

## Topic shift and presuppositions: the case of the German *nämlich*.

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In this paper we present a unified analysis of *nämlich* ('namely', 'since') based on its information structural properties and derive its explanation function and its topic shifting effects described in the literature in terms of defeasible pragmatic inferences.

We distinguish three syntactic environments in which *nämlich* can occur: **(i)** at the beginning of an elliptic clause as in (1). In this case *nämlich* intuitively elaborates on the previous clause and specifies what kind of progress is being talked about. **(ii)** in the so called *Nacherstposition*, i.e. a position between the first constituent and the finite verb in V2 clauses in German (which is reserved for a very limited set of particles) as in (2). In this case *nämlich* can be associated with some explanatory function and in addition, a conventional topic shift effect can be shown: in (2) the reading in which 'he' is coreferent with Peter is out even in contexts in which his son is a doctor. Note, however, that for *nämlich* to appear in the *Nacherstposition* there is a constraint that the topical constituent bears a contrastive topic intonation (B-accent). **(iii)** at some later adverbial position in the clause as in (3). Again, an explanatory function is associated with *nämlich*, but a conventional topic shift effect is not available.

(1) *Es gibt nur einen Fortschritt: nämlich in der Liebe.*

There is only one Progress NÄMLICH in the love  
'There is only one progress, namely in love.'

(2) *Peter<sub>1</sub> geht nach Hause zu seinem Sohn<sub>2</sub>: er<sub>#1/2</sub> nämlich ist krank.*

Peter goes to home to his son his son NÄMLICH is sick  
'Peter goes home to his son, since his son is sick.'

(3) *Peter<sub>1</sub> geht nach Hause: er<sub>1</sub> ist nämlich hungrig.*

Peter goes to home he is NÄMLICH hungry  
'Peter goes home, since he is hungry.'

In the literature it has been generally assumed that **(i)** *nämlich* semantically encodes its explanation/causal function (cf Pasch et al. 2003), however it has never been shown how examples like (1) could actually be derived under such an assumption and **(ii)** *nämlich* functions as a topic shifter in the *Nacherstposition* because at this structural position connectives associate with the topical expression semantically (Breindl 2008). In contrast, we argue that the topic shifting effect is not systematic enough to necessitate a structural analysis since it does not occur in examples like (4), but rather seems to result from defeasible pragmatic inferences.

(4) *Peter ist der einzige Überlebende. Er nämlich hatte sich versteckt.*

Peter is the only survivor he NÄMLICH has himself hidden  
'Peter is the only survivor, because he was (the only one who was) hiding.'

We propose the following unified analysis for these different usages of *nämlich*: *nämlich* is an identification operator that operates not on the topic itself but on a presupposed property of the topic and the comment such that it identifies the presupposed property of the topic by the comment. The presupposed property of the topic is conventionally constrained to relevant properties that are under discussion or at issue, i.e. the hearer must find a property of the topic which is relevant in the discussion but for which it is an open and important question, what it is more precisely. Such properties can be accommodated, most naturally as properties of the topic that maximize its discourse relevance.

$\|nämlich\| = \lambda t. \lambda C. \partial[\exists P. P(t) \ \& \ P = ?] \ \& \ P = C$

In order to see how this actually works consider example (3). The topic is Peter and the comment is the property of being hungry. *nämlich* presupposes that Peter has some property under discussion that maximizes its discourse relevance. Since this property is under discussion we cannot identify it

as the property of going home in terms of binding since we already know that property. Hence, we accommodate this property as a property that Peter has and is maximally relevant. Such a property is a property  $Q$  that Peter has such that  $Q(\text{Peter}) > p$ , where  $p$  is the proposition the sentence attaches to in terms of SDRT (Asher & Lascarides 2003) and  $>$  is a defeasible conditional. Such a property is obviously relevant and easy to accommodate in such a case. The fact that this property is under discussion can also be accommodated if it is assumed that the clause attaches to the prior discourse segment establishing the discourse relation of *explanation* (this would be inferred by default in SDRT without *nämlich* as well). Finally, this property is identified by “being hungry” and hence the regularity that Peter goes home whenever he is hungry is derived, which is exactly the right inference.

This also allows us to derive the correct interpretation for (1) which intuitively might have seemed unrelated. Here, the topic is not overtly available, hence it will be treated as a presupposition  $\partial[\exists t.\exists P.P(t)\&P=?]$ . The previous sentence easily delivers such an element, i.e. the *progress* since the intonation and the choice of “only” clearly signal that there is an open question about what kind of progress we are speaking about. The reason for this is that *only* associates with the current question (Beaver & Clark 2008) and delivers a maximal answer, however this answer is kept so vague that further specification is naturally awaited. Hence, the presupposed property is bound by the open question  $[x:\text{progress}(x),\text{kind\_of}(x)=?]$ . This delivers the correct interpretation that the progress is the progress in love:  $\text{kind\_of}(x)=\text{in\_love}$ .

Finally, in (2) we could apply the same analysis as in (3), however, the topic ('he') is contrastively stressed. Hence, there is a discourse issue associated with the choice of topic. This issue binds the presupposition of *nämlich*, such that *nämlich* yields the assertion that the presupposed property of the topical element is precisely identified as being the topic of the utterance, which is most naturally satisfied if there is a topic-shift. For if the topic would not change, it would not seem natural to signal that there was a question about the choice of topic (one could restate this in terms of Büring 2005: Who am I asking about?). But this – of course – is not a matter of necessity, and indeed e.g. in cases in which the contrastive topic is interpreted as an exhaustiveness operator (van Rooij 2008), the topic shift is neutralized, as in (4). The effect also fails to arise in cases in which *nämlich* does not immediately follow the topic, since in these cases *nämlich* is integrated into the topic-comment structure of the clause and thereby is interpreted after the topic-choice issue is already settled.

Hence we argue for a unified treatment of *nämlich* in all of these different usage patterns and propose a presuppositional analysis that links a topic comment structure. A corpus analysis of 200 example sentences from the COSMAS II corpus confirms our predictions, and reveals additional evidence through the fact that *nämlich* in patterns like (1) generally specifies further properties of indefinites introduced in the former sentence while in patterns like (2) and (3) it specifies properties of definite, mostly pronominal, topics. Both of these findings are predicted by our analysis, since we would not expect presupposed properties of indefinites nor to specify relevant properties of discourse known items.

## References

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