

# German final clauses and attitude verbs<sup>1</sup>

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**Abstract.** This paper explores the semantics of German final clauses introduced by *um* and *damit* against the background of their combinatorial potential with attitude verbs. While final clauses are usually seen as expressing the motivation behind some action, the frequent modification of preferential attitudes like *hope* or *want* presents a puzzle. This paper discusses two common paraphrases as a basis for a semantic analysis of final clauses. The attitude data turn out to be challenging for both of them. The paper proposes a tentative solution for the problem by assuming that intentional action implies the same kind of attitude holder that is evoked by preferential attitudes.

**Keywords:** final clauses, attitudes, cause, modality

## 1. Introduction

The subordinate clauses introduced by *damit* (finite) or *um* (non-finite) express, in their most common use, a future-directed desire that is motivationally involved in the bringing about of some matrix eventuality. This is called a ‘final’ meaning and can in most cases be translated to English as an *in order*-clause.<sup>2</sup> The most stereotypical use of the sequence [*p* UM/DAMIT *q*] in its final meaning involves an agentive event in *p* and the agent’s motivation for this event expressed by UM/DAMIT *q* (1).<sup>3</sup>

- (1) a. Susi machte die Musik lauter, um ihre Nachbarn zu ärgern.  
Susi made the music louder UM her neighbours to annoy  
‘Susi turned up the music in order to annoy her neighbours.’  
b. Susi machte die Musik lauter, damit sich ihre Nachbarn ärgern.  
Susi made the music louder DAMIT themselves her neighbours get.angry  
‘Susi turned up the music in order that her neighbours get angry.’

One can deviate from this schema in different ways. First, a stative eventuality is admitted as long as we can consider that state a (volitional) consequence of some other event (2a)–(2b).

- (2) a. Das Bild hängt im Foyer, um zu sehen, wie es den Besuchern gefällt.  
the picture hangs in.the foyer UM to see how it the visitors pleases  
‘The picture is in the foyer in order to see how the visitors like it.’  
b. Die Kapsel hat eine weiße Farbe, um besser die Sonne zu reflektieren.  
the capsule has a white color UM better the sun to reflect  
‘The capsule is white in order to better reflect the sun.’

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<sup>2</sup>There are some differences, which I will not go into here. In particular, the English split into Rationale Clause and Purpose Clause is not mirrored in German.

<sup>3</sup>I treat *um* and *damit* as expressing the same meaning. I will not always give examples for both items.

Second, the entity whose goal or motivation is expressed in UM/DAMIT  $q$  (henceforth: the attitude holder of the final clause) does not need to be a bearer of a thematic role assigned by the matrix eventuality (as seen, e.g. in (2b)). Instead, the attitude holder is identified with whoever was responsible for the bringing about of the matrix eventuality (the RESP-holder in the sense of Farkas (1988)). For agentive events, this is prototypically the agent of said event, but this tendency can be overridden in an appropriate context.

Third, leaving the realm of a person's intentions, final clauses are used to express more abstract motivations, namely those that come into play in 'natural design' or evolutionary tendencies. The 'attitude holder' in these cases is to be equated with the natural forces that 'arranged for' the state of affairs expressed by the matrix proposition. Depending on the interpretation, this can be an object itself with some sort of inherent function or telos (the 'agent') (3a) or the force (God, evolution. . . ) we identify as responsible (the 'RESP-holder') (3b).

- (3) a. Das Herz pumpt das Blut in den Körperkreislauf, um Organe mit Sauerstoff zu versorgen.  
the heart pumps the blood in the body circulation UM organs with oxygen  
to provide  
'The heart pumps blood in the circulation in order to provide organs with oxygen.'
- b. Flamingos sind pink, um das andere Geschlecht anzuziehen.  
flamingos are pink UM the other sex to.attract  
'Flamingos are pink in order to attract the opposite sex.'

Informally, we can summarize the meaning for the sequence [ $p$  UM/DAMIT  $q$ ] as in (4).

- (4) The state of affairs expressed by  $p$  holds AND the responsible party's motivation behind the bringing about of  $p$  is expressed in  $q$ .

In section 2, I will introduce two common paraphrases for the meaning of final clauses. In section 3, I will present new data on the interaction of attitudes with final clauses and will explore how analyses based on the two different paraphrases could deal with it. Section 4 concludes.

## 2. Common paraphrases for the meaning of final clauses

I have used the term 'motivation' to express the felt impact of final clauses. Now, we have to understand what a motivation is. Intuitively, a motivation for, say,  $p$  is some sort of pro-attitude that plays a causal role in the bringing about of  $p$ . Accordingly, the most common paraphrase in the literature when it comes to final clauses is what I call the causal paraphrase (5).<sup>4</sup>

- (5) **Causal paraphrase** for [ $p$  UM/DAMIT  $q$ ]: (i)  $p$  and (ii)  $q$  is wanted and (iii)  $p$  because  $q$  is wanted.

<sup>4</sup>On common paraphrases, including the two that I am discussing here, see the overview articles by Sæbø (1991, 2011).

The second paraphrase that I want to discuss places the emphasis on a felt connection between  $p$  and  $q$ , namely that  $p$  is supposed to enable  $q$ . Accordingly, I will call this paraphrase the enabling paraphrase (6).

- (6) **Enabling paraphrase** for [ $p$  UM/DAMIT  $q$ ]: (i)  $p$  and (ii)  $q$  is wanted and (iii)  $p$  supposedly enables  $q$ .

Both paraphrases include a statement of a pro-attitude towards  $q$  (ii). This is what I will refer to in this paper as the final clause attitude. The paraphrases come apart in the third part. (5) puts the causal impact of a certain desire at center stage, while an assumption about how that desire could develop such a power has to be in the background: the agent probably believes that, if the matrix eventuality were to happen, this would lead to or enable the achievement of said desire. (6), on the other hand, puts the focus on the enabling part, and leaves the causal part to a plausible inference.<sup>5</sup>

Unfortunately, not much effort has gone into elaborating on these intuitive paraphrases. In the next two subsections, I will point out some reasons why we would like to have an account of final clauses in terms of one paraphrase or the other and some difficulties that come with either choice.

## 2.1. The causal paraphrase

- (5) **Causal paraphrase** for [ $p$  UM/DAMIT  $q$ ]: (i)  $p$  and (ii)  $q$  is wanted and (iii)  $p$  because  $q$  is wanted.

A plausibility argument for an analysis in terms of *because* (5) comes from the fact that final clauses can be used to answer *why*-questions as in the English example (7).

- (7) A: Why did you turn up the music?  
B: To annoy the neighbours.

The first thing that has to be noted about the very informal (5) is that the range of uses for final clauses is a subset of uses of the seemingly equivalent *because*-clause plus desire report. There are at least two qualifications to (5). The first qualification doesn't concern the *because*-part, but the *want*-part. (8a) does not translate to (8b) in a context, in which drinking water is a means to combat the desire for sweet things.<sup>6</sup>

- (8) a. Susi trinkt ein Glas Wasser, weil sie schon wieder etwas Süßes essen will.  
'Susi is drinking a glass of water because she wants to eat something sweet again.'

<sup>5</sup>Of course, the combination of the two is also possible. But besides combining the strengths, this will also combine the weaknesses of both approaches, which should become clearer in section 3. A third informal paraphrase equates final clauses with the prepositional phrase *with the intention that*. . . I will briefly comment on that in section 3.

<sup>6</sup>(8b) could only be understood as "cleansing the palate" in order to prepare the consumption of yet another sweet meal.

- b. # Susi trinkt ein Glas Wasser, um schon wieder etwas Süßes zu essen.  
int.: ‘Susi is drinking a glass of water in order to eat something sweet again.’

The attitude that is expressed by *want* in (5) has to be of a specific type: it has to inform the actions of its bearer. This comes close to what Condoravdi and Lauer (2012, 2016) term an effective preference (EP). This usage of *want* can be contrasted with a mere desire reading, which is at play in (8a). Mere desires can be inconsistent, one can entertain various desires knowing that one cannot fulfill all of them at the same time. EPs, on the other hand, have to be consistent. Their role as action guiding preferences is not compatible with there being another preference (say, not wanting to gain weight) that prevents their realization, as is the case in (8a). One might think that *qua* motivational effect the attitude at play has to be (at least something like) an EP, which is true. But this does not come out in the paraphrase (5), as a mere desire can figure as a cause in *because*-clauses (8a).

The second qualification concerns a fact that has already been mentioned in section 1, the possibility of active responsibility for the matrix eventuality. *Because*-clauses are fine when used to illustrate the involuntary consequence of an action that was motivated by the *want*-attitude (9a). Here, the attitude expressed by *want* seems to be of the EP kind, as it did inform the action choice of the attitude holder. A final clause cannot be used in the same circumstances (9b).

- (9) a. Susi hat ihr Smartphone in den See fallen lassen, weil sie auf dem schwankenden Boot ein Selfie machen wollte.  
‘Susi dropped her phone in the lake because she wanted to make a selfie on the bobbing boat.’  
b. # Susi hat ihr Smartphone in den See fallen lassen, um auf dem schwankenden Boot ein Selfie zu machen.  
int.: ‘Susi dropped her phone in the lake in order to make a selfie on the bobbing boat.’

As has been pointed out, the attitude holder of the final clause is identified with the entity responsible for the matrix eventuality. While Susi is responsible in the colloquial sense, she is not in the more technical sense of RESP. For someone to be the RESP-holder of an eventuality<sup>7</sup>, they have to voluntarily bring this state about. RESP-hood for some eventuality thus presupposes a pro-attitude towards said eventuality.<sup>8</sup> That this is true is commonplace. But it does not follow from the paraphrase in (5) and has to be stipulated or motivated independently.<sup>9</sup> We arrive at the updated properties in (10).

<sup>7</sup>Or a proposition. This is discussed by Grano (2017), who uses the notion of RESP to characterize intention reports.

<sup>8</sup>RESP holds true of an individual *i* and a situation *s* “just in case *s* is the result of some act performed by *i* with the intention of bringing *s* about” (Farkas, 1988: 36).

<sup>9</sup>A third qualification, for completeness’ sake. Causal clauses allow an epistemic reading, according to which the belief of the speaker is explained by the fact stated in the *because*-clause. This reading is lacking for final clauses.

(10) **Causal paraphrase\*** for [*p* UM/DAMIT *q*]:

- a. *p*
- b. *p* was intended (there is some *x*, such that  $\text{RESP}(x,p)$ )
- c. *q* is an effective preference of  $\iota x(\text{RESP}(x,p))$
- d. *p* (or  $\text{RESP}(x,p)$ ) because (10c)

Ideally, we could derive one (or more) of the properties instead of stipulating them. For example, the fact that what is caused has to have been intended (10b) might be explainable by a more general what-causes-what theory in the sense of Copley (2018). But see section 3.3 for complications.

## 2.2. The enabling paraphrase

- (6) **Enabling paraphrase** for [*p* UM/DAMIT *q*]: (i) *p* and (ii) *q* is wanted and (iii) *p* supposedly enables *q*.

The problems with (8b) and (9b), discussed in the last section occurred because of the broader usage possibilities of *because* and *want*. With a paraphrase like (6), those problems do not occur: Since drinking water does (in the context) not lead to eating something sweet, and dropping your phone doesn't help with making a selfie, we can already rule out those cases by the formulation in (6).

There is a possible second advantage that comes with the third part of (6). By nature of causation, the causal paraphrase states or implies a temporal precedence relation between the final clause attitude and the matrix event in the actual world. In order for *p* to occur, the desire for *q* must have been there. The enabling paraphrase on the other hand states that in possible future worlds, there is a precedence relation between the matrix event and *q*. The agent pursues *p* and, in the best case, *q* will follow. Taking into account other – non-final – uses of *um*- and *damit*-clauses, it is the focus on this part of the meaning of final clauses that makes the paraphrase attractive.

Those other uses include a mere circumstantial telic use (11a), a (pre-)conditional use with modals (11b), and a use as nominal modifiers (11c).

- (11) a. Er gewann viel Geld, (nur) um alles wieder zu verlieren.  
'He won a lot of money (only) to lose everything again.'
- b. Etwas muss vier rechte Winkel haben, um ein Quadrat sein zu können.  
'Something has to have four right angles to be a square.'
- c. Ein Buch, um Briefe zu beschweren  
'A book to use as paperweight'

These uses have been discussed as related but different from the prototypical final uses that involve an intention and the motivation of some action. A possible similarity might lie in the fact that the modifiee precedes the proposition embedded in the *um/damit*-clause temporally and/or conceptually. A relation that is echoed in the enabling paraphrase for final clauses

(which on top of that includes attitude aspects that seem to be lacking in (11a)–(11c)). While I cannot present a unified account of the many faces of *um/damit* (which would also go beyond the scope of this paper), it would be preferable if there was one. And as I see it, the causal paraphrase makes itself appear quite idiosyncratic when faced with the uses in (11), none of which comes with the feeling of causation, and especially not of causing the matrix *p*.

### 3. Final clauses and attitudes

#### 3.1. Preferential attitudes

In this section, I will look at instances of the sequence [*p* UM/DAMIT *q*] where *p* is of the form ATTITUDE(*r*). Let me start with the observation that final clauses cannot be felicitously used as modifiers of matrix eventualities that amount to the expression of an epistemic attitude, like belief or knowledge (12).

- (12) a. # Susi glaubt, dass die Erde eine Kugel ist, damit sie ernstgenommen wird.  
int.: ‘Susi believes that the Earth is a sphere in order to be taken seriously.’  
b. # Susi weiß, dass die Erde eine Kugel ist, um ernstgenommen zu werden.  
int.: ‘Susi knows that the Earth is a sphere in order to be taken seriously.’

Given what we know about final clauses, this comes as no surprise. Knowledge or belief are usually not states that we intentionally acquire or that are the result state of some intentional action. Furthermore, the belief that *r* is usually not assumed to lead to the fulfillment of some desire. It doesn’t make sense to say that Susi believes that the Earth is a sphere *with the intention* of being taken seriously by her peers.

But final clauses do regularly occur with other attitudes, in particular the pro-attitudes of hoping, wishing and wanting (13).<sup>10</sup>

- (13) a. Peter hofft, dass Susi zu Besuch kommt, damit er sie etwas fragen kann.  
Peter hopes that Susi to visit comes DAMIT he her something ask can  
‘Peter hopes that Susi will visit him in order/so that he can ask her something.’  
b. Peter wünscht sich, dass Susi zu Besuch kommt, damit er sie etwas fragen kann.  
Peter wishes himself that Susi to visit comes DAMIT he her something ask can  
‘Peter wishes for Susi to visit him in order/so that he can ask her something.’  
c. Peter will, dass Susi zu Besuch kommt, damit er sie etwas fragen kann.  
Peter wants that Susi to visit comes DAMIT he her something ask can  
‘Peter wants for Susi to visit him in order/so that he can ask her something.’

Now, it does also not make sense to say that Peter hopes, wishes or wants that Susi comes to visit him *with the intention* that he can ask her something. It feels like, Peter didn’t *do* anything that would license such an action related intention. Yet, the final clause is fine.

<sup>10</sup>In the following, I will mainly focus on examples with *hoffen* ‘hope’.

The question is: what is it about pro-attitudes like *hope* that sets them apart from other attitudes? These data might tell us something about the correct analysis for final clauses as well as about the properties of certain types of attitudes. In the following sections, I will discuss consequences that arise from the possibility of examples like those in (13), i.e. cases in which the sequence  $[p \text{ UM/DAMIT } q]$  is instantiated by  $[\text{ATTITUDE}(r) \text{ UM/DAMIT } q]$ . It will turn out that an enabling paraphrase analysis could only be salvaged if the final clause appears embedded in the scope of the attitude verb. I will briefly motivate this idea in 3.2, but will ultimately reject it on the basis of syntactic data that speak against embedding. A causal paraphrase analysis seems better equipped to explain the attitude data from the start, but it also faces problems that are due to the non-availability of final clauses with other attitudes. This is discussed in section 3.3.

### 3.2. The enabling paraphrase analysis

#### 3.2.1. A requirement for embedding

- (6) **Enabling paraphrase** for  $[p \text{ UM/DAMIT } q]$ : (i)  $p$  and (ii)  $q$  is wanted and (iii)  $p$  supposedly enables  $q$ .

Prima facie, data involving *hope* constitute a problem for the enabling paraphrase. Resting an analysis on such a paraphrase relies on the supposed connection between  $p$  and  $q$ , namely that  $p$  is a causal factor on the way of achieving  $q$ . For the case of  $p = \text{ATT}(r)$ , as in (14), we can immediately see that this doesn't seem like a feasible strategy: The mere fact that Peter hopes for Susi visiting can never be assumed to be an enabling factor of asking her something. Translating (6) to the current case we arrive at (15).

- (14) Peter hofft, dass Susi zu Besuch kommt, damit er sie etwas fragen kann.  
Peter hopes that Susi to visit comes DAMIT he her something ask can  
'Peter hopes that Susi will visit him in order/so that he can ask her something.'
- (15) **Enabling paraphrase** for  $[\text{HOPE}(r) \text{ UM/DAMIT } q]$ : (i)  $\text{HOPE}(r)$  and (ii)  $q$  is wanted and (iii)  $\text{HOPE}(r)$  supposedly enables  $q$ .

Is there any way to rescue some form of enabling analysis? An idea might stem from the fact that  $q$  is never a consequence of  $\text{HOPE}(r)$ , but it is a (possible) consequence of  $r$ , the complement of *hope*: Peter can ask Susi something in case this is made possible by her visiting him. So, maybe the final clause does not have scope over the attitude in the first place. That is, we are not talking about structures like (16a), but about structures like (16b).<sup>11</sup>

<sup>11</sup>This possibility is briefly mentioned by Brandt and Rosengren (1983). They state a different reading for *damit*-clauses that are *embedded under* operators of 'obligation, permission, wish' like *hope* or the imperative operator. In these environments, the final clause is supposed to be embedded in the complement, but doesn't receive its usual meaning according to which the agent is acting with the intention  $q$ . Instead, the reading can be paraphrased as a consecutive clause, and according to them, all of those kinds of examples have to be translated as consecutive clauses in Swedish. They don't give an explanation for this behaviour.

- (16) a. HOPE(*r*) UM/DAMIT *q*  
 b. HOPE(*r* UM/DAMIT *q*)

Assuming for the moment that cases like (14) are in fact embedded under *hope*, we are still faced with a problem: The final clauses in question do not receive their usual meaning *with the intention...*, which they otherwise can receive if they are embedded in the complement of an attitude. This is easier to see in the following comparison between (17) and (18).<sup>12</sup>

- (17) “Er hofft, dass Arminius das Römerlager angreift, um Tuscelda zu befreien. So he hopes that Arminius the Romans.camp attacks UM Tuscelda to free. so kann er, Colonna, Zeit gewinnen.”  
 can he Colonna time win  
 ‘He hopes that Arminius will attack the Romans’ camp to free Tuscelda. That way, he, Colonna, could gain time.’
- (18) Ich hoffe, dass morgen die Sonne scheint, damit wir draußen sitzen können.  
 I hope that tomorrow the sun shines DAMIT we outside sit can  
 ‘I hope that the sun will be shining tomorrow in order/so that we can sit outside.’

(17) can be true in a context in which the attitude holder of *hope*, Colonna, does not want Tuscelda to be freed at all. All he hopes for is that Arminius, the assumed agent, will act on this intention. Colonna is the attitude holder of *hope*, and Arminius is the attitude holder of the final clause attitude, and these two attitudes are independent. In (18), on the other hand, the final clause cannot pick out the intention of whoever was responsible for the complement clause’s event (the sun shining), witnessed by the infelicitousness of (19). Clearly, the final clause attitude is ascribed to the speaker, the attitude holder of *hope*: they want to sit outside.

- (19) #Morgen scheint die Sonne, damit wir draußen sitzen können.  
 tomorrow shines the sun DAMIT we outside sit can  
 ‘The sun will shine tomorrow in order for us to sit outside.’

And this is also true for the other examples that we have looked at so far. (14) can be true without Susi having any intention of being asked by Peter. Thus, we would need an account that could explain why the final clause embedded under *hope* can combine with sentences that it otherwise would not be able to combine with ((18) vs. (19)), while the final clause attitude is shifted to the attitude holder of *hope*. For reasons of space, I will not explore such an analysis here.<sup>13</sup> Furthermore, there is good reason to doubt that the final clause is embedded. This will be shown in the next section.

<sup>12</sup>All naturally occurring examples were found in the DeReKo (IDS, 2020) and are marked here with quotation marks.

<sup>13</sup>I have presented such an analysis in the corresponding talk (osf.io/b6f8g). The main idea would be that the ordering source of the final clause attitude is flexible in that it can target either the intentions involved in bringing about an event or the ordering introduced by a higher attitude, while the modal base always projects future continuations of the modified event/proposition, i.e. the complement clause of the attitude in this case.



### 3.2.2. Evidence against embedding

In this section, I want to consider three kinds of evidence: evidence from preposing, binding and scope of negation.

Preposing the relevant *damit*-clause is possible without problems as witnessed by (20) and many other examples in the corpus.

- (20) a. “Damit es nicht zum Edit-War kommt, hoffe ich, dass du meine  
DAMIT it not to.the edit-war comes hope I that you my  
Veränderung wieder hinzufügst”  
changes again add  
‘I hope that you will add my changes back in in order/so that there won’t be an  
edit-war.’
- b. “Damit endlich wieder Normalität einkehrt, hofft Voß, dass der Täter  
DAMIT finally again normality stop by hopes Voß that the culprit  
möglichst bald gefasst wird.”  
most.possible soon caught will.be  
‘Voß hopes that the culprit will be caught as soon as possible in order/so that  
everything can go back to normal.’

This is different from cases in which we know that the final clause has to be embedded, i.e. cases in which the final clause serves its ‘normal’ purpose of stating the motivation for the embedded action. This is the case for *hope* (21) as well as for *believe* (22). Preposing those final clauses leads to degraded grammaticality (21b, 22b).<sup>14</sup>

- (21) a. Susi hofft, dass Peter den Kurs belegt hat, damit er etwas lernt (und  
Susi hopes that Peter the course taken has DAMIT he something learns and  
nicht nur für die Credits).  
not only for the credits  
‘Susi hopes that Peter has taken the course in order to learn something (and not  
only in order to get the credits).’
- b. ?? Damit er etwas lernt (und nicht nur für die Credits), hofft Susi, dass Peter den  
Kurs belegt hat.
- (22) a. Ich glaube, dass du meine Veränderung wieder hinzufügst, damit es nicht  
I believe that you my changes again add DAMIT it not  
zum Edit-War kommt.  
to.the edit-war comes  
‘I believe that you will add my changes back in in order to prevent an edit-war.’
- b. ?? Damit es nicht zum Edit-War kommt, glaube ich, dass du meine Veränderung  
wieder hinzufügst

<sup>14</sup>Brandt and Rosengren (1983) state that the embedded status of the final clause can be witnessed by the ungrammaticality of preposing the *damit*-clause. But to me, and as seen in the corpus, there is no problem with preposing.

The second type of evidence comes from binding. If the final clause was hosted in the complement of *hope*, we would expect pronouns in the final clause to be bound by quantifiers in the complement matrix clause. Although, sentences like (23) involving *jede/r* ‘every/each’ are not completely out, they are worse compared to the corresponding sentences with an unbound plural pronoun (24) or binding from the attitude matrix (25).

- (23) ? Ich hoffe, dass jeder Spieler<sub>1</sub> von Verletzungen verschont bleibt, damit er<sub>1</sub> im  
 I hope that every player of injuries spared stays DAMIT he in.the  
 wichtigsten Saisonspiel seine Bestleistung abrufen kann  
 most.important game.of.the.season his best.performance call.up can  
 ‘I hope that every player will be spared by injuries in order/so that he can perform at  
 his best level in the most important game of the season.’
- (24) Ich hoffe, dass jeder Spieler von Verletzungen verschont bleibt, damit sie im  
 I hope that every player of injuries spared stays DAMIT they in.the  
 wichtigsten Saisonspiel ihre Bestleistung abrufen können.  
 most.important game.of.the.season their best.performance call.up can  
 ‘I hope that every player will be spared by injuries in order/so that they can perform  
 at their best level in the most important game of the season.’
- (25) Jeder Mann<sub>1</sub> hofft, dass die Mannschaft gewinnt, damit sein<sub>1</sub> Spielschein  
 Every man hopes that the team wins DAMIT his gamble.ticket  
 aufgeht.  
 works.out  
 ‘Every man hopes that the team wins in order/so that his betting ticket wins.’

The last type of evidence comes from negation. *Um*- and *damit*-clauses can usually take scope above and below negation, just like the English example in (26).

- (26) He didn’t go to university in order to pursue a career in online poker.  
 a. Scope under negation: He had a different plan when he decided to go to university.  
 b. Scope over negation: He didn’t go to university, the reason being his career in online poker.

If the clause occurs with *hope*, it cannot scope under the negation in the complement clause, unless we get a normal intentional reading. If the clause scopes over *hope*, this falls out naturally.

- (27) # Ich hoffe, dass es heute nicht regnet, damit sich die anderen ärgern,  
 I hope that it today not rains DAMIT themselves the others get.angry  
 sondern damit ich drinnen sitzen kann.  
 but DAMIT I inside sit can  
 int.: ‘I hope that it does not rain today so that the others get angry but so that I can sit inside’

### 3.2.3. Conclusion

The enabling paraphrase of final clauses represents the idea that what happens in the matrix clause is seen as a stepping stone on the causal pathway of achieving the goal that is named in the final clause itself. Hoping or wishing that something happens can hardly ever play that role.<sup>15</sup> Therefore, we were forced to assume that in cases of hope-like attitudes combining with final clauses, the final clause is actually in the scope of the attitude. That upheld the idea that what the final clause combines with (the complement of *hope* et al.) could fulfill the role of enabling the goal named in the final clause. But because syntactic evidence speaks against such an approach, I did not try to work out an analysis in this section. Instead, I want to focus now on the competing paraphrase and explore whether it can handle the attitude data in a more straightforward way.

### 3.3. The causal paraphrase analysis

An enabling paraphrase analysis as sketched in section 3.2 requires the final clause to be in the scope of the matrix attitude, which makes it rather unattractive given the syntactic facts presented in section 3.2.2. A causal paraphrase analysis along the lines of the paraphrase in (5), on the other hand, has to work on the attitude itself. Whatever is caused in our example (14) has to be the hoping attitude, as paraphrased in (28).

(5) **Causal paraphrase** for [*p* UM/DAMIT *q*]: (i) *p* and (ii) *q* is wanted and (iii) *p* because *q* is wanted.

(14) Peter hofft, dass Susi zu Besuch kommt, damit er sie etwas fragen kann.  
Peter hopes that Susi to visit comes DAMIT he her something ask can  
'Peter hopes that Susi will visit him in order/so that he can ask her something.'

(28) **Causal paraphrase** for [*HOPE(r)* UM/DAMIT *q*]: (i) *HOPE(r)* and (ii) *q* is wanted and (iii) *HOPE(r)* because *q* is wanted.

This aligns with our intuition that, although it doesn't make sense to say that Peter hopes that *p* *with the intention that* . . . , it makes sense to say Peter hopes that *p* because he wants something that occurs as a consequence of *p*, i.e. *q*. But the story doesn't end here.

#### 3.3.1. More attitudes

In section 3.1, I have alluded to the fact that final clauses cannot be used in combination with epistemic attitude verbs like *believe* and *know*. This was unsurprising. Testing our simple causal paraphrase on epistemics shows that they are already incompatible here (29) (where compatibility seems to be a necessary, albeit not a sufficient condition, see sect. 2.1).

<sup>15</sup>For a possible exception, see the discussion of (36).

- (29) # Susi weiß/glaubt, dass die Erde eine Kugel ist, weil sie ernstgenommen werden will.  
 ‘Susi knows/believes that the earth is a sphere because she wants to be taken seriously.’

Let’s now look at a wider range of attitudes, including emotive factives and ‘negative preferentials’ like *fear*. Again, final clauses cannot be employed for *froh/traurig sein* ‘be happy/sad’ and *bedauern* ‘regret’ (30). And neither can they with the negative preferentials *befürchten* ‘fear’ and *sich Sorgen machen* ‘worry’ (31).

- (30) a. # Peter ist froh, dass Susi zu Besuch kommt, damit er sie etwas fragen  
 Peter is happy that Susi to visit comes DAMIT he her something ask  
 kann.  
 can  
 int.: ‘Peter is happy that Susi will visit him in order/so that he can ask her something.’
- b. # Peter ist traurig, dass Susi nicht zu Besuch kommt, damit er sie etwas  
 Peter is sad that Susi not to visit comes DAMIT he her something  
 fragen kann.  
 ask can  
 int.: ‘Peter is sad that Susi won’t visit him in order/so that he can ask her something.’
- c. # Peter bedauert, dass Susi nicht zu Besuch kommt, damit er sie etwas  
 Peter regrets that Susi not to visit comes DAMIT he her something  
 fragen kann.  
 ask can  
 int.: ‘Peter regrets that Susi won’t visit him in order/so that he can ask her something.’
- (31) a. # Peter befürchtet, dass Susi nicht zu Besuch kommt, damit er sie etwas  
 Peter fears that Susi not to visit comes DAMIT he her something  
 fragen kann.  
 ask can  
 int.: ‘Peter fears that Susi won’t visit him in order/so that he can ask her something.’
- b. # Peter macht sich Sorgen, dass Susi nicht zu Besuch kommt, damit er sie  
 Peter worries that Susi not to visit comes DAMIT he her  
 etwas fragen kann.  
 something ask can  
 int.: ‘Peter worries that Susi won’t visit him in order/so that he can ask her something.’

The question is what is it about the pro-attitudes like *hope*, *want* and *wish* that sets them apart from epistemics, emotive factives and negative preferentials? It could be that the latter three attitude types somehow don’t express the right sort of thing that could be explained or motivated by the final clause attitude (while *hope*-likes do). (29) points in that direction. Our wants don’t

influence our epistemic states (at least: not like this). But turning to emotive factives and the negative attitudes, the situation looks different. They are actually compatible with the simple paraphrase (32), just like the other priority attitudes, repeated in (33).

- (32) a. Peter ist froh, dass Susi zu Besuch kommt, weil er sie etwas fragen  
 Peter is happy that Susi to visit comes because he her something ask  
 will.  
 wants  
 ‘Peter is happy that Susi will visit him because he wants to ask her something.’  
 b. Peter ist traurig, dass Susi nicht zu Besuch kommt, weil er sie etwas  
 Peter is sad that Susi not to visit comes because he her something  
 fragen will.  
 ask wants  
 ‘Peter is sad that Susi won’t visit him because he wants to ask her something.’  
 c. Peter macht sich Sorgen, dass Susi nicht zu Besuch kommt, weil er sie  
 Peter worries that Susi not to visit comes because he her  
 etwas fragen will.  
 something ask wants  
 ‘Peter is worried that Susi won’t visit him because he wants to ask her something.’
- (33) Peter hofft/wünscht sich/will, dass Susi zu Besuch kommt, weil er sie  
 Peter hopes/wishes himself/wants that Susi to visit comes because he her  
 etwas fragen will.  
 something ask wants  
 ‘Peter hopes/wishes/wants Susi to visit him because he wants to ask her something.’

For all those cases, the interpretation seems to go along those lines:

- (34) We know that  $r$  leads to  $q$ .  
 We want  $q$ .  
 Thus: we have some attitude towards  $r$ , because we want  $q$ .

Let’s illustrate this for *hope*, *be happy* and *fear*: If the sun shines, we can sit outside. We want to sit outside. Thus, we hope that the sun will shine, or we are happy that it will shine, or we fear that it won’t. Our desires and plans *do* influence the way that we form non-epistemic attitudes towards the world. If those attitudes somehow don’t express the right sort of thing that could be explained or motivated by the final clause attitude, the simple paraphrase turned out to be not helpful in determining that.

### 3.3.2. RESP to the rescue?

In section 2.1, I have already pointed out that the simple paraphrase is not sensitive enough to exclude accidental side-effects as possible modifiees. At the end of that section, I have concluded that an analysis should rather build on (10):

(10) **Causal paraphrase\*** for [ $p$  UM/DAMIT  $q$ ]:

- a.  $p$
- b.  $p$  was intended (there is some  $x$ , such that  $\text{RESP}(x,p)$ )
- c.  $q$  is an effective preference of  $\iota x(\text{RESP}(x,p))$
- d.  $p$  (or  $\text{RESP}(x,p)$ ) because (10c)

If the attitude holder (of the final clause attitude) is not in the RESP-relation with the matrix event, as in the case of dropping your phone, the whole sequence becomes infelicitous. Intuitively, this is what is going on with *believe* as well. The sentences in (12) feel like they require some sort of volitional decision in favor of some knowledge or belief state, which is incompatible with how we normally acquire knowledge or belief. We can construct an example with *believe* that becomes marginally acceptable, because it is possible to interpret it in the volitional-decision way (35):

- (35) ? Peter glaubt, dass seine Ex-Frau schuld an allem ist, damit er seine eigenen Handlungen nicht hinterfragen muss.  
 Peter believes that his ex-wife guilty at everything is DAMIT he his own actions not question must  
 ‘Peter believes that his ex-wife is to blame for everything in order to not have to question his own actions.’

Plausibly, emotive states like those invoked by *be sad/happy* and *fear* cannot be voluntarily brought about as well, but are rather involuntary reactions towards external facts. But what about *hope* or *want*? Are we more in control of these attitudes? For *want*, this seems plausible in some scenarios, namely in some effective preference scenarios: I have to choose today between two different options of what I’ll be doing tomorrow, playing basketball or playing table tennis. This decision may be informed by independent desires of mine, i.e. meeting a particular friend. If I can only meet this friend at the basketball court, I might opt for this choice *in order* to meet my friend. In this sense, my wanting to play basketball was the result of a conscious decision process: a decision for what preference I elevate to ‘effective’ status. But this thought process seems to be hard to transfer to desires that aren’t effective preferences, e.g. the hope that the sun will shine tomorrow.

One piece of evidence against the idea that we are in a RESP-relationship with our hopes comes from a similar context like the one for ‘intentional belief’ (35). If we set the context up so that there are benefits of forming a certain hope (rather than benefits of the content of hope being true), the example gets the same marginal reading as the one for *believe* (36), which indicates that we coerce it to be (the result of) an intentional state, which it hadn’t been otherwise.

- (36) a. ? Peter hofft, dass die Testergebnisse morgen negativ sein werden, damit er heute ruhig schlafen kann.  
 Peter hopes that the test.results tomorrow negative be will DAMIT he today quietly sleep can  
 ‘Peter hopes that the test results tomorrow will be negative in order to be able to sleep quietly tonight.’

- b. ? Peter hasst seine Nachbarn. Aber er hofft, dass es ihnen gut geht, damit  
 Peter hates his neighbours. But he hopes that it them good goes DAMIT  
 er in den Himmel kommt.  
 he in the heaven comes  
 ‘Peter hates his neighbours. But he hopes that they are doing well in order to go  
 to heaven.’

If the attitudes of *hope*, *wish*, and *want* can be shown to be ‘intentional’ attitudes (in the sense of: intentionally brought about), whereas the others cannot, we would have an explanation ready, but as far as evidence goes, I have none.<sup>16</sup>

### 3.3.3. A requirement for a preferential attitude

*Umldamit*-clauses occur as frequent modifiers of attitude predicates like *hope*, *want*, *wish*. When they do, they seem to have the same meaning as they do in the vanilla case of intentional action as witnessed by the applicability of the standard simple causal paraphrase that was introduced in section 2.1: ‘*x* does *p* because *x* wants *q*’ and ‘*x* hopes that *p* because *x* wants *q*’. The question remains why it should be possible for final clauses to modify those attitudes and not others like *be happy* or *worry*. Neither of those can be said to be (the result of) a RESP-inducing action, or so I have argued in section 3.3.2.

Here is an attempt at generalizing what we have learned so far. The discussion of non-attitude matrix examples as presented in sections 1 and 2.1 shows that the attitude holder of the final clause has to have an appropriate pro-attitude towards the event or proposition expressed in the matrix clause: an intention or effective preference, ruling out mere accidental side-effects. You cannot accidentally drop your phone in order to *q*. If you do drop your phone in order to *q*, it has to happen intentionally. In section 3.3.2, I have suggested that there is no intention *towards* attitudes like *hope*, they are not necessarily acquired by decision. But since *hope*, *want* or *wish* express a future-oriented pro-attitude on their own, they might be alternative overt expressions for an otherwise covert ‘intentionality operator’. What the overt attitude reports and the covert intentionality involved in RESP-inducing events have in common is that they imply an attitude holder of a future-oriented preferential attitude:<sup>17</sup> the person hoping and the person intending. Something that they also have in common with the final clause attitude. This sets them apart from negative preferentials, where the complement is dispreferred, and emotive factives, which are not future-oriented.

Here are the updated informal schematic overview (37) and a tentative lexical entry (38), capturing the above:

<sup>16</sup>Note that the adverbs *intentionally* and *unintentionally/accidentally* don’t differentiate between different attitudes like *believe* or *hope*, so they don’t help us either. It is bad to say that someone intentionally believed or hoped, respectively. *Intentionally* is said to be incompatible with events that require the absence of a RESP-relation (\**He was intentionally tall*), and to be redundant with events that require a RESP-relation (\**John wrote a novel intentionally*). They are acceptable with events that don’t require either (*He fell off a ladder intentionally/accidentally*) (Farkas, 1988).

<sup>17</sup>On the future-orientation of such attitudes, see e.g. Heim (1992).

(37) **Causal paraphrase, generalized** for  $[p \text{ UM/DAMIT } q]$ :

- a.  $p$
- b.  $p$  implies a preferential attitude holder
- c.  $q$  is a preference of that attitude holder
- d.  $p$  because (10c)

(38)  $\llbracket \text{um/damit} \rrbracket = \lambda q \lambda p \lambda w: \exists x \text{ } x \text{ is a 'preferential attitude holder' implied by } p.$   
 $p(w) \ \& \ \forall w' \in \text{PREF}_{x,w}[q(w')]\ \& \ \text{CAUSE}(\forall w' \in \text{PREF}_{x,w}[q(w')], p, w)^{18}$

The idea is that the final clause requires its host to provide a suitable attitude holder that it can use to project its own modal domain. In that sense, the final clause attitude is harmonic with the matrix clause attitude. If the matrix clause provides an attitude like *hope*, *want*, *wish*, the final clause will use the same modal domain for its attitude. If the matrix clause is about an event like turning on the music, the final clause will fall back on the only attitude holder that it can get a hold of, the person who intentionally brought about the event. If there is no attitude holder available, e.g. because there was no intentional event, the requirements for the final clause are not fulfilled.

Let me address two worries. With an entry like (38), we move from the traditional generalization that  $p$  had to be intended, implying a RESP-holder, to only a requirement for some positive preference, including *hope*. But why then would cases like (19) be bad? Why should we be able to ‘invent’ an intentional attitude towards some action, but not some hoping attitude towards a state of affairs like the sun shining, if this possibility exists in the overt case?

- (19) #Morgen scheint die Sonne, damit wir draußen sitzen können.  
 tomorrow shines the sun DAMIT we outside sit can  
 ‘The sun will shine tomorrow in order for us to sit outside.’

The answer to this question might lie in the fact that this is not a possibility independent of any final clause. A sentence like (39) can never mean *he hoped to go to the store*. The RESP-relation is well known to be not part of the lexical entry of a verb but to be pragmatically supplied when needed. In the usual case, we understood *He went to the store* in such a way that he did it intentionally, and the final clause associates with whoever is ‘in RESP’ for the matrix clause. If we know that the agent did not act on their own terms, we can shift the final clause attitude to the person who was in charge of the action. RESP can be implied, hope cannot.

- (39) He went to the store.

The second worry concerns the type of attitude that is allowed. First, there is no good reason to restrict the type of attitude to future-oriented ones except that it captures the empirical facts, excluding the emotive factives. It is a way to tell those two classes of attitudes apart, a task that could not be solved by the RESP-relation (section 3.3.2). But how do we separate *hope* and,

<sup>18</sup>Alternatively, the modal domains could be projected from the event, in the sense of Hacquard (2006). For a related idea, see Alonso-Ovalle and Menéndez-Benito (2018) on modal indefinites, see also the last paragraph in this section.



say, *fear* on principled grounds? Both attitudes are plausibly analyzed as involving some kind of bouletic ordering and are not factive. Although I cannot fully justify this particular cutting of the attitude cake, independent work shows that it is at work in other places as well. Alonso-Ovalle and Menéndez-Benito (2018) observe that the modal indefinite *uno cualquiera* exhibits two kinds of readings when embedded under priority modals and attitudes: the independent and harmonic reading. On the independent reading, the modal domain of the indefinite is projected from the embedded event. On the harmonic reading, the indefinite shares the same modal domain with the embedding operator, e.g. the imperative, projected from the ordering event. What is important for our case is that this harmonic reading is only possible for a certain class of priority modals and pro-attitudes, arguably the same that is of interest here. To account for this requirement, they propose as a presupposition that the modal anchor has to project ‘normative’ content. This is supposed to cover volitional events (as opposed to accidental) and the modal environments that allow for the harmonic interpretation. Since a normative event in that sense also requires an attitude holder, this comes close to the idea formulated in (38).

### 3.3.4. Open problems

The causal analysis (more or less independent of its implementation) faces another difficulty. Final clauses can also co-occur with the sentence adverbs that correspond to the attitude verbs discussed, e.g. *hoffentlich* ‘hopefully’, or *wünschenswerterweise* ‘preferably’. Since what is caused has to be the attitude, we have to assume that the final clause also takes scope over *hoffentlich* in an example like (40).

- (40) “Hoffentlich regnet es mal wieder, damit ich nicht dauernd im Park sitzen  
 hopefully rains it MAL again DAMIT I not constantly in.the park sit  
 muss.”  
 must  
 ‘Hopefully, it will rain so that I don’t have to sit outside.’

Sentence adverbs in German like *hoffentlich* are usually taken to have the widest scope relative to all other adverbials (except for frame adverbials, see e.g. Frey (2003)). Additionally, they are often said to be non-at-issue. Assuming an analysis of final clauses in which they have to take scope over the attitudes that they cause runs counter to these common assumptions, whereas an analysis that assumes the final clause to be in the scope of the attitude in general (as the one hinted at in section 3.2) could naturally account for that. At the moment, this has to remain subject to future work.

## 4. Conclusion

I have started this paper by introducing two common paraphrases for German final clauses headed by *um* and *damit*. The causal paraphrase captures the intuition that the final clause states the motivation behind the matrix clause event. The enabling paraphrase puts emphasis on the fact that the matrix clause event is believed to lead to the desired outcome. In section 3, I have presented data on the combinatorial potential of final clauses and attitude verbs. Final

clauses appear as frequent modifiers of preferential attitudes like *hope*, *wish* or *want*, but not of other attitudes like emotive factives or epistemics. That they do appear as modifiers of attitudes is *prima facie* surprising, since hoping or wanting are not prototypical agentive events. For the enabling paraphrase, this becomes even worse, because hoping and wanting are also usually not believed to lead to some desired outcome. In order to save an enabling analysis, we were forced to accept that the final clause in those cases is actually embedded in the attitude complement to cash in on the fact that the attitude's complement could be what would lead to the desired outcome. But evidence favors a syntactic analysis that adjoins the final clause directly to the attitude. The causal paraphrase seemed better equipped to handle the attitude data. After all, we can hope for something, because we want something else. But this reasoning also goes through for other attitudes, still final clauses are not felicitous with them. In section 3.3.3, I have tried to reconcile the final clause's natural requirement for an intentionally brought about event with its occurrences with *hope*, *want*, or *wish*. The common denominator is the existence of an attitude holder implied by the matrix clause that can serve as the attitude holder of the final clause. An analysis like this must be accompanied by a theory that proves *hope*-like attitudes to form a natural class as distinguished from future-orientend negative attitudes and emotive factives on independent grounds.

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