHA])

In (33) *parenthetically* is syntactically parallel to *of course*, while pragmatically marking what follows as hedged. Both *incidentally* and *by the way* would have implied that the writer presents what follows as relatively trivial and inconsequential, which would have detracted from the pointedness of the author's comment.

In the data, *parenthetically* does not introduce a shift to a significantly face-threatening topic shift, nor is it introduced by *Oh*. It is therefore even less similar in function to *by the way* than *incidentally*.

3.5. Summary of the rise of the four DDMs

To summarize, *by the way* and *by the by(e)* have syntactically and semantically rather similar origins in locational phrases. It appears that a constructional schema of digressive topic shifting markers arose in EModE based on spatial adverbials. Its development is heavily dependent on the conceptual structures pertaining to text creation, initially the ARGUMENT IS A JOURNEY metaphor.

A new pattern emerged in the 19thC, based on adverbs that specify the manner in which text is put together; *incidentally* and *parenthetically*. Membership of the schema has changed over time, but *by the way* has predominated from the beginning. It appears to have early become an exemplar for analogical modeling.

Whereas *by the way* and *by the by(e)* underwent considerable semantic change via the context of reference to discourse as a path, *incidentally* and *parenthetically* were from the beginning used in discursive contexts. It appears likely that *by the way* in its DDM use was the target of analogical thinking and influenced the other adverbs, but mainly in its core meaning of projecting a change of discourse-topic that is presented as not entirely relevant to what precedes. It is also possible that speakers ceased to use *by the by(e)*, which was always relatively infrequent, because two new markers had become available.¹⁴ Pragmatic extension to interpersonal, transgressive, use has occurred with *by the way*, but not with *incidentally* and *parenthetically*, possibly because they are preferred in fairly formal registers. It remains to be seen whether any such developments will take place with *incidentally*, which, as mentioned above, is now being used with *Oh*, and possibly eventually with *parenthetically*.

Table 2 summarizes the onomasiological choices available from EModE on for the digressive discourse-topic shifter category. (CAPS indicate relatively high frequency, and *italics* very low frequency.)

Table 2
Digressive discourse-topic shifter DDMs from EModE on.

| 1650s | 1850s | 1900s |
|-------------------|------------------------|------------------------|
| by the way | BY THE WAY | BY THE WAY |
| by the by | by the by | <i>by the by</i> |
| <i>by the bye</i> | by the bye | <i>by the bye</i> |
| | incidentally | incidentally |
| | <i>parenthetically</i> | <i>parenthetically</i> |

4. Theoretical discussion

In this section I address two interrelated theoretical questions from the perspective of construction grammar that have been the subject of recent debate: i) Do the expressions discussed above form a schema or a “family” of constructions? ii) What does the history of the digressive DDMs show about Bybee et al.’s (1994: 9) hypothesis that source meanings restrict possible future function vis-à-vis Kaltenböck et al.’s (2011: 875) proposal that the meaning of independent units, including discourse structuring markers, “is shaped by its function in discourse”?

4.1. Do the DDMs discussed form a constructional schema or a “family” of constructions?

One of the issues discussed in construction grammar is under what circumstances a set of similarly behaving individual micro-constructions may be said to form a constructional schema rather than a “family” of constructions (Hilpert, 2013: 209 and *passim*). Hilpert (2013: 191) acknowledges that such a question “might seem like an open-ended exercise in lumping and splitting”, but argues for the distinction as follows (pp. 191–192). A schema is an overarching generalization over micro-constructions and allows speakers to produce utterances that combine characteristics from different source constructions. It can be the locus of leveling and convergence between different members through analogy and other processes of assimilation. A family, however, is a set of “individual, loosely-connected micro-constructions” (p. 191), which may diverge rather than converge.

The present outline of the rise of the four “digressive” discourse markers has followed Mittwoch et al. (2002: 779) in regarding them as a set (presumably the authors did not include *by the by(e)* since it is so rare in PDE). From Mittwoch et al.’s perspective, they form a set because they are markers of informational status that are connective adjuncts. They “express the relation between the clause they introduce and what precedes” (p. 775). Quirk et al. (1985) treat *by the way*, *incidentally* and *by the by(e)* as conjuncts that express “transitional” and “discoursal” relations (p. 636) and that “serve to shift attention to another topic” (p. 640). Their focus is on relatively broad distinctions in “the semantics and grammar of adverbials”. Focusing on their development as metatextual DDMs, I have treated the four adverbials as a set on grounds of their metatextual function introducing a discourse-topic shift that is presented as somewhat incongruent with what precedes (except in the extended, interpersonal sense of *by the way*).

The investigation has shown that the four DDMs discussed are far from equal members of a set, as summarized in Table 2. *By the way* has predominated since around 1850 and the other adverbials have either been marginalized (*by the by(e)*) or remained on the margin (*incidentally*, *parenthetically*) in terms of frequency and range of use. From the perspective of pragmatics, *incidentally*, *parenthetically* and *by the by(e)*, are considerably less multifunctional than *by the way*. This might suggest a family. Nevertheless, there has been a degree of convergence over time. I suggested that *by the by(e)*, *incidentally*, and *parenthetically* may all have been analogized to *by the way*. All four appear immediately post-relativizer in parallel subjective uses:¹⁵

¹⁴ However, an anonymous reviewer points out that, since *by the by(e)* is favored in non-initial position, this is unlikely.

¹⁵ However, use of *parenthetically* in relative clauses is very sparse in COHA.

- (34) a. for the first supposed all bodies reducible at last into fire, air, water, and earth; and therefore held the quaternary of elements, [*which, by the way*, they could never yet sufficiently prove].
(1672 Sherley, *Philosophical essay* [EEBO-BYU])
- b. added four more articles as agreed upon, *amongst which, by the by*, there is no mention of the beaifick ['beatific'] vision, which i observe others also to omit.
(1672 More, *Brief reply* [EEBO-BYU])
- c. It did not predict, because no one could, the drought, *which, incidentally*, has not affected the black earth region where Russia grows its grain.
(1921 *Wall Street Journal* [COHA])
- d. I'll tell you what strains credulity is there were, as you know, next to the footprints *which, parenthetically*, and perhaps coincidentally, were also roughly the same size as O.J. Simpson's shoe size ...
(1995 *ABC_Nightline* [COCA])

By the by and *incidentally* (but not *parenthetically*) are attested preceded by *Oh* in COCA. This is possibly by analogy with *by the way*, which appears preceded by *Oh* from the 1930s on in both COHA and COCA (see (14a) above and (35a) below). In many cases of *Oh* + DDM, the content of what follows is contrary to expectations (Morris did not expect his mother to accept that he was gay (35a), *Byrd's dead* is an unexpected change of tone after social pleasantries (35b), saving a life is unexpected of someone who is treacherous (36c)):

- (35) a. From Spain, Morris wrote his mother a letter. I said, *Oh, by the way*, I'm gay," he remembers.
(1991 *Rolling Stone* [COCA])
- b. (to Penny) Nice meeting you, Penny. I've heard a lot about you. (to Barris, walking away) *Oh, by the by*, Byrd's dead.
(2002 *Confessions of a dangerous mind* [COCA])
- c. You had to see Zalasta's treachery for yourself. *Oh, incidentally*, she did save your life, you'll remember.
(Eddings, *The shining ones* [COCA])

Presumably, as adverbials referring to a literal road, *by the way* and *by the by(e)* may originally have been conceptualized as a subset of spatial expressions. Since both were used as metatextual adverbials in the metaphorical sense of ARGUMENT IS A JOURNEY, and *by the by(e)* may have been analogized to *by the way*, both were by hypothesis generalized over and conceptualized as members of a small schema of metatextual markers. But by 1900 or so this would no longer have been a stable network as *by the by(e)* was obsolescing. Meanwhile *incidentally* and *parenthetically*, both originating as metatextual adverbs and both indexing an aside, were presumably attracted to the schema and used in some of the ways characteristic of *by the way*, especially clause-initial use as a change of discourse-topic marker. I conclude that the four DDMs form a schema, albeit a fairly loose and changing one.

4.2. Did the sources restrict the outcome?

For many years, in the grammaticalization literature there has been the assumption that source meaning restricts the possibilities of later function. For example, Bybee et al. (1994: 9) developed the "source determination" hypothesis that:

The actual meaning of the construction¹⁶ that enters into grammaticization uniquely determines the path that grammaticization follows, and consequently, the resulting grammatical meanings.

Bybee et al.'s monograph is about grammaticalization, but the hypothesis has been extended to other domains. For example, referring to the development of the word-formation construction *V-ment* (e.g. *embodiment*) Hilpert (2013: 153) says that "the origins perpetuated much of the development".

In contrast, Kaltenböck et al. (2011) propose that syntactically independent markers, including discourse markers (p. 871), are derived by cooptation to a "thetical" grammar and that "the meaning of the coopted unit is shaped by its function in discourse" (p. 875). An overarching "discourse grammar" is posited (p. 850) and within it two domains. One is regarded as canonical sentence grammar. It is propositional and based on argument structure (p. 873). The other is a thetical grammar that accounts for structures that are "not licensed by the syntax of [their] anchor", typically have their own independent prosody (comma intonation or written commas, p. 855), and tend to be positionally variable (p. 857). The components in the situation of discourse that are relevant to theticals include "the source of information, attitudes of speakers, speaker–hearer interaction, the discourse setting, and world knowledge" (p. 878). Cooptation is considered to be a "cognitive operation whereby existing material is exploited for new functions" in a different domain of discourse organization from sentence grammar (p. 876).

The model is attractive in that it draws even greater attention than construction grammar to the large number of expression types that are often considered marginal at best and not to fit standard views of sentence grammar, especially syntax. But positing two domains is not parsimonious, especially as they interact (p. 863) and there may be "interference between the two domains" (872). The main distinction being drawn appears to be between highly literate and largely planned style (sentence grammar) and spoken interaction (thetical grammar). Furthermore, as Kaltenböck et al. (pp.

¹⁶ "Construction" is here meant in the sense of syntactic constituent, e.g. phrase.

870–872) acknowledge, there are different types of theticals. Some are instantaneous, created on the fly, and possibly not replicated, e.g.:

- (36) He called John – *he is one of his best friends* – to find out what had happened.
(Kaltenböck et al., 2011: 862; citing Kaltenböck, 2007: 29)

Others are “constructional” theticals. These are “prefabs”, or recurrent patterns, e.g. *Josh admitted*. Yet others are “formulaic”. These are usually short, procedural, and morphologically unanalyzable (p. 871). This is the type that includes discourse markers.

While it is true that discourse markers typically have their own independent prosody and tend to be positionally variable (p. 857), it is debatable whether they are or are not licensed by sentential, or more properly clausal, syntax. In recent years it has become fairly widely recognized that there are positions preceding and following clauses in English and many other languages, where expressions of this type are licensed. These have been characterized as “left periphery” and “right periphery”, which include pragmatic marker positions as well as topic and focus markers (Beeching and Detges, 2014), and, more neutrally, “initial field” and “final field” (Haselow, 2016).

It is widely recognized that elements that are licensed by these initial and final slots have a range of specific functions far beyond the “drastic widening of scope” (syntactic and semantic/pragmatic) that Kaltenböck et al. mention as among the meanings resulting from cooptation (p. 875). Reference is made to components of the situation of discourse, such as text organization, source of information, attitudes of speakers (p. 861). But logically, if the new function is shaped by discourse, without some mechanism for matching material from sentence grammar with such components, any expression could be coopted to fulfil any component; *after all, please, truly, well* could be coopted as sources of information, for example, but they are not. Kaltenböck et al.’s hypothesis does not explain the choice of a specific expression for a particular pragmatic function (see also Brinton, 2017: 37), nor the contexts which enabled the choice. As has been discussed in detail above, precursors of digressive discourse-topic shift marking had metatextual origins relevant to their functions as DDMs. It must be concluded that, as in the case of the *V-ment* examples cited at the beginning of this section, “the origins perpetuated much of the development” (Hilpert, 2013: 153).

5. Envoi

The focus in this paper has been on English. I have shown that *by the way* and *by the by(e)* originated in spatial adverbials. It is striking that, although the French DDMs *d’ailleurs* and *par ailleurs* likewise originate in spatial adverbials, the semantic space denoted is not ‘along the road’, as in English but rather ‘in a different location, elsewhere’ (see Fagard and Charolles, 2018). Furthermore, the extended, metaphorical uses of *d’ailleurs* and *par ailleurs* appear not to involve a journey, whether physical or textual.

These observations suggest that a cross-linguistic typological investigation of the kinds of sources and their conceptualization that enable the rise of digressive DDMs is called for. The range of sources appears to be quite large, even among the European languages, cf. the use of manner adverbs in English and of *por cierto* (epistemic ‘for certain’) in Spanish as a digressive topic shifting marker (Pons and Estellés, 2009). Such a typological study would greatly illuminate how textual progression and coherence are construed cognitively and culturally.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.pragma.2019.02.002>.

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