

Approaching the pragmatics of exclamations experimentally*

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1 Introduction

A standard assumption is that sentence exclamations like (1) count as an assertion and can thus be denied, whereas exclamative clauses such as (2) do not make a contribution to the discourse that could be denied (or affirmed) directly. It is controversial whether exclamatives can nevertheless be ‘weakly denied’ by phrases like *not really* etc. (examples and judgments by Rett 2008, 2011):

- (1) A: (Wow,) John bakes delicious desserts!
B: No (he doesn’t), these are store-bought. John’s actually a terrible cook.
- (2) A: (My,) What delicious desserts John bakes!
B: ? No (he doesn’t), these are store-bought. John’s actually a terrible cook.
B’: Not really; these are store-bought. John’s actually a terrible cook.

These judgments have so far not been assessed empirically. This paper follows the methodology of an increasing number of studies in pragmatics that incorporate experiments in order to obtain reliable and robust judgments (see Sauerland & Schumacher 2016). Specifically, I reexamine a prominent theory of exclamations (Rett 2011): It is argued that the difference we see in (1) and (2) falls out of the fact that only exclamative clauses and not sentence exclamations denote degree properties and not propositions. That is, while (1) can also be associated with a non-scalar expectation (i.e., that the desserts John bakes would not be delicious), (2) can only be associated with a scalar expectation (that the desserts John bakes would not be as delicious as they are).

In the present study, in addition to cases like (1) and (2), I also included a potentially interesting construction from Germanic languages other than English: the Germanic languages Dutch (3), German (4), and Swedish (5) feature so-called *that*-exclamatives (e.g., Bennis 1998, d’Avis 2016, Delsing 2010):

- (3) *Dat hij die boeken kan lezen!*
that he those books can read
‘Wow, he can read those books!’

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- (4) *Dass der schön singen kann!*
 that this.one beautiful sing can
 ‘How surprising that he can sing beautifully!’
- (5) *Att du hann till mötet!*
 that you reached to meeting-DEF
 ‘What a surprise that you reached the meeting!’

It has been argued for German that *that*-exclamatives like (4) do not allow the scalar-expectation reading of *wh*-exclamatives. In particular, in (4) the speaker is surprised that the referent of *der* can sing beautifully at all and not about the degree of the beauty of his singing (Truckenbrodt 2013: 580–581). Truckenbrodt calls this difference ‘Emotion zu implizitem Grad’ (‘Emotion towards implicit degree’) vs. ‘Emotion zu Proposition’ (‘emotion towards proposition’); see also d’Avis (2002) for seminal work.

Note now that sentence exclamations like (1) above can receive both a degree (emotion towards implicit degree) and a non-degree (emotion towards proposition) reading. Here I adopt the distinction between sentence exclamations and exclamatives proposed by Rett (2011) and many others. That is, while declarative clauses performing an exclamation speech act can be referred to as ‘sentence exclamations’, more restricted sentence types like verb-final *wh*-configurations in English can count as exclamatives proper. Given this distinction, we see that an exclamatory declarative like (6) can either express that the speaker is surprised that the referent of *he* can sing beautifully at all or that the speaker is surprised about the degree of the beauty of someone’s singing (see also Nouwen & Chernilovskaya 2015 on this distinction).

- (6) He can sing beautifully!

The non-degree reading of *that*-exclamatives has also been observed for the other relevant Germanic languages. Delsing (2010), for instance, argues on the basis of his Swedish examples that Swedish *that*-exclamatives (formed with the complementizer *att*, see [5] above) can be characterized as so-called ‘polar’ exclamatives. That is, the likelihood/expectation scale that serves as the semantic basis for the surprise reading of exclamatives is polar in these cases, insofar as the speaker presupposes that the likelihood of the proposition (e.g., ‘X can sing beautifully’ in our case) is low and the exclamative conveys that the proposition is in fact true. Crucially, the surprise effect is only based on a binary situation: that *p* is true or not true. In the case of *wh*-exclamatives (*How beautiful he can sing!*), by contrast, the surprise interpretation is based on a graded scale; that is, these configurations express to what extent/degree some property expressed by *p* is the case (variable scales, in Delsing’s 2010 terms).

After having clarified the notions of sentence exclamation, (degree) *wh*-exclamative, and *that*-exclamative, I will now report on a judgment experiment that tested the felicity of different strategies of denial that can in principle follow a German exclamation speech act in a discourse. Based on the results, I will then draw some general conclusions about the semantic nature of exclamatives.

2 An experimental study on the pragmatics of exclamations

The experimental items I used in this study were manipulated at two levels: EXCLAMATION FORM, that is, whether the relevant case is a sentence exclamation (7), a *wh*-exclamative (8), or a *dass*-exclamative (9), and DENIAL, that is, whether the utterance by Speaker B is a strong (SD) or a weak denial (WD), see below. For each combination, there were four examples. Sentence exclamations can also be associated with scalar expectations (e.g., accomplished by using focus on the adjective). To ensure that sentence exclamations receive a non-scalar interpretation, cases included explicit degree statements featuring deictic *so* ('so'), which blocks a scalar reading of the whole exclamation (Truckenbrodt 2013).

- (7) A: *Wow! Peter kann so lecker kochen!*
 wow Peter can so delicious cook
 'Wow! Peter is such a great cook!'
 B: {SD: *Nein,* / WD: *Nicht wirklich,*} *er wärmt immer nur Fertiggerichte auf.*
 '{SD: No, / WD: Not really,}' he always warms up convenience food.'
- (8) A: *Wahnsinn! Was für schwierige Matheaufgaben*
 madness what for difficult math.problems
Katrin lösen kann!
 Katrin solve can
 'Man! What difficult math problems Katrin can solve!'
 B: {SD: *Nein,* / WD: *Das stimmt nicht ganz,*} *sie schlägt immer im Lösungsbuch nach.*
 '{SD: No, / WD: That's not quite right,}' she always looks the solution up in the textbook.'
- (9) A: *Wow! Dass die Maria so schön aussieht!*
 wow that the Maria so beautiful looks
 'Wow! I'm amazed that Maria is so beautiful!'
 B: {SD: *Nein,* / WD: *Nicht wirklich,*} *sie benutzt lediglich sehr viel Make-up.*
 '{SD: No, / WD: Not really,}' she just uses a lot of makeup.'

In addition, I constructed four fillers I expected to get good judgments ('good' fillers, [10]), four fillers I expected to get bad judgments ('bad' fillers, [11]), and four fillers I expected to receive mixed judgments ('medium' fillers, [12]). Taken together, there were thus 36 stimuli in total; stimuli were divided into 2 lists, each consisting of 24 items.

- (10) A: *Linda hat einen schlaunen Sohn*
'Linda has a smart son.'
B: *Nein, das stimmt nicht.*
'No, that's not right.'
- (11) A: *Wie ist sein Name?*
'What's his name?'
B: *Nein, das stimmt nicht.*
'No, that's not right.'
- (12) A: *Hat Boris gestern eingekauft?*
'Has Boris done the shopping yesterday?'
B: *Nein, das finde ich nicht.*
'No, I disagree.'

I collected judgments from 112 native German speakers, recruited through *Clickworker's* crowd-sourcing service (<https://www.clickworker.de>). The experimental items were presented through an online questionnaire, and participants had to rate the acceptability of Speaker B's reactions on a scale ranging from 1 (= very bad) to 6 (= very good); see Appendix for detailed German instructions and full list of stimuli.

Figure 1 shows that fillers were judged as I had expected. Acceptability of bad fillers was lowest (1.2), acceptability of medium fillers was about in the middle of the provided scale (2.4), and acceptability of good fillers was at ceiling (5.8). The results of a one-way ANOVA of FILLER TYPE on acceptability judgments show that the main effect of FILLER TYPE on acceptability judgments was highly significant ($F(1304, 101) = 652.13, p < .001$). These data on fillers show that participants not only understood the task well, but that they also used the full range of options for their judgments.

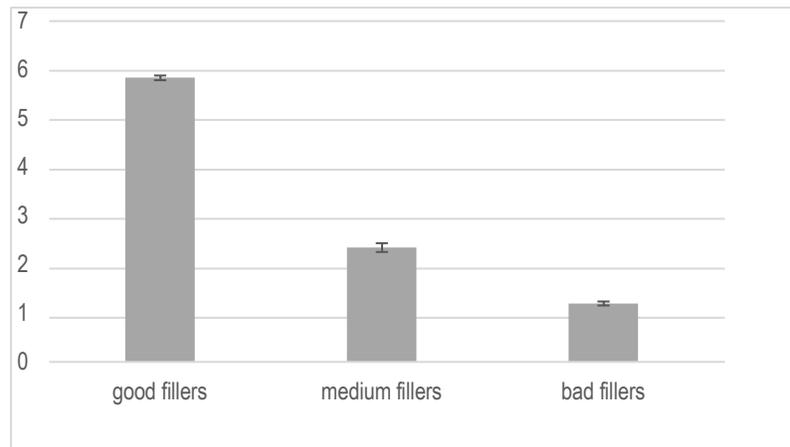


Figure 1: Judgment of filler items. Whiskers represent standard errors.

Figure 2 shows that weak denial is always preferred over strong denial, also in the case of sentence exclamations. A two-way ANOVA (3 x 2) revealed significant main effects of both EXCLAMATION FORM ($F(14, 48) = 6.96, p < .001$) and DENIAL ($F(4, 32) = 3.87, p < .001$), but there was no significant interaction ($F(.07, 36) = .04, p > .05$). Overall, it is striking that all judgments of exclamation items were in accordance with the category of ‘good fillers’ and thus at ceiling (ranging from 5.2 to 5.7), suggesting that the often-cited infelicity of certain reactions to particular exclamation forms (e.g., strong denial in the context of *wh*-exclamatives) is actually a very subtle matter.

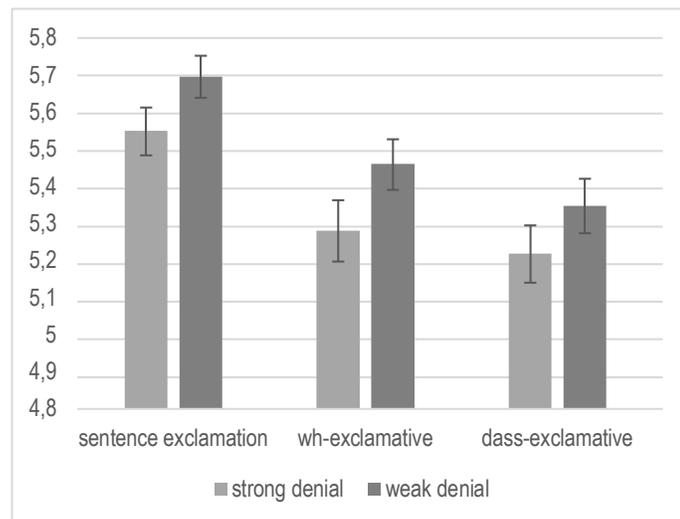


Figure 2: Judgment of critical items. Whiskers represent standard errors.

All in all, the findings of this little study suggest that exclamative clauses expressing a degree reading can in fact be followed by a denial in a discourse, and

that there is no difference between *wh*-exclamatives and other (non-degree) forms of exclamations (i.e., sentence exclamations and *that*-exclamatives) in participants' preference for the weak-denial strategies – which is interesting in its own right and might be due to general pragmatic strategies of politeness etc.

Since the materials used in this experiment were designed to test the felicity of denying the descriptive content of the respective exclamation (by continuations like the ones given in [7]-[9] above; see also Appendix below), we can thus conclude that the propositional (descriptive) content of exclamatives is in fact 'at-issue' in these cases because it is perfectly fine to object to it. Do exclamatives then denote both truth-conditional and expressive content? Are they 'multidimensional' semantic objects? This is an issue I would like to address in the rest of this short contribution.

3 Concluding outlook: A new approach to the semantic denotation of exclamatives

In this final section of the paper, I will now shift the focus from the denial issue and related discourse properties of exclamations to the core semantics of exclamatives and briefly indicate what the empirical observations in the context of denial strategies presented above could mean for the denotation of exclamative syntactic objects in general.

Exclamatives are generally considered one-dimensional semantic objects that are associated with a dedicated semantic operator. Prominent examples are Rett's (2011) 'E-FORCE' and Grosz's (2012) EX operator, which both return the original proposition (the at-issue content) and a not-at-issue/CI-proposition. Let us illustrate this general idea by sketching very briefly the approach by Grosz (2012); see also Gutiérrez-Rexach (1996, 2001) and Postma (1996) for seminal proposals of an intensional operator EXCL(AMATIVE) over propositions.

In the context of optative and exclamative constructions, Grosz proposes an operator EX that combines with a truth-conditional expression of type $\langle s, t \rangle$ (i.e., with a proposition) and maps this proposition onto felicity conditions that capture the speaker's attitude towards the proposition. Crucially, the resulting denotation is not truth-conditional, but, according to Grosz, 'felicity-conditional'. In particular, he claims that application of EX to a proposition yields a one-dimensional meaning of type E (defined as the type of expressive meaning). Consider the following example and the representation in (14); see Grosz (2012: 118):

- (13) Boy, is it raining!
 (14) EX(rain) : E
-
- ```

graph TD
 A["EX(rain) : E"] --- B["rain : <st>"]
 A --- C["EX : <st, E>"]

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Grosz thus proposes that EX removes its propositional complement from the level of descriptive at-issue meaning and shifts it to the level of expressive meaning. By contrast, and as also claimed by Grosz (2012), if one utters a sentence exclamation like (15), one still expresses a truth-functional statement (i.e., that it was snowing in San Francisco):

(15) ‘It is snowing in San Francisco! (Can you believe it?)’

Accordingly, in contrast to the approach to exclamatives sketched in (14) above, sentence exclamations are assigned a multidimensional meaning (with an expressive and a descriptive, truth-functional) component. Following Potts (2005, 2007), I assume that the descriptive part  $\langle st \rangle$  combines with the expressive part  $\langle st, E \rangle$  by means of the composition operator ‘•’, which combines both meanings, passes the descriptive content up, and interprets it relative to the context modified by EX (see also Gutzmann 2015 for important work on multidimensionality in this context). Formally, the composition operator ‘•’ yields the following result (Potts 2007: 187):

(16)  $[[EX]]^C \bullet [[snow]]^C = [[snow]]^{[[EX]] ([[snow]])^C}$

According to this multidimensional analysis, the operator EX passes the descriptive content of  $[[snow]]$  unchanged – that is, it is at-issue and it can be asserted or questioned. However, its context of interpretation is altered by the content of the operator. So, in contrast to the proposal by Grosz (2012) illustrated in (14), the result is the following two-dimensional semantic object:

(17)

$$\begin{array}{c}
 \text{rain} : \langle st \rangle \\
 \bullet \\
 \text{EX}(\text{rain}) : E \\
 \swarrow \quad \searrow \\
 \text{rain} : \langle st \rangle \quad \text{EX} : \langle st, E \rangle
 \end{array}$$

In what follows, I would like to argue that the experimental data discussed in Section 2 above support such a two-dimensional perspective on exclamatives and are in line with further data that can be found in the literature on the cross-linguistic properties of exclamatives. Let me mention some work on Catalan in this context.

Villalba (2008) has pointed out that the factivity analysis of exclamatives can be called into question, given the possibility of the presence of negation. That is, if the propositional content of the exclamation would be presupposed, we should observe no difference in terms of truth conditions that result from the presence of negation. Look at the situation in the context of factive predicates:

- (18) a. I regret having bought this book.  $\Rightarrow$  I have bought this book.  
 b. I don't regret having bought this book.  $\Rightarrow$  I have bought this book.

A factivity analysis of exclamatives cannot account for the following data showing that negative quantitative exclamatives are also possible; see Villalba (2008: 18) for the following examples and also Espinal (1997) for more observations in this domain.

- (19) a. *¡Cuántos libros no pudiste leer jamás!*  
 how.many books not could.you read never  
 'How many books you could never read!'  
 b. *¡Caramba, la de cosas que no*  
 why the-FEM of things that not  
*compró nadie!*  
 bought nobody  
 'Why, the things that nobody bought!'

Villalba (2008) argues that the licensing of the negative polarity items *jamás* ('never') and *nadie* ('nobody') indicate that these examples feature standard negation and that, therefore, factivity accounts of exclamatives cannot explain the presence of negation in these cases. It is easy to see why and how the problem raised by Villalba's (2008) data is connected to the general issue whether exclamatives should be analyzed as one- or multidimensional semantic objects: these data raise the issue whether the descriptive/propositional content of exclamatives can 'only' be presupposed and not be asserted, as defended by Grimshaw (1979), Castroviejo Miró (2008), Abels (2010), and many others.

In a similar vein, Villalba (2017) has recently argued based on two experiments that the descriptive meaning of exclamatives is clearly at-issue and hence amenable to denial in a discourse. Although his empirical work differs from our study above (both in the choice of materials and in the methodology used), this recent research on Spanish and Catalan exclamatives suggests similar conclusions to what I have proposed above regarding the assertive force of exclamatives and their multidimensional nature.

After having outlined a general account of the denotation of exclamatives, let me now briefly turn to the discourse perspective again and indicate a proposal of how to account for the contribution of exclamatives to the common ground (CG). That is, how can we analyze the discourse move of exclamatives, which not only assert descriptive content (according to my approach) but also express the emotive/expressive stance associated with exclamatives?

In what follows, I will base my ideas on the discourse model by Farkas & Bruce (2010) to account for these issues. Specifically, I will adopt the ideas by Chernilovskaya (2014) on the discourse contribution of exclamatives, which are proposed within Farkas & Bruce's (2010) framework. However, and in accordance to what I have outlined above, I will add an important qualification: In contrast to

Chernilovskaya (2014), I claim that exclamatives can consist of a combination of two speech act operators and thus have two functions as far as contribution to the *CG* is concerned. In order to show that, let me first sketch the notion of the assertion speech-act operator according to the framework by Farkas & Bruce (2010).

Speech act operators in this discourse-oriented semantic framework can be defined in terms of how they change context states (in what follows: *C*). These context-change effects then account for the contribution of the respective speech act to the *CG*. Given this conceptual background, look at the following representation of the assertion speech-act operator (see Farkas & Bruce 2010: 92). For our purposes, we can adopt the simplified notation by Chernilovskaya (2014: 100):<sup>1</sup>

- (20)  $ASSERT(A)(p)(C_{input}) = C_{output}$ , where  $C_{output} = C_{input}$ , except:
- a.  $QUD_{output} = push(\{p\}, QUD_{input})$
  - b.  $DC_{A,output} = DC_{A,input} \cup \{p\}$
  - c.  $CG^*_{output} = CG^*_{input} \cup \{p\}$

In (20), we see that the assertive operator is defined as a three-place function: it takes Speaker *A*, the denotation of a sentence *p*, and the input context state. The result is then mapped to the output context state. The effect of *ASSERT* is then that *p* becomes a new issue under discussion (20a), Speaker *A* becomes committed to *p* (20b), and *p* is projected to future common grounds (20c).

Now, how can we define the speech act operator for exclamations? Chernilovskaya (2014: 117) proposes the following definition:

- (21)  $EXCL(A)(p)(C_{input}) = C_{output}$ , where  $C_{output} = C_{input}$ , except:  
 $CG_{output} = CG_{input} \cup \{p\}$

The most important component of this definition is that the *CG* is directly updated with the content *p* expressed by the exclamative, and so there is no possibility for the addressee to object to it. In addition, and related to this central component, there is no update of the *QUD* component, which means that an exclamative, according to Chernilovskaya (2014), raises no issues that have to be settled. Also, the exclamative speech-act operator does not update future common grounds (*CG\** in [20] above) and so it does not require the addressee to react and/or to be committed to the content of the exclamative. Note that the content *p* conveyed by an exclamation is meant to be the expressive (and not also the presupposed/descriptive content) here. In particular, in an example like *How beautiful Mary is!*, the content can be represented as in (22), where *A* again refers to Speaker *A*:

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<sup>1</sup> *A* is Speaker *A*, *QUD* are ‘Questions under Discussion’ (see Roberts 1996, 2012), *DC* refers to ‘Discourse Commitment’, and *CG\** is the set of future common grounds, modelled as a projected set according to Farkas & Bruce (2010).

$$(22) p = \exists x (\text{beautiful}(A,x) \wedge \text{be}(m, x) \wedge \text{noteworthy}(A,x))$$

According to what I have said above and what the empirical study in Section 2 has indicated, I now argue that exclamatives in fact do have assertive force and thus pattern with sentence exclamations, which, according to Rett (2011), function both as conveying expressive content and as asserting  $p$ . Consequently, exclamatives too, according to my view, combine the two speech acts of assertion (20) and exclamation (21). But how can we spell this out formally?

Chernilovskaya (2014: 131–134) suggests the following combination for sentence exclamations:

$$(23) \text{ASSERT} - \text{EXCL}(A)(p, q)(C_{input}) = C_{output}, \text{ where } C_{output} = C_{input}, \text{ except:}$$

- a.  $QUD_{output} = \text{push}(\{p\}, QUD_{input})$
- b.  $DC_{A,output} = DC_{A,input} \cup \{p\}$
- c.  $CG^*_{output} = CG^*_{input} \cup \{p\}$
- d.  $CG_{output} = CG_{input} \cup \{q\}$

(23) makes an attempt at expressing that content  $p$  is asserted (thus proposing to update the  $CG$ ), while, at the same time, the expressive content  $q$  conveys a noteworthiness evaluation and, according to the representation in (21) above, directly enters the  $CG$ .

However, as noted by Chernilovskaya (2014) herself, there is a well-known problem with this combining of the two speech acts if one accepts the idea that the exclamative interpretation (here modelled as a noteworthiness evaluation, see [22]) is factive. Then the proposition  $p$  (e.g., *that Mary is beautiful*) must already be in the  $CG$  and cannot be part of the assertion, that is, of the proposal to update the  $CG$ . In other words, since  $q$ , which updates the  $CG$  directly (23d), presupposes  $p$ , an analysis that proposes that  $p$  is asserted does not hold. Crucially, this major drawback of such an analysis disappears as soon as one adopts the general idea I sketched in (17) above, namely that exclamatives are actually two-dimensional semantic objects that can denote both truth-conditional and expressive content.

If this multidimensional approach is on the right track, then both the data in Section 2 and the general account indicated in this section are addressing a central question at the language-emotion interface: Can humans realize cognitive and emotional behavior by means of natural language syntax at the same time? The question is – without exception – negatively answered in the existing linguistic literature on exclamatives, as we have argued above when we were mentioning the presuppositional approaches in this domain.

More specifically, if we understand the act of asserting and thereby describing facts of the world as a cognitive behavior, and the act of expressing surprise, astonishment as an emotional behavior, the existing literature claims that these two dimensions of the human mind are in complementary distribution in the domain of

natural language syntax because they cannot be performed at the same time. By contrast, the present approach is in accordance with recent work in the cognitive neurosciences that suggests that cognition and emotion cannot be referred to as separate components of the human brain (e.g., Okon-Singer et al. 2015). As has also been pointed out in a linguistic context (Grosz 2012), scholars in psychology in particular and in the cognitive sciences in general (e.g., Pessoa 2013) often distinguish between the domain of cognition (i.e., memory, problem solving, etc.) and the domain of emotion (i.e., attitudes, affects, evaluations). However, it is an established view in this field of research that these two fundamental components of the human mind interact in interesting ways. In this short paper, I hope to have provided a good starting point for pursuing this idea in the linguistic domain of exclamatives.

## 4 Appendix

### A) GERMAN INSTRUCTIONS

Im Folgenden lesen Sie kurze Auszüge aus einem Dialog zwischen zwei Sprechern (Sprecher A und Sprecher B).

Unsere Frage an Sie: Hören sich die kursiv markierten Reaktionen von Sprecher B für Sie natürlich an?

Bitte schauen Sie sich zunächst die jeweiligen Äußerungen von Sprecher A und Sprecher B in Ruhe an und bewerten Sie dann die kursive Äußerung von Sprecher B auf einer Skala von 0% (= klingt sehr schlecht) bis 100% (= klingt sehr gut).

Hier ein paar Beispiele:

A: Linda hat einen schlaun Sohn.

B: *Ja, das stimmt.*

An der Reaktion von Sprecher B gibt es nichts auszusetzen. Sie klingt ganz natürlich und könnte in einem entsprechenden Dialog so geäußert werden. Wir geben 100%.

Ein weiteres Beispiel:

A: Hat Boris gestern eingekauft?

B: *Nein, das finde ich nicht.*

Die Reaktion von Sprecher B ist zwar gut verständlich, klingt aber irgendwie nicht eindeutig oder klar. Wir bewerten sie mit 40% oder 60%.

Ein letztes Beispiel:

A: Was hat er sich zum Geburtstag gewünscht?

B: *Ja, das stimmt.*

Die Reaktion von Sprecher B ist nahezu unverständlich. Es ist höchst unwahrscheinlich, dass sie in einem entsprechenden Dialog so geäußert wird. Wir geben 0%.

Fertig? Jetzt sind Sie dran!

## B) CRITICAL ITEMS

### *Sentence exclamations/strong denial*

- (1) A: Wow! Maria kann so schön stricken!  
 B: Nein, ihre Mutter hilft ihr immer sehr dabei.
- (2) A: Toll! Uli kann so lecker kochen!  
 B: Nein, er wärmt immer nur Fertiggerichte auf.
- (3) A: Das hätte ich nicht gedacht! Sylvia ist so groß!  
 B: Nein, sie trägt einfach Schuhe mit hohen Absätzen.
- (4) A: Wahnsinn! Lisa kann so laut sprechen!  
 B: Nein, sie hat ein gut verstecktes Mikrofon benutzt.

### *that-exclamatives/strong denial*

- (1) A: Unglaublich! Dass der Georg so schlecht malen kann!  
 B: Nein, er verwendet einfach eine sehr anspruchsvolle Technik.
- (2) A: Wow! Dass die Eva so schön aussieht!  
 B: Nein, sie benutzt lediglich sehr viel Make-up.
- (3) A: Toll! Dass die Laura so kreativ basteln kann!  
 B: Nein, sie bastelt das meiste nach einer genauen Anleitung.
- (4) A: Wahnsinn! Dass der Werner so gut schießen kann!  
 B: Nein, er schießt immer nur aus geringen Entfernungen.

### *wh-exclamatives/strong denial*

- (1) A: Unglaublich! Was für leckere Salate Markus macht!  
 B: Nein, das Dressing ist nie selbst gemacht.
- (2) A: Wow! Was für schöne Bilder Johanna malen kann!  
 B: Nein, ihre Schwester hilft ihr immer beim Entwurf der Bilder.
- (3) A: Toll! Was für schwierige Matheaufgaben Katrin lösen kann!  
 B: Nein, sie schlägt immer im Lösungsbuch nach.
- (4) A: Wahnsinn! Was für schlaue Fragen Thomas stellt!  
 B: Nein, er hat die meisten Fragen aus dem Internet.

### *Sentence exclamations/weak denial*

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 B: Nicht wirklich, ihre Mutter hilft ihr immer sehr dabei.
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- (4) A: Wahnsinn! Was für schlaue Fragen Thomas stellt!  
 B: Nicht wirklich, er hat die meisten Fragen aus dem Internet.

## C) FILLER ITEMS

*'good' fillers*

- (1) A: Maria hat ein neues Auto.  
 B: Nein, das stimmt nicht.
- (2) A: Muss ich wirklich mein Zimmer aufräumen?  
 B: Ja.
- (3) A: Claudia hat eine tolle Arbeit geschrieben.  
 B: Ja, das finde ich auch.
- (4) A: Nimm lieber die warme Jacke mit!  
 B: OK, mache ich.

*'medium' fillers*

- (1) A: Muss er morgen in die Schule?  
 B: Das finde ich auch.
- (2) A: Lern bitte endlich für die Klassenarbeit!  
 B: Ja, das stimmt.
- (3) A: Hat Bernhard gestern gekocht?  
 B: Nein, das finde ich nicht.
- (4) A: Bring auch noch ein Pfund Tomaten mit!  
 B: Ja, das stimmt.

*'bad' fillers*

- (1) A: Harald hat ein neues Haus gekauft.  
 B: Ja, mache ich.
- (2) A: Hat Mirko ein neues Fahrrad?  
 B: Ja, ich erledige das.
- (3) A: Welches Kleid soll ich nehmen?  
 B: Ja, das stimmt.
- (4) A: Wie ist sein Name?  
 B: Nein, das stimmt nicht.

## References

- Abels, K. 2010. Factivity in exclamatives is a presupposition. *Studia Linguistica* 64.141–157.
- Bennis, H. 1998. Exclamatives! In *Linguistics in the Netherlands 1998*, ed. by R. van Bezooijen & R. Kager, 27–40. Amsterdam: John Benjamins.
- Castroviejo Miró, E. 2008. Deconstructing exclamations. *Catalan Journal of Linguistics* 7.41–90.
- Chernilovskaya, A. 2014. *Exclamativity in Discourse: Exploring the Exclamative Speech Act from a Discourse Perspective*. PhD dissertation, Utrecht University.
- d’Avis, F. 2002. On the interpretation of *wh*-clauses in exclamative environments. *Theoretical Linguistics* 28.5–33.
- d’Avis, F. 2016. Different languages – different sentence types? On exclamative sentences. *Linguistics and Language Compass* 10.159–175.
- Delsing, L. O. 2010. Exclamatives in Scandinavian. *Studia Linguistica* 64.16–36.
- Espinal, M. T. 1997. Non-negative negation and *wh*-exclamatives. In *Negation and Polarity: Syntax and Semantics*, ed. by D. Forget, P. Hirschbuhler, F. Martineau & M. L. Rivero, 75–93. Amsterdam: John Benjamins.
- Farkas, D. & K. Bruce. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27.81–118.
- Grimshaw, J. 1979. Complement selection and the lexicon. *Linguistic Inquiry* 10.279–326.
- Grosz, P. G. 2012. *On the Grammar of Optative Constructions*. Amsterdam: John Benjamins.
- Gutiérrez-Rexach, J. 1996. The semantics of exclamatives. In *Syntax at Sunset: UCLA Working Papers in Linguistics*, ed. by Edward Garrett & Felicia Lee, 146–162. Los Angeles, CA: UCLA.
- Gutiérrez-Rexach, J. 2001. Spanish exclamatives and the interpretation of the left periphery. In *Romance Languages and Linguistic Theory 1999*, ed. by J. Rooryck, Y. de Hulst & J. Schrotten, 167–194. Amsterdam: John Benjamins.
- Gutzmann, D. 2015. *Use-Conditional Meaning: Studies in Multidimensional Semantics*. Oxford: Oxford University Press.
- Nouwen, R. & A. Chernilovskaya. 2015. Two types of *wh*-exclamatives. *Linguistic Variation* 15.201–224.
- Okon-Singer, H., Hendler T., Pessoa L. & A. J. Shackman (eds.). 2015. The neurobiology of emotion-cognition interactions. Special issue of *Frontiers in Human Neuroscience* 9.
- Pessoa, L. 2013. *The Cognitive-Emotional Brain: From Interactions to Integrations*. Cambridge, MA: MIT Press.
- Postma, G. 1996. The nature of quantification of high-degree: *very*, *many*, and the exclamative. *Linguistics in the Netherlands* 13.207–220.
- Potts, C. 2005. *The Logic of Conventional Implicatures*. Oxford: Oxford University Press.
- Potts, C. 2007. The expressive dimension. *Theoretical Linguistics* 33.165–198.
- Rett, J. 2008. *Degree Modification in Natural Language*. PhD thesis, Rutgers University.
- Rett, J. 2011. Exclamatives, degrees and speech acts. *Linguistics and Philosophy* 34.411–442.
- Roberts, C. 1996. Information structure in discourse: Toward a unified theory of formal pragmatics. *Ohio State University Working Papers in Linguistics* 49.91–136.
- Roberts, C. 2012. Information structure in discourse: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5.1–69.
- Sauerland, U. & P. B. Schumacher. 2016. Pragmatics: Theory and experiment growing together. *Linguistische Berichte* 245.3–24.
- Truckenbrodt, H. 2013. Satztyp, Prosodie und Intonation. In *Satztypen des Deutschen*, ed. by J. Meibauer, M. Steinbach & H. Altmann, 570–601. Berlin: Mouton de Gruyter.
- Villalba, X. 2008. Exclamatives: A thematic guide with many questions and few answers. *Catalan Journal of Linguistics* 7.9–40.
- Villalba, X. 2017. Non-asserted material in Spanish degree exclamatives: An experimental study on extreme degree. In *Advances in the Analysis of Spanish Exclamatives*, ed. by I. Bosque, 139–158. Columbus, OH: Ohio State University Press.