

**On the grammaticalization of not-at-issue content.
The case of mirative *um-zu*-clauses in German**

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Introduction In this talk, I examine the conditions of emergence of mirative *um-zu*-clauses in the history of German. Synchronically, I provide evidence showing that two distinct *um* complementizers exist in Present-day German, and that they introduce two distinct subordinate dependency relationships with regard to the matrix clause, although both clause types do not differ on the surface. Diachronically, I develop a step-by-step account showing how mirative clauses emerged in the history of German, and how their not-issue-content was incorporated into the lexical meaning of *um*. In general, this talk contributes to a deeper understanding of mirativity in subordinate environments.

Phenomenon In Present-day German, *um* can introduce two types of adverbial clauses: i) rationale clauses, and ii) mirative clauses.

- (1) Tom trainiert jeden Tag, um Weltmeister zu werden.
Tom train.3SG every day comp world:champion to become.INF
'Tom is training every day to become world champion.'
- (2) Tom trainiert jeden Tag, um dann doch einen Herzinfarkt zu bekommen.
Tom train.3SG every day COMP then DISCP a heart:disease to get.INFV
'Tom is training every day, only to contract a heart disease anyway.'

Whereas in (1) *um* introduces a rationale clause expressing a goal, in (2) *um* heads a mirative clause encoding speaker's exceeded expectations. In (1), the event expressed in the matrix clause is performed with the intention of bringing about another event. No such intentionality occurs in (2). Instead, it expresses a sequence of two events, whereby the event expressed in the subordinate clause is presented as surprising/unexpected to the hearer. As for rationale clauses, there is no necessity for the desired result to come about, as not every intention is successfully realized by action. Mirative clauses, on the other hand, are factive, as it follows from (2) that Tom contracted a heart disease.

I discuss semantic and syntactic arguments showing that although (1) and (2) differ, they can be analyzed either as central or as peripheral adverbial clauses in the typology of adverbial clauses developed by Haegeman (2012) and Frey (2016), contrary to what Pauly (2013, 2014) claims. Main evidence comes from: i) movement to the left periphery of the matrix clause, ii) variable binding, iii) sensitivity to material (e.g. negation) occurring in the matrix clause, iv) co-occurrence with other adverbial clause types in the *Nachfeld* position, and v) not-at-issue meaning. The differences between (1) and (2), in turn, are to be traced back to v) of *um* and its further development.

Based on Salanova & Carol (2017), I assume *um* in (2) to be a mirative complementizer (where “•” separates the at-issue and not-at-issue content):

- (3) Given a set of alternatives *C* to the at-issue proposition *p*,
[[*um*]] = $\lambda p.p \bullet \exists p' \in C$ such that *p'* is better than *p* with respect to the speaker's expectations

Cases like in (2) have not attracted much attention in the diachronic literature. The main aim of this paper is to fill this gap.

Reanalysis Based on the diachronic findings reported in Jędrzejowski (2022), I take mirative clauses to have emerged out of rationale clauses, as the latter begin occurring in Early New High German (1350–1650), whereas first instances of the former are attested in New High German (1650–1900).

Step 1 Our departure point is the rationale clause in (1). Structurally, all linguistic material is given. *Um* is used as a complementizer and it takes a TP including a *zu*-infinitive as its complement.

Step 2 By virtue of being irrealis (= expressing a hypothetical result state), rationale *um-zu*-clauses trigger an implicature. As the proposition embedded under *um* is future-oriented and not part of the real world, the speaker triggers a set of alternatives that can also specify the conditions under which the matrix clause is true. Applying this to (1) means that we can imagine alternative propositions. One of the possibilities could be, for example, that Tom is training every day because he wants to stay fit. The number of such alternative propositions can be extended in an easy way (where *C* refers to the set of alternatives and *P* to a single conceivable proposition):

- (4) $C = \{P_1 = \textit{Tom is world champion}, P_2 = \textit{Tom is fit}, P_3 = \textit{Tom is healthy}, P_x = \dots\}$

The implicature is not-at-issue as it cannot be questioned, nor can it be assented or dissented with. The role of *um* is to take two propositions as arguments and relate them. This relation is defined as RATIONALE implying a goal. This means that both arguments must be linked via the RATIONALE relation. When *um* relates both arguments, it also triggers a set of expectations with respect to the second argument. If one of the alternative propositions listed in (4) can meet the RATIONALE relation, then it is assumed to belong to the set of expectations, and to be conceivable as a second argument of *um*. For example, we take P_1 from (4) and compare it to P_y equal to the proposition that Tom contracts a heart disease. It is quite obvious that P_y does not belong to the set of expectations because it does not meet the RATIONALE relation requirement. Nobody wants to contract a heart disease. Accordingly, the set of alternative propositions and expectations is only compatible with those that meet the RATIONALE relation condition.

Step 3 Against this background, we now need a structure that is ambiguous between a rationale interpretation and a mirative interpretation. Leys (1988) mentions one of such cases, (5). They also occur in New High German (1650–1900).

- (5) Sie zog nach Amerika, um dort sehr schnell zu heiraten.
 she move.3SG.PST to America COMP there very fast to get:married.INFV
 ‘She moved to the United States to get married very quickly / only to get married very quickly anyway.’

The ambiguity arises when the speaker considers the asserted proposition to be true. If this is not the case, only a pure rationale interpretation is possible. If, on the other hand, the speaker takes p to be true, then a mirative interpretation is the only option. In (5), mirativity follows from the fact that someone got married. Yet, how is it possible for a mirative clause to be factive when it is claimed to have developed out of a content rationale clause expressing future-oriented goals? The answer is tightly linked to the set of expectations mentioned in Step 2. If the speaker knows that the proposition p (e.g. getting married in (5)) is true at the speech time, then she or he contrasts it with what she or he expected previously in terms of the RATIONALE relation. By comparing them, it turns out that the proposition being true in the real world does not belong to the set of speaker’s expectations in terms of the RATIONALE relation. In other words, unexpectedness is relative to the speaker’s past expectations (see also Cruschina & Bianchi 2021 for similar observations on a mirative verbal periphrasis in Sicilian involving the motion verb *go*). A clash arises between what speaker’s belief used to be in the past and what the assertion expresses. This clash, as I argue, is attributed to what I refer to as a mirative implicature:

- (6) Mirative implicature triggered by *um*:
 There is at least one alternative proposition which is more likely than the asserted proposition with respect to a contextually given set of propositions fulfilling the RATIONALE relation.

I take the mirative implicature to trigger a reanalysis of *um*.

Step 4 The mirative implicature in (6) is syntacticized to the extent that the rationale complementizer *um* grammaticalizes into a mirative complementizer. No ambiguity is available in (2). The speaker takes the embedded proposition to be true. It does not meet her or his previous expectations leading to a clash. This clash is often highlighted by the discourse particle *doch*, usually signaling that the truth value of p should not be questioned, but some conflicting information has been added to the discourse (cf. Grosz 2014). In (2), *doch* signals that the proposition that Tom contracted a heart disease should not be questioned and that this proposition contrasts with what the speaker had expected. Correspondingly, the *um-zu*-clause does not express a goal, but a clash between speaker’s past expectations and the asserted proposition, triggering a surprise effect. The mirative clause conveys an evaluation that the speaker becomes immediately committed to, and its main aim is to foreground a surprising event in the past. This meaning of *um* is not-at-issue. The speaker knows that the asserted proposition is true, meaning it cannot appear unexpected to her him, but she or he presents it as unexpected to the hearer to express her or his clash between the set of the expectations and what is asserted.

Conclusion As it turns out, examining of the complementizer *um* provides new insights into how mirative complementizers work, emerge and develop.

References

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