

On *wh*-exclamatives and noteworthiness^{*}

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1 Introduction

We explore a new approach to the semantics of *wh*-exclamatives, like (1).

(1) What a beautiful song John wrote!

We will aim for two things: (i) extend the empirical focus beyond English *what*- and *how*-exclamatives, to include exclamatives common in other languages that are based on other *wh*-words; (ii) counter the common assumption that exclamative semantics needs to involve some kind of scalar mechanism.

Before we motivate and present our analysis, a word of caution is in order. To simplify matters for this short paper, we will be discussing the semantics of exclamatives like (1) in terms of truth-conditions. Such a move blatantly ignores the fact that an utterance of (1) counts as a speech act that comes with its own intricate and interesting properties, properties which will be quite different from those of an assertion. For the purpose of this short paper, however, we will remain agnostic as to what role the truth-conditions play in the pragma-semantics of exclamatives. (See Rett, 2012; Zanuttini and Portner, 2003, for extensive discussion.)

2 Background: scalarity in exclamative semantics

Rett 2012 proposes that the semantics of *wh*-exclamatives involves degree intensification (Cf. Castroviejo, 2006; Rett, 2008a,b, for related approaches). On her approach, the logical form of (1) will specify the (derived) degree predicate in (2). (See Rett's paper for details of the derivation.)

(2) $\lambda d. \exists x [song(x) \wedge wrote(j, x) \wedge beautiful(x, d)]$

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According to Rett, an utterance of a *wh*-exclamative involves the speaker expressing that it is noteworthy that the degree property corresponding to the exclamative is instantiated by some value that exceeds the relevant contextual standard (in the case of (1) the standard of beauty w.r.t. songs).

If, as in (3-a), a *wh*-exclamative lacks an overt gradable adjective, a measurement operator $\lambda d.\lambda x.\mu_\alpha(x) = d$ is inserted. This operator basically plays the role of a silent adjective, where the relevant measurement dimension α is determined contextually. Via this operator, (3-a), too, ends up expressing a degree property, namely how α (how *beautiful*, how *weird*, how *complex*, etc.) John's song was. This is the predicate in (3-b). An utterance in (3-a), then, means that the speaker expresses that it is noteworthy that the degree of α of John's song exceeds the standard.

- (3) a. What a song John wrote!
 b. $\lambda d.\exists x[\text{song}(x) \wedge \text{wrote}(j, x) \wedge \mu_\alpha(x) = d]$

Rett's approach is to treat a *wh*-exclamative as a degree phenomenon and she argues that it could really be nothing else. In particular, she argues that the noteworthy evaluation that is part of the *wh*-exclamation is necessarily directed at predicate of *degrees*. She does so on the basis of scenarios like (4).

- (4) *Imagine that by some strange coincidence someone repeatedly picks out the same two cards (say, the $3\heartsuit$ and the $6\heartsuit$) from a (repeatedly reshuffled) pack of cards. Mary has seen this happen and now witnesses this person pick $3\heartsuit$ and $6\heartsuit$ yet again.*

Rett observes that it is now infelicitous for Mary to utter (5):¹

- (5) What cards he picked!

What is essential to this scenario is that no matter how noteworthy the events of picking these cards were, there is nothing particularly special about the cards that were picked. That is, there is no α such that $\mu_\alpha(3\heartsuit \oplus 6\heartsuit)$ returns a particularly high degree. In Rett's approach, this then explains why (5) is infelicitous. Rett concludes that *wh*-exclamatives are subject to a *degree restriction*: they always express that the degree to which something holds is deemed noteworthy by the speaker.

¹ We have encountered several native speakers of English (including an anonymous reviewer) who disagree with this judgment or who at least can come up with similar scenarios in which an exclamative *is* felicitous. Below, we will show that in languages like Dutch some exclamatives are generally felicitous in a scenario like (4). We would guess that the speakers who disagree with Rett's observation speak a dialect of English that is in this respect close to Dutch. The fact that such dialects exist is further supported by the fact that we have found speakers of English that have *who*-exclamatives in their language, while Rett assumes that such exclamatives do not exist in English since English *who* is incapable of ranging over degrees. Despite such exceptions, we believe Rett's observations are important and should be taken seriously, given the clear support they receive from the vast majority of speakers.

It is worth remarking that it is not necessary to interpret Rett’s observation concerning (4) and (5) as saying something about the involvement of degrees in the semantics of *wh*-exclamatives, but that instead one could argue that it just shows that *wh*-exclamatives always involve some kind of *scalar* mechanism. For instance, we believe that the influential scalar approach of Zanuttini and Portner (2003), although compositionally less specific, is in principle suitable for dealing with examples like (5) equally well (pace Rett’s own assessment of that work). In the interest of space, we refrain from a detailed discussion and comparison.

3 The scope of noteworthiness

Rett claims that it should be impossible to insert silent measurement operators using dimensions like *noteworthiness*, *unexpectedness* or *surprise*. Rett suspects that such a choice would wrongly predict that *What cards he picked!* is felicitous in the card-picking scenario of (4). This does not seem entirely accurate to us. Unlike (say) $A\heartsuit \oplus A\diamondsuit \oplus A\clubsuit \oplus A\spadesuit$, it seems to us that the pair $3\diamondsuit \oplus 6\heartsuit$ lacks any noteworthy features. Also, what is surprising is not the pair of cards itself, but rather *that they were picked*. Moreover, Rett’s restriction on silent measurement operators is surprising given the possibility of having overt adjectives associated to those same dimensions in *wh*-exclamatives, as in (6).

(6) What a surprising turn of events!

This discussion points in the direction of our main argument: cases like (4)/(5) are not evidence of a degree (or scalarity) restriction, but rather point out that the noteworthiness evaluation is always directed at the referent of the *wh*-phrase. Call this the *locality restriction*: readings in which the μ applies to a structure that properly contains the *wh*-phrase, as in (7), are unavailable. Such degree predicates would incorrectly predict (5) to be felicitous in (4).

(7) $\lambda d. \exists x [\mu_{\text{noteworthy}}(\wedge \text{cards}(x) \wedge \text{picked}(h, x)) = d]$

4 Beyond English *what*-exclamatives

Whilst English only has *what*- and *how*-exclamatives, languages like Dutch, German and Russian allow for exclamatives based on other *wh*-words too. The example in (8) presents a Dutch *who*-exclamative, and (9) a Dutch *which*-exclamative. There are similar examples in other languages, but not in English.

(8) Wie ik net gezien heb! (9) Welke vrouw ik net gezien heb!
 who I just seen have which woman I just seen have

The meaning of these examples shows a contrast with English *what*-exclamatives. It is infelicitous to utter (8) or (9) in response to seeing a woman with some noteworthy feature, e.g. an exceptionally tall woman. These exclamatives *can* be used when the very fact that the speaker just saw the woman in question is

unexpected; for instance, as a reaction to seeing Mary, an in all senses absolutely normal woman, of whom everybody thought that she had left the country.

The approaches discussed in the previous study will have a hard time accounting for these examples.² This is first of all because these exclamatives lack the readings that these approaches account for in the case of *what*-exclamatives. Moreover, the available readings are close to the readings that were meant to be excluded as possible interpretations of *what*-exclamatives. For instance, (10) is felicitous in the card-picking scenario in (4).

- (10) Welke kaarten hij toen (weer) trok!
 which cards he then (again) pulled

As we discussed above, in the scenario there is no property such that $3\heartsuit \oplus 6\heartsuit$ has this property to a particularly high degree. What appears to be needed to account for the fact that (10) is felicitous in the given scenario is to break with the locality restriction and assume that the exclamative expresses the degree predicate in (7). This is not unproblematic, for we need the locality restriction to avoid predicting the Dutch *what*-exclamative in (11) to be felicitous in scenarios like (4), while in fact it behaves in complete parallel to its English counterpart.

- (11) Wat een kaarten hij toen (weer) trok!
 what a cards he then (again) pulled

5 Proposal

We propose that exclamatives directly express a noteworthiness evaluation and that exclamatives are not a degree phenomenon in Rett's sense. We furthermore categorise all *wh*-exclamatives in two distinct classes:

- Type 1:** expressing the noteworthiness of a referent of the *wh*-word
Type 2: expressing the noteworthiness of the proposition referenced
 in the exclamative

In addition to this, each *wh*-word introducing a *wh*-exclamative is specified for what kind(s) of noteworthiness it can mark. For example, both English and Dutch *what a*-exclamatives are type 1. Dutch *who* and *which* introduce *wh*-exclamatives of type 2.

As (12)-(15) show, type 1 exclamatives can be *reduced*, whilst type 2 exclamatives can not. This would be expected since the latter but not the former are dependent on a larger propositional structure. In Dutch, moreover, word order reflects the type 1/2 distinction. Dutch has SVO for main clauses, with V2, and SOV for embedded clauses. As (16)-(19) show, type 1 exclamatives may be either

² Rett assumes that *wh*-exclamatives can only be formed with *wh*-words ranging over degrees, i.e. *who*-exclamatives are predicted to be ungrammatical. This is a fine prediction for English, but obviously not for other languages. Even if this restriction is lifted for such languages, the desired readings for examples like (8) and (9) are not derived.

- | | | | |
|------|---|------|---|
| (12) | What a (beautiful) book! | (14) | *Wie! who |
| (13) | Wat een (mooi) boek! what a (beautiful) book | (15) | *Welk mooi boek! which beautiful book! |
| (16) | Wat maakte Jan een herrie! what made Jan a racket 'What a racket Jan made!' | (18) | Wat Jan een herrie maakte! what Jan a racket made 'What a racket Jan made!' |
| (17) | Wie ik net zag! Who I just saw 'You wouldn't believe who I just saw' | (19) | *Wie zag ik net! Who saw I just |

V2 or verb-final, whilst type 2 exclamatives are exclusively verb-final.

5.1 Wh-exclamatives of type 1

According to our proposal, the key ingredient to exclamative meaning is a noteworthy evaluation. The meaning that we propose for (20-a) is in (20-b) (though we will refine this shortly):³

- (20) a. What a song John wrote!
b. $\exists x[\text{song}(x) \wedge \text{wrote}(j, x) \wedge \text{noteworthy}(x)]$

How does this work? First, let us note that it is probably impossible to give a maximally precise semantic definition of the predicate *noteworthy*,⁴ just like it is impossible to give maximally precise truth-conditions for, say, (21-a) or (21-b).

- (21) a. The achievements of Sir Alex Ferguson are noteworthy.
b. It's noteworthy that Sir Alex Ferguson is still the manager of ManU.

Despite this semantic ineffability, we have clear intuitions on what is noteworthy. Take *blackberry*, *chicken liver and cauliflower cake*, which we consider almost indisputably noteworthy. Similarly, *the font used in this article* most probably counts as a clear case of something non-noteworthy. Here is our own intuition about the rough concept behind the label *noteworthy*: *an entity is noteworthy iff its intrinsic characteristics (i.e. those characteristics that are independent of*

³ An anonymous reviewer wonders how the exclamative picks up the individual that is being evaluated, given the general assumption that wh-phrases are not referential. Here we agree with Rett (2012) that wh-phrases in (type 1) exclamatives are best analysed as free relatives.

⁴ This is possibly a weakness of the approach, since this makes it difficult for opponents to our theory to show that something is *not* noteworthy in a situation in which an exclamative is used felicitously.

the factual situation) **stand out considerably** with respect to a comparison class of entities.

This definition should be taken *cum grano salis*. We believe that the concept of noteworthiness is at the core of what exclaimatives express, but we also believe that, as with any model-theoretic semantic analysis, a full characterisation of the concepts involved is outside the scope of our theory.⁵

Given the characterisation above, (20-b) is true if and only if the song written by John stands out considerably in some sense, compared to other songs. This can be because of many things (it being particularly good, or particularly weird, or particularly beautiful, etc.), which is as it should be.

If we apply the notion of noteworthy to the card-trick scenario, then it should be clear that the combination $3\heartsuit \oplus 6\heartsuit$ is not noteworthy. This makes type 1 exclaimatives infelicitous in the card-picking scenario. (Later, we will use the fact that the proposition that these cards were picked several times in a row *is* noteworthy.)

Of course, *noteworthy* is a gradable predicate. We will take this into account by adopting a vague predicate approach to degree predicates (but nothing hinges on this). So we will write $noteworthy(x)(c)$ to express that among the members of comparison class c , x would count as noteworthy. For (20-a):

$$(22) \quad \exists x[song(x) \wedge wrote(j, x) \wedge noteworthy(x)(\lambda y.song(y))]$$

In case there is a gradable predicate present in the *wh*-phrase, this predicate will become part of the comparison class, as in (23) (where c is the contextually determined comparison class for *beautiful*).

$$(23) \quad \begin{array}{l} \text{a. What a beautiful song John wrote!} \\ \text{b. } \exists x[song(x) \wedge beautiful(x)(c) \wedge wrote(j, x) \wedge \\ \quad noteworthy(x)(\lambda y.beautiful(y)(c) \wedge song(y))] \end{array}$$

Of course, the most salient reason for John's beautiful song to be a noteworthy beautiful song is that it was particularly beautiful, which accounts for the most natural reading of (23-a). However, there also exists a reading in which this *wh*-exclamative does not express how beautiful the song was, but that the beautiful song in question was noteworthy for some other reason (e.g. because it was very weird, unusually structured, or abnormally long):

$$(24) \quad \begin{array}{l} \text{Q: Did John write a beautiful song?} \\ \text{A: Yes he did, and whàt a beautiful song he wrote! It contained 36} \\ \quad \text{verses!} \\ \text{A': Yes he did, and whàt a beautiful song he wrote! It has just one chord!} \end{array}$$

⁵ Note further that the given 'definition' of noteworthiness applies to entities only, while below we apply *noteworthy* to propositions too. We refrain from spelling out a similar definition for the propositional use, but do point out that the flexible application of noteworthiness is reflected in the distribution of the natural language adjectives like *noteworthy*, as is shown by (21).

5.2 Wh-exclamatives of type 2

According to our proposal, Dutch *who* and *which* exclamatives differ from examples like (23-a) in that they do not involve the noteworthiness of the referent corresponding to the *wh*-phrase, but rather the noteworthiness of a proposition. For instance, for Dutch examples of the form *Who/which woman I just saw!* the interpretation in (25-a) is unavailable. Instead, the predicted reading is in (25-b), where the noteworthiness evaluation takes propositional scope.⁶ (We will leave the comparison class implicit. It suffices to assume it contains the speaker's experience.)

- (25) a. $\exists x[\text{saw}(I, x) \wedge \text{noteworthy}(x)]$
b. $\exists x[\text{noteworthy}(\wedge \text{saw}(I, x))]$

We will assume *noteworthy* to be factive. The form in (25-b) is true if and only if for some person, the true proposition that I saw this person is noteworthy.⁷

6 Discussion

6.1 No interaction with degree constructions

In our proposal, *wh*-exclamatives are not a degree phenomenon in the sense of containing a mechanism that targets degree arguments of gradable predicates. The high degree reading of exclamatives is due to the fact that noteworthy objects are objects that stand out by possessing some attribute to an exceptionally high degree. But this high degree is lexically accessed, not compositionally. The result is that we predict that proper degree constructions, i.e. those that target degree slots of adjectives, will not stand in the way of forming a *wh*-exclamative. For instance, the degree slot in (26) is presumably saturated by *extremely*, witness the incompatibility of having further degree modification if *extremely* is there, as in (27). On a degree approach, it would be difficult to account for why (26) is felicitous, since *extremely* and *what* would target the same degree slot. (Cf. Castroviejo-Miro (2008) for discussion.)

- (26) What an extremely nice man John is!
(27) a. *John is more extremely nice than Bill.
b. *John is too extremely nice.

⁶ More needs to be said on how this analysis is compositionally realised. We omit these details here given the limited space we have.

⁷ An anonymous reviewer wonders what the interaction is between noteworthiness and expectation. In particular, s/he wonders whether unexpectedness is a necessary condition for being noteworthy. This is an interesting question since expectation has played an important role in the characterisation of exclamatives in the literature (compare Rett (2012) and Zanuttini and Portner (2003)). It would be good to gain some ground regarding this issue, but we have to leave this for further research, also in the light of the general discussion concerning the concept of noteworthiness in section 5.1.

In our proposal, however, the degree slot of *nice* in (26) plays no role in the exclamative semantics.

6.2 An extension to *how*-exclamatives

In English, questions with *how* may form degree questions, as in (28-a). Given our proposal to abandon a degree semantics for *wh*-exclamatives, the question arises how we could account for exclamatives like (28-b).

- (28) a. How tall is John?
 b. How tall John is!

In particular, one might ask whether English *how*-exclamatives are type 1 or type 2. Although, we do not have any clearcut arguments for either choice, there is one reason to think that they are of type 1, and that is because they can be reduced, as in *How tall!*, *How bizarre!*, etc. We will leave a more decisive argumentation for a choice between type 1 and type 2 to further research. It will be informative, however, to explore the two options a little bit.

How-exclamatives as type 1 If *how*-exclamatives are indeed of type 1, we get the following semantics for (28-b).

- (29) $\exists d[tall(j, d) \wedge noteworthy(d)(c)]$

There are some problems with these truth-conditions. First of all, it is not clear what the comparison class *c* should look like, but let us assume that this is just some set of degrees of tallness that makes contextual sense. Second, and more seriously, it is unclear when a degree is or is not noteworthy. For instance, it makes no sense to assume that $noteworthy(210cm)(c)$ is true because people who are that tall are remarkable, for that would make 210cm towers exclamation-worthy. However, it is not completely inconceivable that we can have attitudes to degrees. What we need is a notion of degree that expresses the relative positions entities take up in the relevant ordering. We could, for instance, use the universal scale of Bale (2008), where every entity is mapped to a universal degree representing its relative position in the (finite) weak order of entities under discussion. For now, however, we'll use a different mechanism originating from Klein (1980). We'll assume that *how* in exclamatives does not range over a fine-grained scale of degrees, but rather over a coarse-grained set of so-called degree functions. Instead of interpreting adjectives as degree relations, we take them to be relations between comparison classes and entities. Degree modifiers like *very* manipulate the comparison class argument (Klein, 1980; Kennedy and McNally, 2005).

- (30) $\llbracket tall \rrbracket = \lambda c \lambda x.tall(x)(c)$ "x is tall in class c"

- (31) $\llbracket very tall \rrbracket = \lambda c \lambda x.tall(x)(\lambda y.tall_c(y))$

So, being *very tall* just means being tall with respect to the class of tall individuals. Functions like that expressed by *very* are called degree functions. We can create an ordering of degree functions as follows. Let D_0 be $\lambda P \lambda c \lambda x.P(c)(x)$

and D_1 correspond to “very”, that is, $D_1 = \lambda P\lambda c\lambda x.P(P(c))(x)$. The next, stricter degree function is $D_2 = \lambda P\lambda c\lambda x.P(P(P(c)))(x)$. Generally, for $n > 0$: $D_n = \lambda P\lambda c\lambda x.P(D_{n-1}(P))(c)(x)$. The exclamative semantics could now be given in terms of such functions:

$$(32) \quad \exists D[(D(\text{tall}))(c)(j) \wedge \text{noteworthy}(D)]$$

Assume that things that are *very very* A are noteworthy, as are things that are *very very very* A, etc. In other words, $\text{noteworthy}(D_n)$ is true for $n \geq 2$. This means that (28-b) is felicitous if John is (at least) *very very tall*. In this setup we now do not predict that towers of John’s height are exclamation-worthy, since those towers will not count as *very very tall*.

How-exclamatives as type 2 When we consider the option of *how*-exclamatives being of type 2, we get (33) for (28-b).

$$(33) \quad \exists d[\text{noteworthy}(\wedge \text{tall}(j, d))]$$

This is completely parallel to the semantics that Nouwen (2011) gives for (34-a), as in (34-b). (Assume that the predicate *surprising* is factive).

$$(34) \quad \begin{array}{l} \text{a. John is surprisingly tall.} \\ \text{b. } \exists d[\text{surprisingly}(\wedge \text{tall}(j, d))] \end{array}$$

The parallel is intuitively attractive. Both evaluative adverbs of degree like *surprisingly* and exclamatives seem to combine high degree with some sort of attitude. The page limit for this paper does not allow for a more thorough comparison of (28-b) and (34-a), nor for a proper evaluation of (33).

7 Conclusion

We have identified two kinds of *wh*-exclamatives: those that involve the noteworthiness of the *wh*-referent and those that involve a noteworthiness evaluation of the open proposition in the exclamative. Our approach simplifies the semantic mechanism and improves the empirical coverage over competing, scalar approaches.

An anonymous reviewer suggests a more radical approach than ours. The fact that type 2 exclamatives are not found in all languages and are syntactically distinct from type 1 exclamatives could mean that they do not form a common semantic class with type 1 exclamatives. In other words, our attempt at a unified analysis (involving noteworthiness) is misguided, given the many differences between the classes. This is an interesting thought, which we have not pursued for several reasons, most importantly because intuitively there is considerable semantic overlap between the two classes. (We characterise this overlap as the concept of noteworthiness). Furthermore, it was one of our main goals for this paper to point out an oddity in the literature: an analysis like the one in Rett (2012) is only suitable for English exclamatives, whilst the completely different analysis given in d’Avis (2002) is only suitable for *who*-exclamatives in languages

like German and Dutch. We show that such papers are not in opposition to each other, but analyse different types of exclamatives. At the very least, we hope to have broadened the empirical burden of theories of *wh*-exclamatives.

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