

Two types of wh-exclamatives¹

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Abstract – We study a particular aspect of the semantics of matrix wh-exclamatives. In particular, we focus on the relation between fairly straightforward morpho-syntactic properties of such structures and the kind of scalar meanings they express. We identify two types of wh-exclamatives: two distinct types of structures with two distinct types of scalar meaning. Languages differ with respect to which wh expressions serve in which of the two types.

Key words – Exclamatives, semantics, scalarity, questions

1. Introduction

This paper concerns matrix wh-exclamatives. These are matrix structures that resemble questions in containing question words, while they often (but not always) differ from questions in their word order and prosody. There are two question words that can occur in English matrix wh-exclamatives: *what* as in (1), and *how* as in (2).

(1) What a wonderful song she sang!

(2) How beautiful the birds sing!

Given the occurrence of wh-expressions in exclamatives, one might wonder whether (wh-)exclamatives and questions share certain grammatical or semantic mechanisms. However, the resemblance between these two types of clauses is arguably quite superficial. Whilst (2) has an obvious corresponding question (*How beautiful do the birds sing?*), there is no such interrogative counterpart to (1). Reversely, not every *what* question can be turned into a *what* exclamative, witness (3) / (4). More generally, English lacks *who*, *where*, *which* and *why* matrix exclamatives (Elliott 1974).

(3) What did John eat?

¹ This paper is a descendent of the extended abstract published as Chernilovskaya & Nouwen 2012, where we offer an initial rough sketch of the distinction between two types of wh-exclamatives that is central to this article. In contrast to its parent, the current work offers an explicit model of cross-linguistic variation. Also, in contrast to its parent, this work does not offer a formal semantic model of the reported variation. Both authors were supported by a grant from the Netherlands Organisation for Scientific Research. The first author was additionally supported by funding from the European Research Council under the European Union's Seventh Framework Programme (FP/2007-2013) / ERC Grant Agreement no. 313502. We gratefully acknowledge this financial support. Moreover, we would like to thank Jeroen van Craenenbroeck, our anonymous referees, as well as audiences in Chicago, Montreal, Amsterdam and Utrecht for their invaluable help in improving this work.

- (4) *What John ate!
- (5) *Who I just saw!
- (6) *Where he lives!
- (7) *Which book he picked!
- (8) *Why John chose to move to the US!

We could very well imagine what an exclamative like (8) would mean. (Roughly, *the speaker is amazed at John's reason for moving to the US*). But despite the fact that there exists a corresponding question, *Why did John choose to move to the US?*, (8) is simply ungrammatical. The upshot is that even if there exists some relation between questions and exclamatives, this relation is not going to be a straightforward one.

To make things more complicated, the potential wh-exclamative clauses in (9)-(12) are felicitous in embedded contexts; for instance as complements of what are sometimes called *exclamative verbs*, verbs expressing an exclamative stance.

- (9) You wouldn't believe who they hired! (Michaelis 2001)
- (10) I can't believe where he lives!
- (11) I am amazed at which book he picked!
- (12) I am amazed at why John chose to move to the US!

Michaelis and Lambrecht (1996) as well as Michaelis (2001) discuss an influential intuition of what is behind these data. The idea is that wh-exclamatives have a scalar semantics. Michaelis analyses example (9) as being interpreted with respect to a scale of people, ranked in accordance to their incompetence with respect to the job. Thus, (9) expresses that the person hired is relatively (or, more accurately, surprisingly) high on that scale. Crucially, Michaelis assumes that such a scalar ranking of individuals corresponding to the question word *who* needs to be triggered by the syntactic context. In (9), the *you wouldn't believe* construction does exactly that, whilst in an example like (5) no such context is available and hence no suitable interpretation can be derived. Things are different for *how* exclamatives like (2), which are inherently scalar, given the fact that *how* questions may ask about the degree to which a certain scalar (i.e. gradable) property holds.

This idea of matrix wh-exclamatives being *inherently scalar* occurs throughout the literature in different guises. We should say immediately, however, that the rough sketch above raises several profound questions. On a technical level, it seems extremely difficult to us to construct a formal account of how syntactic context enables a wh-expression to adopt a scalar meaning if it does not carry one in unembedded environments. But more importantly, there are two empirical observations that are left unexplained. Both of these will play an important role below. Firstly, it is not clear why there exist *what* matrix exclamatives in English, since, unlike the case of *how*, there is no independent evidence that *what* can adopt a scalar meaning, except perhaps in its role as the relative pronoun in so-called *amount relative clauses* (cf. Rett 2011). Second, some languages allow for a whole range of matrix wh-exclamatives without there being any evidence of a scalar semantics for the corresponding question word. For instance, Dutch allows *who*, *which* and *where* exclamatives. Other similarly more permissive languages include German, Russian, Italian and Turkish.

- (13) Wie ik gisteren tegenkwam! (Dutch)
Who I yesterday came-across
(roughly) ‘You wouldn’t believe who I met yesterday!’
- (14) Welk boek hij nu aan het lezen is! (Dutch)
Which book he now on it read is!
(roughly) ‘You wouldn’t believe which book he’s reading now’
- (15) Waar hij op vakantie gaat! (Dutch)
Where he on holiday goes!
(roughly) ‘You wouldn’t believe where he goes on holiday to’
- (16) Kimleri gördük! (Turkish, Michaelis 2001)
who.pl.obj saw.pst.1pl
(roughly) ‘You wouldn’t believe who I saw!’
- (17) Neler bulduk! (Turkish, Michaelis 2001)
what.pl find.pst.1pl
(roughly) ‘You wouldn’t believe what we found!’

In this paper, we will study this kind of variation. In particular we will focus on the relation between the particular wh-expressions that occur in wh-exclamatives and the (scalar) meaning of the resulting exclamation. Our conclusion will be that scalarity plays a non-trivial role in what the exclamatives of a certain language look like. We will distinguish two kinds of wh-exclamatives, that involve scalarity in two distinct ways. Our goal is not to push a specific analysis of the data we uncover, but rather to provide a new descriptive foundation for future studies of the relation between (variations in) exclamative form and meaning.

Given the central role the meaning of exclamatives plays in this paper, we need to say something about (roughly) what such meanings are like. Exclamatives constitute non-assertive, expressive speech acts (e.g. Searle 1979, Castroviejo-Miro 2010, Chernilovskaya 2014). As such, it would be overly simplistic to characterize the meaning of a wh-exclamative purely in terms of its propositional content, for wh-exclamatives express that this content has caused the speaker to be amazed, surprised, bewildered, etc. In what follows, however, we will nevertheless often ignore this expressive attitudinal component and focus instead on what is the target of this attitude. That is, the part of exclamative meaning that interests us is exactly *what* the speaker is surprised about, amazed of, etc.²

²This also allows us to sidestep the open question of *what* attitude is expressed by wh-exclamatives. It is often descriptively noted that exclamation is about *surprise*. For instance, an exclamative like *what a tall man!* is often described to express that the man in question is taller than the speaker had expected (Elliott 1974; Castroviejo-Miro 2006; Castroviejo-Miro 2008; Rett 2008). Other authors (for instance, Zanuttini and Portner 2003) take the view that such a characterisation is too narrow and instead assume that wh-exclamation covers a much wider range of attitudes, including *surprise*, but also including things like *amazement*, *awe*, and *astonishment*. In our own theoretical work (AUTHORS 2012) we side with Zanuttini and Portner, when we claim that exclamatives express *noteworthiness*, a catch-all concept of the whole myriad of expressive attitudes.

2. Rett's card trick

What exactly does it mean to say that wh-exclamation is, in essence, a scalar phenomenon? Rett (2008; 2011) provides a cogent answer to this question, by devising a test that tells us whether or not an exclamative clause can have a clearly non-scalar meaning. Let us run through an example of such a test.³

Imagine John is doing a card trick. He blindfolds himself, then shuffles a deck of cards and seemingly randomly picks two cards: the three of diamonds and the six of hearts. He puts the cards back, shuffles again and once more picks two cards. Again, he picks 3 of diamonds and 6 of hearts. Then, he puts the cards back, shuffles again and, lo and behold, he picks the 3 of diamonds and 6 of hearts for a third time in a row. Witnessing this amazing run of events, Mary now utters:

(18) #What cards John picked!

The intuition is that (18) is infelicitous in this scenario. Crucial to the scenario is that there is no scalar property which the cards in question have to a particularly high degree. Rett interprets the fact that (18) is infelicitous in this scenario as indicative of the necessarily scalar nature of wh-exclamatives. Rett thus has a very specific take on the sense in which exclamatives are scalar. According to her they necessarily involve gradable properties and thus constitute a kind of degree construction. The exclamative in (18) is only felicitous in scenarios in which the cards in question are remarkably high-valued, remarkably pretty, surprisingly oddly shaped, etc. The card trick test shows that a wh-exclamative like (18) has to express surprise at such degree properties.

The anatomy of a card trick test is as follows. The test depicts a scenario in which the central object (or group of objects) is by itself truly *unremarkable*. On the other hand, the scenario does describe an *event* involving this object that *is* remarkable. A wh-exclamative based on a wh-expression referring to the object in question and containing reference to the said event is now expected to be infelicitous given the assumption that wh-exclamatives can only express scalar properties of wh-referents. We will say in such cases that the sentence *fails the card trick test*.

To provide another example of a card trick test, imagine that John is a completely unremarkable man. Mary, who is friends with John, expects him to be abroad on holiday, but then meets him in the street. An utterance of (19) in this scenario would be completely infelicitous. Once more, according to Rett this is because there is no gradable property that John has to a remarkably high degree. The fact that (19) is infelicitous thus supports the idea that wh-exclamatives are inherently scalar in the specific way Rett proposes them to be.

(19) #What a man I saw in the street!

In Rett's approach the observation that (18) and (19) fail the test is accounted for by assuming that *what* exclamatives always contain gradable predicates. That is, in an example like (20), *what* associates with the degree of beauty of the song that was sung. The exclamative thus ends up conveying the speaker's surprise, amazement, bewilderment, stupefaction, disbelief, etc. of *how beautiful* a song was sung.

³The particular test we use below, involving a card trick, finds its origin in Rett 2008.

(20) What a beautiful song she sang!

In examples like (18) and (19), no overt gradable property is available. For instance, for (18), the noun *cards* is non-gradable,⁴ as is the verb *to pick*.⁵ Rett therefore assumes that such examples contain covert measure functions that, effectively, enrich non-gradable expressions with a gradable structure. Although Rett's implementation is more advanced, for ease of exposition we can consider Rett's proposal as stipulating the availability of freely insertable covert adjectives. For instance, the underlying interpretable form of (18) is one of the following:

(21) What beautiful cards he picked!

(22) What high-valued cards he picked!

(23) What brightly coloured cards he picked!

(24) etc.

Since the cards in question (3 of diamonds + 6 of hearts) are not particularly beautiful, high-valued or otherwise striking by themselves in any respect, no such form will make (18) a felicitous exclamation in the card trick scenario. Except that, perhaps, one could think that the properties expressed by exclamatives themselves (surprising, amazing, etc.) are suitable characterisations of the two cards in question. Rett herself thinks so and accordingly she constrains the insertion of covert adjectives: gradable properties are freely insertable as long as they do not correspond to the very properties expressed by exclamatives themselves. So, whilst (18) can be about how *beautiful* or *bright* the cards are, it cannot express the degree of *unexpectedness* that came with the cards, for this is exactly what the card trick test shows to be impossible. In other words, Rett needs to exclude the possibility of (25) or (26) being underlying forms for (18).

(25) What unexpected cards he picked!

(26) What amazing cards he picked!

There is a subtle but important point to make here. What is absolutely clear is that, given the card-trick context, the set of card pairs may be ordered with respect to how surprising / amazing it would be were the conjurer to pick them, and, clearly, the combination of 3 of diamonds and 6 of hearts has the highest such degree. However, this is not to say that these cards themselves are thereby *amazing* or *surprising*, let alone *highly amazing/surprising*.

⁴Consider an example like:

(i) John is an unbelievable idiot.

This example talks about the degree of idiocy of John. It is not possible to, in a similar way, use the noun *card* to talk about degrees of card-ness, since that is an unavailable concept to start with. That is, it is hard to grasp what (ii) would mean.

(ii) #That is an unbelievable card.

See Morzycki 2009 for an analysis of adnominal degree modification.

⁵Compare **he picked a card very much* to *he likes me very much*.

Our point is that attitudes like *amazing* or *surprising* only pertain to objects *out of context*.⁶ They generally fail to pick up contextual expectance scales. If we do not expect John to turn up for a party, then we can make reference to the low position of John on the contextually induced scale of expectance by using a particle like *even*, as in *Even John came*. What we can't do is predicate *surprise* of John himself:

(27) Counter to our expectation, John came.
#He / That is surprising.

In our view, then, Rett does not need to stipulate that exclamative properties cannot be inserted in wh-exclamatives. If we did in the card scenario, we would be saying of 3 of diamonds and 6 of hearts that they are surprising in and of themselves, but they are not. Quite obviously, to exclaim *What a man!* of someone is not to indicate that he is the subject of a surprising proposition, but rather that he has *intrinsically* surprising properties (e.g. he is particularly polite, erudite, strong, rude, unpleasant, etc. etc.).

This reasoning will become important below. The question we would like to ask now is whether Rett's card trick can serve as a test for the contention that grammatical wh-exclamative forms are always scalar. The idea would be to think that (29) is a prediction of (28).

(28) *Matrix wh-exclamatives are inherently scalar.*

(29) *Languages only have matrix wh-exclamative forms that fail Rett's card trick test*

For English, this works fine. Even though we have no independent evidence of a scalar semantics for English *what*, it still occurs in wh-exclamatives. As shown above, when it does the resulting form will fail the card trick test, by which we have evidence that the wh-exclamative has received a scalar interpretation.

Can we now move on to apply the card trick test in more cases, thereby systematically giving support for (28)? We cannot. First of all, Rett herself uses tests like these to show that wh-exclamation involves *degree* semantics. There are clear scalar aspects to gradability, but to say that wh-exclamatives are scalar constructions is far less specific than to say that they are degree constructions. In other words, Rett's cards trick may simply point out a very specific subset of scalar phenomena involved in wh-exclamatives, namely those that have to do with degree intensification of an implicit or explicit gradable property. It could be that all wh-exclamatives are scalar, but only some are degree constructions. In that case, Rett's test would fail to support (28). Second, as we will see below, there are plenty of cases of what appear to be wh-exclamative forms that falsify (29).

In what follows we will show that Rett's card trick nevertheless sheds light on variation in wh-exclamative forms. It does so not by showing that the felicitous forms generally fail the test, but by showing that there is a stable cross-linguistic pattern of those forms that fail and those that pass the test. That is, what Rett's trick appears to show us is that there are *two kinds of wh-exclamative structures* that differ in their scalar semantics.

⁶Thanks to two anonymous reviewers of an earlier incarnation of this work for pointing out that this particular aspect of our story was not made explicit enough in an earlier version. The ingredients of the discussion below (though not its direction) were suggested by them.

This semantic difference is exactly what the card trick test is sensitive to. However, our take on what the card trick does is somewhat different from what Rett envisioned. In a card trick scenario, the cards are unremarkable entities while the event the cards partake in *is* remarkable. Thus, one could see the card trick test as distinguishing two kinds of exclamative attitudes: surprise (amazement, stupefaction, etc) at the wh-referent versus surprise (etc.) at the event this referent is said to be part of. The card trick test shows that *what* exclamatives in English express an attitude on the level of the wh-referent only.

For what follows we distinguish two possible interpretations exclamatives may have:^{7,8}

- (30) *i-level interpretation*: an exclamative attitude towards the wh-referent. We will call this *i-level* exclamation: the expressive attitude targets the individual singled out by the wh phrase. If a wh-exclamative has this type of interpretation, it will fail the card trick test.
- (31) *e-level interpretation*: an exclamative attitude towards the event the wh-referent is said to take part in. We will call this *e-level* exclamation: the expressive attitude targets the event rather than the wh-referent. If a wh-exclamative has this type of interpretation, it will pass the card trick test.

The *i-* versus *e-*level distinction crosscuts the notion of scalarity we will adopt from now on. Exclamatives are always *scalar* in some sense. For *i-level* interpretations, the wh-referent can be placed on a scale containing other referents. It will outrank most of those with respect to the degree it has a certain salient (or given) property. For *e-level* interpretations, the event in question can be compared to alternative events, where the relevant comparison is to what extent this event is surprising, noteworthy, etc.

Before we continue, we should note that the card trick test, and thus the notions of *i-level* and *e-level* fail to apply to some wh-exclamatives. In adverbial exclamatives, such as English *how* exclamatives, the wh-referent is a degree. This makes it hard if not impossible to formulate card trick scenarios. (See also Chernilovskaya & Nouwen 2012 for discussion.) This is why, for now, we will avoid discussion of this group of wh-exclamatives and focus on argument wh-exclamatives only. We turn to the adverbial group at the end of this article.

⁷ An anonymous reviewer notes that there is a danger of terminological confusion here. Rett 2012 calls the type of interpretation that passes a card trick test *the individual interpretation*, since in those meanings the speaker didn't expect the individuals in question to be part of the reported event. She then goes on to show that English wh-exclamatives lack such individual interpretations. Our notion *i-level* is entirely different: it involves the speaker's surprise at the individual itself, independent of the reported event. What Rett calls the individual interpretation is what we call *e-level*.

⁸ There is a tricky question here whether some exclamatives may have both an *i-level* and an *e-level* interpretation. If a wh-exclamative passes the card trick test, then it must have an *e-level* interpretation, but it does not exclude the possibility that it has an *i-level* interpretation at the same time. Our assumption will be, however, the level of interpretation is structural in nature: the exclamative attitude either targets the wh-referent or the event. In the former case, we will say that there is an *i-level* interpretation, in the latter an *e-level* interpretation, even though, in that case, the interpretation may still be compatible with an *i-level* meaning as well. Thanks to Jeroen van Craenenbroeck asking for more clarity on this important point.

According to Rett, English exclamatives always fail the card trick test. In our spin on this test, we would reinterpret Rett's observation as saying that English exclamatives are always interpreted as *i*-level. We indeed think this is right, but in what follows, we would like to add to this that, cross-linguistically, both types of meanings are attested. Thus, Rett's card trick can provide us with a powerful diagnostic as to how different exclamative forms in different languages influence the resulting scalar meaning. That is, we propose to distinguish two kinds of *wh* exclamative structures, one of which yields *i*-level interpretations while the other comes with *e*-level meanings. Before we turn to data in support of this, we should say a few words on the languages we will focus on. Our sample will be a rather modest set of, mostly Germanic, languages. This will allow us to make rather straightforward comparisons and to formulate strong generalisations of what variation in *wh*-exclamative paradigms looks like. Testing and extending these results beyond this modest sample is left to future research.

3. Two kinds of *wh*-exclamatives

While English offers support for (29), other languages prove it false. At the beginning of the paper, we mentioned Turkish and Dutch as two examples of languages with *who* exclamatives. Crucially, in these languages, matrix *who* exclamatives express *e*-level exclamation. (Other examples are German, Russian and Hungarian.) Let us illustrate this with a few examples.

According to Rett's card trick test, in English, an exclamative like (32) can only express that the book in question was particularly *P*, where *P* is some gradable property of the book. So, (32) can express that the book John is writing is surprisingly long or beautiful or revealing etc. (*i*-level), but not that it is surprising that he is writing a book (*e*-level).

(32) What a book John wrote.

In Dutch *who*-exclamatives we see exactly the opposite. Take (33).⁹

(33) Wie ik net op straat tegenkwam!
who I just on street encountered

This example is felicitous in a scenario (akin a card trick scenario) where the speaker for some reason or other did not expect to encounter the person she encountered. It is infelicitous in Dutch to utter (33) in a situation in which the speaker has just met an extremely tall man in the street and she wants to communicate her surprise at the man's height. Nor is it felicitous to utter (33) in any other scenario central to which is some extreme, surprising or noteworthy property of the referent of the *wh*-expression. In other words, (32) fails the card trick test (i.e. it is *i*-level), while (33) passes it (i.e. it is *e*-level).

⁹ Here and in what follows we will refrain from providing a translation of the interpretation of non-English examples. This is because there are no English *wh*-exclamatives that express the same exclamation. One can approximate the meaning by using an embedded exclamative like "You wouldn't believe who I just encountered on the street". However, it is unclear to us whether such structures really express the same range of attitudes that matrix *wh*-exclamatives express and we are therefore hesitant to use them in glosses.

One might think that (33) is infelicitous in the scenario with the extremely tall man since the *wh*-expression leaves no syntactic room to insert a covert adjective (*tall* in this case). However, this is made implausible given the fact that Dutch *which* exclamatives (which, in the absence of NP-ellipsis, obviously include a noun) behave exactly parallel to (33). That is, (34) is also infelicitous in a situation in which the speaker just met an extremely tall (or beautiful, arrogant, etc.) man.

(34) Welke man ik net op straat tegenkwam!
which man I just on street encountered

So, Dutch *who* and *which* exclamatives are felicitous only in situations that resemble the situations in which English *what* exclamatives are *infelicitous*. In fact, in the card trick scenario, we can felicitously utter a Dutch *which* exclamative:

(35) Welke kaarten hij toen (weer) trok!
which cards he then again picked

In summary, *who* and *which* exclamatives in Dutch differ from English in two ways: (i) they are grammatical, whilst they are not in English; (ii) they are not scalar in the same sense that English exclamatives are: they are *e*-level, rather than *i*-level. However, it would be overly simplistic to now conclude that some scalarity parameter associated to exclamatives is set differently in languages like Dutch. This is because Dutch *what* exclamatives are again completely parallel to the English case. In contrast to (35), and like the case of English presented in the previous section, (36) is infelicitous in the card trick scenario and is thus *i*-level.¹⁰

(36) Wat een kaarten hij toen (weer) trok!
what a cards he then again picked

As in English, (36) is only felicitous in a scenario in which the cards in question are placed high on some scale, because they were exceptionally beautiful or high-valued, etc.

The *e*-level scalarity of *who* and *which* exclamatives may appear to be a cross-linguistically general pattern: Whenever a language allows a *who* / *which* exclamative, it will assign to such a structure an *e*-level interpretation. It turns out that this does not hold, but, first, here is an example from Hungarian that would support such a hypothesis.

(37) (Hogy) kiket láttam az utcán!
Comp who.PL.ACC saw.1SG the street.on

To illustrate a situation in which such exclamatives are felicitous, imagine a speaker who expects John and Mary to be on holiday somewhere far away, but then runs into them on the street. Once more, this type of exclamative is infelicitous in a situation in

¹⁰The attentive reader may wonder about the singular indefinite *een* combining with the plural noun *kaarten*. Below we will see that this use of the indefinite article is an integral part of this particular exclamative construction.

which the speaker runs into a couple with a particularly remarkable feature (they are both extremely tall, or they are wearing exactly the same outfit, etc.)

Nevertheless there are cases where *who* exclamatives or *which* exclamatives are clearly *i*-level scalar. Swedish, for instance, uses *which* where in English exclamatives one would find *what*. Abels and Vangsnes (2010) give the following example.

(38) Vilken lärare du har!
which teacher you have

An example like (38) is compatible with a situation in which the speaker wishes to point out the surprising features of the teacher in question, but not with a situation in which the attention goes to, say, the fact that the identity of the addressee's teacher is different from expected.

The preliminary conclusion we would like to draw from the above is that there are two kinds of exclamatives:

Two types of exclamatives

Type 1: wh-exclamatives that are scalar in the i-level sense (fail the card trick test)

Type 2: wh-exclamatives that are scalar in the e-level sense (pass the card trick test)

We could have said that there are *i*-level and *e*-level exclamatives, thus suggesting that the distinction we are proposing in this article is purely semantic. Below, however, we will show that the semantic distinction is mirrored in syntax, which is why we now have introduced terminology, type 1 versus type 2, that properly subsumes the interpretational variation.

English only hosts type 1 wh-exclamatives. Swedish is exactly comparable. That is to say that *who* and *what* exclamatives are simply ungrammatical in Swedish, witness (39) and (40) (L.-O. Delsing, p.c.).

(39) *Vem jag träffade igår!
Who I met yesterday

(40) *Vad jag köpte igår!
What I bought yesterday

Other languages we looked at above, however, have both type 1 and type 2 exclamatives. Here is a partial overview:¹¹

(41) **English:**

– Type 1: *what* (*a*)

(42) **Swedish**

– Type 1: *which*

¹¹For reasons of exposition, this is an extremely limited overview of type 2 exclamatives. We have refrained, for instance, of giving any details about *when*, *where* and *why* exclamatives, although in languages like Dutch these are perfectly acceptable in type 2 exclamatives. What is important, however, is that the table below exhausts the type 1 exclamatives of these languages. Note, that we have not classified adverbial *how* exclamatives. See below for discussion.

(43) **Dutch**

- Type 1: *what (a)*
- Type 2: *who, which, what, ...*

(44) **Hungarian**

- Type 1: *what kind*
- Type 2: *who, which, what, ...*

In summary, we have shown that there exist *wh*-exclamatives that pass Rett's test. As a consequence the card trick points at a semantic distinction between two kinds of *wh*-exclamative forms. This is the *i*-level / *e*-level distinction. That is, the *i* versus *e* distinction is the semantic side of the type 1 / 2 distinction. What we will show next is that there is also a morpho-syntactic side to the two classes of *wh*-exclamatives.

4. The morpho-syntax of the type 1 / 2 distinction

The distinction between kinds of *wh* exclamatives we are proposing is not just reflected in the semantics. In languages like Dutch, the two kinds of exclamatives have different word order. Dutch has SVO for main clauses, with V2, and SOV for embedded clauses. As the following examples show, Dutch type 1 exclamatives may either be V2 or verb-final, whilst type 2 exclamatives are exclusively verb-final. That is, (45) is type 1 and V2, (46) is type 1 and verb-final. There is a contrast between (47) and (48). The former is type 2 and verb-final, which is grammatical. The latter is ungrammatical: it combines type 2 with verb second.¹²

(45) Wat maakte Jan een herrie!
What made Jan a racket
“What a racket Jan made!”

(46) Wat Jan een herrie maakte!¹³
What Jan a racket made
“What a racket Jan made!”

(47) Wie ik net zag!
Who I just saw

(48) *Wie zag ik net!
Who saw I just

Another discerning property for the type 1/2 property is *reducibility*. Type 1 exclamatives can and type 2 exclamatives cannot be reduced to structures containing only a *wh* phrase.

¹² Note that since Dutch type 2 exclamative structures have the word order of embedded clauses, they can embed under a wide variety of embedding verbs, including question-embedding verbs, which are said to typically ban exclamatives from their scope (Grimshaw 1979). Crucially, however, in such cases of embedding the interpretation is one of an embedded question, not one of an embedded exclamative. Since embedded questions have the structure of a type 2 exclamative, we think that this observation is quite expected and no conclusions can be drawn from it.

¹³ Or, alternatively, *Wat een herrie Jan maakte!*

(49) What a book!

(50) Wat een boek!
what a book!

(51) *Wie!
who

(52) *Welk (mooi) boek!
which beautiful book

In summary, there is some initial evidence that the type 1 / 2 distinction reflects two different structures. In fact, data like these may be seen as to support a view where exclamatives of the type 1 variety are the only *true* exclamatives. That is, one could hold on to a tight connection between wh-exclamation and *i*-level scalarity by dismissing type 2 exclamatives, with their more restricted word order and their (if you want) non-standard scalar semantics, as simply a phenomenon entirely different in nature from type 1 exclamatives. We believe there are many reasons not to go down that route.

First of all, it should be clear however that there is also a lot of common ground between type 1 and 2 exclamatives. In languages like Dutch, it is not that type 1 and 2 exclamatives have an entirely different word order, it is just that type 1 exclamatives have the additional option to be phrased in a different word order. Moreover, both type 1 and type 2 exclamatives express the same kinds of emotions/attitudes of the speaker, viz. that of surprise, amazement, etc. More importantly, type 1 and 2 exclamatives have the same speech act properties: they are non-assertive and non-interrogative; consequently one might say they are both vehicles for *expressive* speech acts. (See Chernilovskaya 2014 for extensive discussion and key references.) For instance, both type 1 and type 2 exclamatives are unsuitable as answers to questions, unlike regular assertions. Also, answering a wh-exclamative is completely infelicitous, irrespective of whether it concerns type 1 or type 2.

Such considerations do leave open a possibility that is sometimes mentioned in the literature.¹⁴ In the literature on wh-exclamatives, at least two authors have warned against confusing wh-exclamatives and rhetorical questions, viz. Castroviejo-Miro 2006 and Rett 2011. Rett does so on the basis of examples like (53).

(53) How beautiful is my cat!? (Rett 2011)

Rett observed that (53) can get a falling intonation pattern, in which case she would classify (53) as a wh-exclamative. But it could also have an “emphatic rising pattern” (Rett 2011, 6), which, according to Rett, would make a structure like this a rhetorical question. The differences in meaning are subtle. According to Rett, the rhetorical version is not naturally compatible with a situation in which the speaker expected the

¹⁴ Thanks to an anonymous reviewer for stressing the relatively large role that rhetorical questions have played in the small amount of discussion of *who* exclamatives that exists in the literature, especially in response of Zanuttini and Portner’s claim that Paduan has *who* exclamatives.

cat to be less beautiful. For instance, imagine a situation in which the speaker has just bought a new cat and shows the animal to one of his friends. Uttering (53) in that situation would most naturally be using the rhetorical intonation pattern.

If Rett's observations are correct, then we should show that the type 1 / type 2 distinction does not amount to the exclamative / rhetorical question distinction. It is relatively straightforward, however, to dismiss the possibility that type 2 exclamatives are rhetorical questions. First of all, the observations regarding (53) are restricted to *how* exclamatives. Rhetorical *who* questions have the specific property of introducing a negative polarity (Han 1998). Consider (54):

(54) Who left the door open!?

It is hard to paraphrase rhetorical questions, but there are two clear components to the meaning of (54). First of all, it conveys that someone left the door open and, second, the speaker indicates that the door should not have been left open. As in English, the word order of Dutch rhetorical questions is the same as that of regular (unembedded) interrogatives, as in (55).

(55) Wie heeft nu weer de deur open gelaten!?

Who has now again the door open left

This word order is different from Dutch *who* (type 2) exclamatives, as in (56), which has the embedded question word order.

(56) Wie nu weer de deur open gelaten heeft!

Who now again the door open left has.

The interpretation of (55) is very different from that of (56). Most importantly, if (55) is read as a rhetorical question, it is compatible with the speaker not knowing who left the door open. On the contrary, (56) expresses surprise about the identity of the person leaving the door open. That is, the identity of this person is an essential part of the sentence's meaning.

Although we did not do a thorough cross-linguistic examination, we expect such differences between type 2 exclamatives and rhetorical questions to be systematic. In any case, the two are so distinct for type 2 exclamatives in Dutch, that it seems to us that the danger of confusing exclamation and rhetorical interrogation is less severe than in the case of Rett's example of English *how* exclamative in (53).

Given these considerations we believe it makes sense to consider type 1 and type 2 forms as variations of the same phenomenon, if you want, as variations of the same broad sentence type. In any case, as we will be arguing next, whilst from the perspective of English, it is tempting to consider type 1 exclamatives as the prototypical exclamative *wh*-constructions and type 2 exclamative as the more exotic species, there are reasons to believe that quite the opposite is the case. There exist morphosyntactic requirements, for instance, that are restricted to (a subclass of) Type 1 exclamatives only. Let us turn to Dutch once more to illustrate this. Above, we noted that (36), repeated here as (53), is infelicitous in a card trick scenario. However, note that it is wrong to call this a *what* exclamative. A more appropriate term for such

a structure would be a *what a* exclamation: The indefinite article *een* ('a') cannot be part of the wh noun phrase, since it only goes with singular nouns and *kaarten* (cards) in this example is plural. (That is, *een kaarten* is an ungrammatical noun phrase.) Dutch *what* exclamatives that lack such an indefinite behave similar to *who* and *which* exclamatives. For instance, in contrast to (57), (58) is felicitous in the card trick scenario.

(57) Wat een kaarten hij toen (weer) trok! (type 1)
what a cards he then again picked

(58) Wat hij toen weer trok! (type 2)
what he then again picked

Similarly, Dutch has an archaic usage for *welke* (which) that shows a similar pattern:

(59) %Welk een kaarten hij toen (weer) trok! (type 1)
which a cards he then again picked
Infelicitous in the card trick scenario; archaic

(60) Welke kaarten hij toen (weer) trok! (type 2)
which cards he then again picked
Felicitous in the card trick scenario

In English, the indefinite article in a *what a* exclamation does import a number semantics. That is, (61) is simply ungrammatical.

(61) *What a cards John picked!

Nevertheless, there is some evidence that type 1 exclamatives in English are marked not just by the presence of *what*. For instance, whilst (62) and (63) are grammatical, using respectively singular *a* and a null determiner, the use of other determiners is prohibited.

(62) What a song!

(63) What songs!

(64) *What three songs!

(65) *What the song!

(66) *What some song!

In sum, it is too simplistic to divide the set of wh-exclamatives in a language into two types purely on the basis of which wh-word is involved. In many cases, type 1 exclamatives will crucially involve some kind of marker and in this way type 1 exclamatives are structurally more enriched than type 2 clauses. Another way to say this is that type 2 exclamatives, typically, bear more of a resemblance to (embedded) questions. Recall for instance that English lacks an interrogative correlate of *What a tall man John is!*. To illustrate this point a bit further let us introduce another language at this point, German, and review its use of *which* in exclamatives. The following discussion is based on Repp 2013 (who incidentally draws conclusions from the German data that are rather different from our overall conclusions).

In German questions, wh-determiners like *which* inflect for gender and number. This inflection may disappear in exclamatives.

(67) Welch*(er) Mann hast du geholfen? (German)
which.masc.sg man have you helped.
Which man did you help?

(68) Welch schwerer Irrtum! (German, Repp 2013)
which serious.masc.sg mistake
'What a serious mistake!'

(69) *Welcher schwerer Irrtum! (German, Repp 2013)
which.masc.sg serious.masc.sg mistake

Notice that (68) and (69) are reduced and therefore only candidates for type 1. Non-reduced exclamatives may indeed contain the inflected *which*:

(70) Welches Buch der Jan gelesen hat! (German, Repp 2013)
Which.masc.sg book the J. read has
'The book Jan read!'

Crucially, non-inflected *which* involves *i*-level exclamation. An example like (68) communicates how serious the mistake in question was. It cannot be used to say that it was surprising (or amazing) that the (serious) mistake was made. This contrasts with (70), which may express the speaker's surprise at the fact that Jan read the book he did, and is thus *e*-level. In summary, the picture for German exclamatives is as in (71):

(71) **German**

- Type 1: uninflected *which*
- Type 2: inflected *which*, inflected *who*, inflected *what*, ...

This picture provides a compelling illustration of the main point of this article: There are two types of wh-exclamatives. Syntactically, type 1 exclamatives involve non-standard wh-constructions, whereas type 2 exclamatives more accurately resemble questions. The non-standard constructions of type 1 go with an *i*-level interpretation. That is, they concern an exclamative attitude that targets the wh-referent. The type 2 variant of matrix wh-exclamatives goes with an interpretation that is subtly different. There, the expressive attitude does not target the wh-referent, but rather the event this referent is part of. In other words, type 2 constructions go with *e*-level meaning.

5. Adverbial wh-exclamatives

So far, we have only considered wh-phrases that function as arguments. We have not discussed any adverbial cases, such as English *how* exclamatives, for instance. Such exclamatives are typically *degree* related. It is important to compare such clearly degree-related structures to type 1 exclamatives, and this is indeed what we will do in this section. In particular, we will show that the wh-expressions in type 1 exclamatives are not degree adverbials and that, consequently, the distinction between type 1 and type 2 cannot be reduced to degree-related versus non-degree-related structures.

The following examples all express that the man in question is considerably tall:

(72) How tall he is!

(73) Wat is hij lang! (Dutch)
what is he tall

(74) Kor høg han er! (Norwegian)
How tall he is

(75) Vad han är lång! (Swedish)
what is he tall

(76) milyen magas embert (Hungarian)
how tall man.ACC

Such exclamatives fall outside the type 1 / 2 distinction. This is because such constructions operate within the AP domain and their scalarity is therefore tied in with that domain. One illustration of this is that such exclamatives are ungrammatical without a gradable predicate. This is best seen using Dutch adverbial *what* exclamatives. In (77) and (78), we use a numeral to make sure that we are not dealing with a (type 1) *what a / wat een* exclamative.

(77) Wat heeft Jan drie *(prachtige) boeken gelezen!
What has Jan three beautiful books read

(78) *Wat heeft Jan drie symfonische werken gecomponeerd!
what has Jan three symphonic works composed

The examples in (77) and (78) cannot be the Dutch type 1 *wat* exclamative, since such exclamatives require the presence of the indefinite article *een* (cf. example (57), see also Bennis et al. 1998). As the current examples show, the resulting structure is only grammatical if it can associate with a gradable adjective (as with *beautiful* in 73).

Given that these kinds of adverbial exclamatives operate in the AP domain, the relevant wh-referents are degrees not entities. This means we should be on the lookout for an alternative test to the card trick test. Rett 2008 offers an empirical argument that is separate from the card trick test that can inform us about the scalar nature of English *how* exclamatives. Rett points out that *how* questions may ask after degrees (79), manners and evaluations (both 80).

(79) How tall is John? (degree)

(80) Q: How does Buck ride his horse? (Rett 2008)
A: Elegantly (evaluation)
A: bare-backed (manner)

In contrast to *how* questions, *how* exclamatives cannot involve manners. That is, (81) can only be used to express that the speaker is surprised or amazed at how elegantly / beautifully / clumsily etc. Buck rides his horse.

(81) How Buck rides his horse!

It is infelicitous to use (81) to express surprise at the fact that Buck rides his horse bare-backed. Since evaluations, but not manners, are gradable, Rett concludes from these data that *how* exclamationatives are necessarily about degree. We fully agree with this, but we disagree with the wider conclusion that this shows that exclamationatives are generally scalar in the particular way Rett has in mind. A good illustration comes from Dutch. As we saw above in (77) and (78), adverbial (degree) exclamationatives are expressed using *wat* (what), even though Dutch degree questions use *how*.

(82) Hoe lang is Jan? (Dutch, degree question)
how tall is J.
'How tall is Jan?'

(83) Wat is Jan lang! (Dutch, degree exclamationative)
what is J. tall
'How tall Jan is!'

When we now turn to Dutch *how* exclamationatives, we see that they behave different from English ones. Such adverbial exclamationatives do not operate in the AP domain but rather in the VP domain. Crucially, (84) is fully compatible with either a manner or an evaluation reading.

(84) Hoe Jan zijn paard berijdt!
how J. his horse rides

On an evaluation reading, (84) may for instance mean that the speaker is impressed at how beautifully or how clumsily Jan rides his horse. As noted before, evaluations are gradable, and so Rett would conclude that such a reading is compatible with a degree account of wh-exclamation. Crucially, however, (84) may additionally also be used to express the speaker's surprise or amazement at the manner at which Jan rides his horse. For instance, it could express that the speaker did not expect Jan to ride his horse bare-backed.

We can conclude from this that not all adverbial wh-exclamationatives are scalar in the same sense. Dutch *how* exclamationatives allow for non-degree related readings that are completely absent from their English counterparts.

Despite this, however, it may be tempting to propose that the type 1 exclamationatives we discussed above (for instance English *what a* exclamationatives) are, in fact, adverbial in nature. This is especially so in the light of Rett's original analysis, which involves association to a possibly covert adjective in the wh phrase. In other words, given Rett's ideas, could we reduce type 1 exclamationatives to cases where the wh-word acts like an adverb of degree? There are several reasons to believe that this is too simplistic.

First of all, consider the following Dutch example:

(85) Wat heeft Jan een (prachtige) boeken gekozen!
What has Jan a beautiful books chosen

This is a type 1 exclamative, as can be seen by the singular indefinite article going with a plural noun. In contrast to the adverbial *what* exclamative in (77) (repeated here as (86)), the adjective in (85) is optional.

(86) Wat heeft Jan drie *(prachtige) boeken gelezen!
What has Jan three beautiful books read

This is a first clue that *wat* in (85) is not a degree adverb. As (86) shows, degree adverbial *wh*-words depend on the availability of (overt) gradable material.

In English type 1 *what a* exclamatives, adjectives are also optional.

(87) What a car!

Interestingly, when the adjective *is* present, a *what a* exclamative need not necessarily be used to express surprise (or whatever) at the extent to which the adjective applies. For instance, the following discourse is felicitous.

(88) Someone already told me that John had bought an outrageously expensive car, but, o boy, what an expensive car! This is more a racing car than anything else!

Granted, you need some help from intonation to get this right, but this is only to be expected if we want to set up a context in which the information that the car is ridiculously expensive is given. What this shows, once more, is that type 1 exclamatives are not constructions that involve a degree adverb. Clearly, *what* in (88) is independent of the AP in the *wh* phrase.

A final argument against a degree adverbial analysis of type 1 exclamatives comes from Dutch indefinite quantity noun phrases (comparable to English *a lot*, see below), illustrated in (89).

(89) Jan heeft een boel meegemaakt.
Jan has a lot experienced
'Jan has been through a lot'

Een boel is not gradable, as (90) shows. Also, there is no way to modify the noun *boel*.

(90) Jan heeft erg { veel / *een boel } meegemaakt.
J. has very much / a lot experienced
'Jan has been through a lot' (intensified)

(91) *Jan has een { grote / enorme / erge / mooie } boel meegemaakt.
Jan heeft a big / enormous / very / beautiful lot experienced.
Intended: 'Jan has been through a great many things'

Despite the restrictions in (90) and (91), Dutch *what a* exclamatives with such nouns are felicitous.

(92) Wat heeft Jan toch een boel meegemaakt.
What has Jan PRT a lot experienced.
'What a lot of things Jan has been through'

Since we cannot assume that *wat* in this example is adverbial to some degree predicate inside *een boel* and since we know that *een boel* itself is not gradable, we must conclude that *what* in is not a degree adverb. These data extend to English. In English, *a lot* is also not gradable.

(93) John ate a lot of apples.

(94) *John ate very (much) a lot of apples.

(95) John ate very many apples.

(96) What a lot of apples John ate!

Despite the non-gradable nature of *a lot*, (96) is grammatical. The conclusion we can draw from this is that the *wh*-words in type 1 exclamatives are not degree adverbs. As such, we have shown that the distinction between type 1 and type 2 exclamatives is a distinction that is not reducible to a distinction between AP domain (and thus degree-semantic) structures on the one hand and non-AP domain (and thus non-degree semantic) structures on the other hand.

Our study of adverbial *wh*-exclamatives has not been as extensive as that of argument *wh* exclamatives. This is mainly because the empirical test central to our proposal (the card trick test) fails to apply in these cases. Still, in the above discussion we have made clear that, in contrast to English, Dutch allows non-degree related *how* exclamatives, which shows that even in the adverbial cases distinctions similar to the type 1 / 2 divide can be found.

6. Conclusion

We started this article with the observation that a large part of the literature on *wh*-exclamatives claims that such structures are inherently scalar in some sense. Although we concur, we showed that there are two kinds of exclamatives. The two kinds differ semantically in terms of what *kind* of scalar meaning they involve. Descriptively, the first kind expresses an exclamative attitude towards the *wh*-referent, while the second expresses an attitude toward the event this referent takes part in. This semantic distinction has a syntactic counterpart: type 1 exclamatives are non-standard *wh* structures, while type 2 exclamatives resemble embedded questions. Languages differ with respect to which *wh* expressions are involved in which kind of exclamatives, and whether both kinds are available in the first place.

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