

# Elaboration and Explanation<sup>\*</sup>

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**Abstract.** In this paper we study two realisation patterns shared between elaboration and explanation relations: unmarked connection, i.e. juxtaposition of sentences without any explicit marker, and the German marker ‘*nämlich*’ (namely), which must have emerged as a marker of specification but has spread in the direction of explanation. We try to answer the question what is common to elaboration and explanation relations which licenses the use of same expressive patterns, and argue that elaboration and explanation are closely connected in the conceptual space of discourse relations.

## 1 Introduction

We use the term *elaboration* to refer to a group of discourse relations that connect utterances describing the same state of affairs: reformulation (restatement), specification (particularisation), generalisation, elaboration ‘proper’, summary, etc. *Explanation* in turn is a cover term for a group of relations where the second utterance gives “support” to the first one, including causal explanation, evidence, justification, motivation, etc. (Mann and Thompson, 1988; Asher and Lascarides, 2003; Danlos and Gaiffe, 2004).

The goal of this paper is to motivate the hypothesis that these two groups are closely connected in the semantic space of discourse relations. Semantic spaces, or maps (e.g. Haspelmath, 2003) have developed as a formal tool for capturing cross-linguistic synchronic and diachronic regularities in the polysemy patterns of grammatical markers. The main assumption of this approach is that there is a (universal) set of functions structured by a “closeness” relation. The more closely two functions are related in that space, the more likely are they to be subsumed under the same marker. In the course of semantic change, a marker

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will normally acquire a new function that is more closely related to one it already has, before it acquires a less closely related function.

It is perhaps not as obvious that markers of discourse relations form neat grammatical paradigms, as this is the case for more prototypical grammatical meanings such as tense, aspect, case, etc. However, discourse markers often undergo various degrees of grammaticalisation, from relatively weak (e.g. *thing is*) to strong (e.g. *and, but*). Semantic maps have been previously applied in the study of the space of contrast relations (Malchukov, 2004; Jasinskaja, 2010a); and in fact, even if they did not call it that way, a similar use of cross-linguistic comparison to induce a cross-linguistically valid set of semantic categories in the domain of discourse relations goes back at least to Knott and Sanders (1998).

One reason why elaboration and explanation have not figured prominently in this strand of research is probably that they are not so frequently expressed by markers. For example, according to the corpus study of Taboada (2006), in newspaper articles *elaboration* and *summary* are marked only about 10% and 4% of the time, respectively, cf. 90% and 67% marking for *concession* and *result*. So apparently, since there is no hard evolutionary pressure to signal these relations explicitly, the markers that do exist rarely undergo strong grammaticalisation (cf. *in particular, that is, namely*).<sup>4</sup> Second, the most well-known markers of elaboration and explanation tend to be distinct (e.g. *in particular* vs. *because*).<sup>5</sup>

In formal discourse semantics the close connection between elaboration and explanation was advocated by Danlos (2001), the basic idea being that both groups of relations involve event identity; however, in explanations the identity is established between one main event description and an implicit causal argument of another event description. The main limitation of this approach is the fact that it relies on the existence of (lexically triggered) causal arguments and does not extend easily to explanations that are not directly causal, such as evidence,

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<sup>4</sup> This applies especially to elaboration relations. Since explanations have a causal dimension, they tend to attract markers of causality, e.g. *because*, which in turn are often the product of strong grammaticalisation. It is also not surprising that among all the explanation relations it is especially causal explanations as in *Max fell, John pushed him* that are expressed most easily by markers like *because*. The use of causal markers is more restricted and in some languages entirely inappropriate with epistemic and speech act causal relations (Sweetser, 1990), i.e. evidential explanations, justifications and motivations in our terminology. These latter kinds of explanation seem to be altogether less frequently marked than pure non-volitional causal relations at the level of events in the world, cf. 8,82% marked among *justify* relations, 14,29% for *volitional cause*, vs. 62,16% marked for *non-volitional cause* in Taboada's (2006) study of task-oriented dialogues.

<sup>5</sup> Of course, there is one way in which elaboration and explanation are very well known to be similar. The two sets of discourse relations more or less exhaust the class of *subordinating* relations (Asher and Vieu, 2005), distinguished by their characteristic effect on the salience of discourse referents, as captured e.g. by the Right Frontier Constraint. This is another argument in support of the view developed in this paper, though our focus here will be on marking patterns—the classical type of argument of the semantic map approach.

justification, motivation. In this paper we therefore try an entirely different look on the matter. We study two expressive patterns shared between elaboration and explanation relations: unmarked connection, i.e. juxtaposition of sentences without any explicit marker (section 2), and the German marker *nämlich*, lit. ‘namely’, which must have emerged as a marker of specification but has spread in the direction of explanation (section 3). We try to answer the question what is common to unmarked elaboration and explanation relations, as well as to those marked by *nämlich*, and thus both formulate the conditions of appropriate use of both patterns, and explain how exactly and why elaboration and explanation relations are conceptually close.

## 2 Unmarked Connection

The fact that the sentences in elaboration and explanation relations can be connected without any marker, cf. (1) and (2), might not appear as a very strong argument for the close relatedness of elaboration and explanation in the conceptual space, as it has often been claimed that almost any discourse relation can be unmarked.

- (1) I met a great actress at the party.  
I met Vanessa Redgrave.
- (2) Max fell. John pushed him.

However, one should distinguish two kinds of unmarked connection. On the one hand, many additive conjunctions, especially in the languages of Europe, have the property that when they connect more than two conjuncts the marker need not be repeated, but can only appear before the last one (Haspelmath, 2007), as in (3):

- (3) a. John came into the room,  
b. he poured himself a cup of coffee,  
c. *and* took place in front of the TV.

Adding *and* before (3-b) would not change the fact that all three conjuncts are understood to be connected by *narration*. In contrast, adding *and* in (1) and (2) changes the interpretation dramatically. In (1) we get a *parallel* relation: the referents of *a great actress* and *Vanessa Redgrave* (probably not so great) are understood to be distinct. The discourse in (2) turns into a *narration*: the falling precedes the pushing (the phenomenon studied in detail by Carston, 1993; Blakemore and Carston, 1999; Txurruka, 2003).

Although it seems that *and* could also be removed from (3) without affecting the discourse relation, this creates an impression of incompleteness, one is tempted to put ‘...’ at the end of the discourse. There is no such effect in (1) or (2). Moreover, in speech the connection would then have to be marked by

intonation (typically rising or high “continuation” tone).<sup>6</sup> In other words, the connection between (3-a) and (3-b) is only “seemingly” unmarked. In contrast, the connection in (1) and (2) is unmarked “properly”: no later occurrence of *and* or ‘...’, no comma, or “comma intonation” is required. As it turns out, the “seemingly” unmarked connection is possible for most coordinating discourse relations, including *list*, *parallel*, *narration*, some varieties of *contrast*, while the proper unmarked connection is more or less restricted to relations of the elaboration and explanation group.<sup>7</sup>

The question that arises is what is common to elaboration and explanation relations at the conceptual level that delimits the appropriate use of properly unmarked connection. We propose that this common property has to do with the non-fulfilment of the communicative goal associated with the first utterance, and the repairing role of the second utterance in achieving that goal.

An informative communication act of content  $\phi$  is successful when the addressee believes, or at least *accepts*  $\phi$  to a degree sufficient for the purposes of the exchange (Stalnaker, 2002) and it is obvious to the speaker that he or she does so. A directive is successful when it becomes obvious to the speaker that the addressee has complied with the request or committed to comply at a later point. A question is successful when the speaker has got an answer from the addressee. In all three definitions, the condition that the result of the speech act is manifest to the speaker is essential and reflects the need for *grounding*, or updating the *common ground* of the communication participants to facilitate further communication. Our success conditions for different types of speech acts are perhaps stronger than what is usually assumed in the grounding literature (Clark and Schaefer, 1989; Traum, 1994). For informative acts, we follow Lascarides and Asher (2009) in assuming that  $\phi$  is grounded not only when it is mutually understood, but also when it is mutually *agreed*. For all three speech act types the decisive success criterion is that the speaker is satisfied and has no reason to repair and reproduce the speech act (or replace or supplement it with a different kind of speech act to bring about the originally intended result).

As is well known, communication can fail at various stages (cf. Clark’s, 1996, levels of action in communication). The kinds of failure we are most interested in here are lack of understanding (Clark’s level 3 failure) and disagreement (level 4 failure in Lascarides and Asher’s, 2009, interpretation of Clark). When the speaker encounters or anticipates some kind of communicative failure they will produce a repair. We propose that the primary function of (unmarked) elaborations and explanations is self-repair for encountered or anticipated misunderstanding or disagreement on the part of the addressee. Or put differently,

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<sup>6</sup> The same holds generally for a wide range of world’s languages outside Europe where coordination is expressed entirely by intonation and coordinating conjunctions like *and* are not available (see Haspelmath, 2007).

<sup>7</sup> See Jasinskaja (2007, 2010b) for an extensive argument.

elaborations and explanations are answers to explicit (actual) or implicit (anticipated) repair requests.<sup>8</sup>

Two of the more frequent reasons for understanding failure are problems of reference resolution (4) and lexical access (5). *Reformulation* is a way to repair for this kind of problem.

- (4) It's there.  
[Where is 'there'? / It's WHERE?]  
Behind the refrigerator.
- (5) This piece begins with an anacrusis,  
[What is 'anacrusis'?]  
an unaccented note which is not part of the first full bar.

Part of understanding an utterance is “pragmatic” understanding: seeing how the utterance relates to the previous context, in what way it is relevant, and what its implicit content is. Various problems at this level can be handled by relations of the elaboration group. For example, *generalisations* and *summaries* are called for when the hearer is otherwise unable to establish the connection between different parts of a text (cf. “forging links” by generalisations in Danlos and Gaiffe, 2004):

- (6) I don't think John is a very good boss.  
He let go Mary, Bill, and Sue.  
[So what? How does that relate to not being a good boss?]  
He let go his best software developers.

Some elaborations, e.g. the process-step elaboration in (7), can address problems of agreement: in (7) the hearer cannot comply or commit to complying with the speaker's request due to lack of necessary know-how. This relation type is classified as *enablement* by Mann and Thompson (1988).

- (7) Please make me a poached egg.  
[How do you make a poached egg?]  
You boil some water with a bit of vinegar,  
crack an egg into a bowl,  
slide the egg gently into the water,  
and cook for about 3 minutes.

Explanation relations address actual or potential disagreements. A piece of information can be made easier to believe by pointing to observable *evidence* (8), by reference to an authoritative source (*justification*), while *motivation* is needed if the hearer might refuse to fulfil a request or answer a question.

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<sup>8</sup> See Rodríguez and Schlangen (2004) for a taxonomy of repair requests based on Clark's (1996) levels of action in communication.

- (8) John must have been here recently.  
[Why do you think so?]  
There are his footprints.

Typical causal explanations like (2) deal with a very mild kind of anticipated disbelief: *surprising* events (people normally don't fall without reason) call for the mention of causes. Especially in narrative discourse, where the described events are expected to form a more or less continuous causal chain, events that do not follow naturally from the events related so far are felt to disrupt the continuity of the narrative. Causal explanations serve to repair such disruptions, supplying afterwards causes that the narrator should have mentioned before, but "forgot to".

It can be shown that what SDRT calls "the semantic consequences" of discourse relations, such as identity and part-whole relations between entities and events in elaborations and causal relations in explanations, can be derived as a semantic side effect of establishing in which of the above-mentioned ways the second utterance repairs the first. For example, the fact that the expressions *anacrusis* and *an unaccented note which is not part of the first full bar* in (5) refer to the same entity follows from the fact that the speaker, trying to deal with the understanding problem, has used the second to express the same meaning as was intended by the first. Not rarely speakers *do as if* they commit an error and repair themselves, entirely for the sake of these side effects. In (5), the speaker might be deliberately using an expression unknown to the hearer in order to introduce the term by means of a reformulation (cf. discussion in Blakemore, 1993). In *specifications* like (1) and many standard cases of process-step *elaboration* (9), the speaker seems to be deliberately producing a pragmatic "false start"—an utterance that is so underinformative that its relevance is difficult to assess, or an utterance that is out of place from the point of view of the canonical structure of the narrative (see Polanyi, 1978). Thus speaker claims the floor for his (possibly quite extended) turn at talk by provoking questions (of "pragmatic" understanding) in the hearer.

- (9) Something unusual happened to me today. [What happened?]  
[story follows]

In sum, repair (spontaneous or deliberate) for an actual or anticipated communicative failure is a necessary condition for the occurrence of properly unmarked connection. This lack of marking is inherited from speech repair in a more general and standard sense (Levelt, 1983; Levelt and Cutler, 1983), particularly from the *appropriateness* repair—a type of repair where the contribution of the reparandum need not be withdrawn, but only supplemented with additional information. The occurrence of properly unmarked connection can be seen as a natural sign (and sometimes a signal) that the speaker is still struggling to achieve the communicative goal of an earlier utterance.

In contrast, markers like *and* and *but* indicate that the speaker is satisfied with the way he or she has handled the previous goal and is moving on to the next

one on the agenda. It is important to emphasise that coordinating relations normally do not involve repair. A typical discourse goal structure for coordinating relations involves a set of uniform subgoals corresponding to each coordinated utterance. For instance, the contrastive pair in (10) can be intended to answer the question *Who likes what kinds of sports?* However, the first conjunct alone is not intended by the speaker to achieve that goal, it is only intended to answer the subquestion *What does John like?*, which it does in a perfectly satisfactory way.

(10) John likes football, and Bill likes basketball.

In contrast, in repairs the first utterance alone is intended to resolve the initial question and to fulfil the initial communicative goal, and only after the recognition that that did not work (or is not going to work) the new communicative goal associated with the second, repairing utterance is added to the agenda.<sup>9</sup> At least, this is the case for true, spontaneous self-repairs. In deliberate, rhetorical uses of self-repair, the speaker does not really expect the first utterance to do the job, but for the hearer he does as if he has that expectation.

In other words, elaboration and explanation relations are similar (and differ from coordination) in the sense that they can function as repairs for various kinds of communicative problems. The possibility of a repair construal is a necessary condition for the occurrence of properly unmarked connection. In this respect, unmarked connection can be seen as a cue to (if not a marker of) elaboration and explanation.

### 3 Nämlich

Another piece of evidence for the conceptual similarity between elaboration and explanation relations comes from the case of the German marker *nämlich*, lit. ‘namely’, which, among elaboration relations, can mark specification and elaboration ‘proper’ (process-step, set-member), as well as all kinds of explanation relations.

Traditionally, *nämlich* is assumed to mark either specification or explanation, depending on its syntactic position. There have been attempts to unify the dif-

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<sup>9</sup> The following example might look similar to an instance of coordination because of the presence of the additive marker *too*:

- (i) [Who (of our friends) went to the concert?] Bill went to the concert.  
[Only Bill?] Well, John and Mary went, too, but they left after the first part.

However, it is crucially different. Here the speaker really intends the first utterance as a full answer to the initial question under the assumption of a domain restriction that excludes less committed concert-goers John and Mary. The second utterance is a repair which consists in the revision of that domain restriction. Despite the fact that an additive marker *too* is used here, we expect examples of this kind to behave like subordinating relations. Notice that the second utterance can be conceived of as a side remark, and the subsequent discourse can go on about Bill.

ferent interpretations in the one or the other direction: causal vs. specificational (Breindl, 2008; Onea and Volodina, 2011). There is however evidence that a more accurate account is one on which the basic function of *nämlich* is specificational, while the explanation uses should be seen as the result of weakening from a full-fledged specification marker, to a marker of more abstract logical and inferential relations that typically accompany specification (Karagjosova, 2011a,b).

This approach gives justice to the historical development of *nämlich*. It is most likely that *nämlich* originates as a marker introducing the proper name of an object (or names of objects) presented descriptively in the previous context:<sup>10</sup>

- (11) Zwei Jungs aus dem DJ-Trio - *nämlich* DJ Ayres und Cosmo Baker - beweisen morgen an den Reglern, warum ihre Remixe so gefeiert werden.  
‘Two guys from the DJ-Trio - namely DJ Ayres and Cosmo Baker - [...]’

In the next step, *nämlich* generalises to a real specification marker. It can be used between descriptions of objects and situations of various kinds as long as the second description is more specific than the first, or a subsort of the first (Danlos and Gaiffe, 2004).

- (12) Behalten möchte auch Michael Douglas (65) etwas - *nämlich* sein Geld.  
‘Even Michael Douglas (65) wants to keep something - namely his money.’
- (13) Fred hat ein Kleidungsstück beschädigt. Er hat *nämlich* ein Hemd be-  
leckert.  
‘Fred damaged a garment. More specifically, he stained a shirt.’

Apart from the standard notions of hyponymy or subsort relations defined in the lexicon, specification can be based on what (Danlos and Gaiffe, 2004) call ‘extended hyponymy’, based on the mereological structure of the speakers’ naive ontology, as in (14), where carving grotesque faces counts as a kind of measure against ghosts.

- (14) Vielleicht spukt es im Schloß Mespelbrunn deshalb nicht, weil die In-  
gelheims entsprechende Vorkehrungen getroffen haben: In der Decke des  
Himmelbetts [...] sind *nämlich* Fratzen geschnitzt.  
‘Maybe there are no ghosts in the Mespelbrunn castle because the In-  
gelheims took respective measures: in the ceiling of the canopy bed they  
carved grotesque faces.’

Notice that in all these cases, the content of the first discourse unit follows from the content of the second, either logically, or contextually against the background of speaker’s and hearer’s shared assumptions. From the fact that Michael Douglas wants to keep his money, it follows that he wants to keep something. From the fact that Fred stained a shirt, it follows that he damaged a garment. And even in (14), under the assumption that the faces were carved with the intention of scaring away ghosts, this implies that measures were taken against ghosts. We conjecture that it is this property of specification relations that gives rise

<sup>10</sup> The Russian expression *po imeni*, lit. ‘by name’, is restricted to this literal use.

to a further generalisation of the function of *nämlich*, which is reduced to a presupposition that the content of the first discourse unit can be *inferred* from the second. This makes *nämlich* suitable for marking all kinds of explanation relations. E.g. in (15), from the fact that the inspector was faster than the thief and the shared assumption that the inspector's intention was to arrest the thief, it follows under normal circumstances that the inspector was able to achieve his goal, and the thief could not get away.

- (15) Der Dieb konnte nicht fliehen.  
Der Inspektor *nämlich* war schneller.  
'The thief couldn't get away.  
The inspector was faster.'

Historical and cross-linguistic evidence confirms this direction in the development of *nämlich*: according to the Grimm-dictionary (<http://www.dwb.uni-trier.de/>), no causal uses of the specificational mhd. *namelich* have been attested before the 18th century. Norwegian *nemlig*, as well as Dutch *namelijk* seem to have developed in the same way: they can mark both types of relations. In contrast, English *namely* and Russian/Bulgarian *a imenno* have remained pure specificational particles.

In sum, what is common to explanation and the subtypes of elaboration relations that can be marked by *nämlich*, is that the content of the first utterance follows from that of the second under normal circumstances and relevant contextual assumptions. This excludes the use of *nämlich* in generalisations, summaries, and most kinds of reformulations, but licenses *nämlich* in specifications and all types of explanations.

## 4 Conclusions

Discourse relations that represent varieties of elaboration and explanation are similar in more than one way. On the one hand, all kinds of elaboration and explanation can function as repairs for an anticipated communicative failure of the first utterance. On the other hand, explanation and specification share the property that the proposition of the first utterance can be inferred from that of the second (with contextual support). It remains to be found out if more fine-grained structure can be established within the functional space of elaboration and explanation relations. However, the shared marking patterns discovered so far and the historical development of *nämlich* present sufficient evidence for a close connection between elaboration and explanation in the conceptual space of discourse relations.

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