

# Factivity in exclamatives is a presupposition

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## 1 Introduction

This paper studies an aspect of the meaning of English examples of the type shown in (1), which belong to the class of *wh*-exclamatives. The examples in (1a) are unambiguously exclamative and do not correspond to *wh*-questions, (2). *Wh*-exclamatives have a lot of syntactic properties in common with *wh*-questions (Elliot (1971, 1974); Grimshaw (1979); Zanuttini and Portner (2003); d’Avis (2001); Castroviejo Miró (2006) among many others) although there is no subject-auxiliary inversion.<sup>1</sup> In this paper, I will call clauses of this type *what-a* exclamative and

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<sup>1</sup>Rett (2008) suggests tentatively that *wh*-exclamatives might be free relatives, which would explain the lack of subject-auxiliary inversion. A difficulty for this proposal not noted by Rett herself comes from the external distribution of sentences like (1a). If they were free relatives, they should be restricted to positions that accept NPs – a prediction that seems to be falsified by examples like the following.

- (i) a. I am amazed \*(at) the building.
- b. I am amazed (at) {how very tall the building is|what a tall building this is}.

*how-very* exclamative respectively. I use these terms indiscriminately for matrix and embedded occurrences. This is not meant as a theoretical commitment that there is such a thing as an embedded exclamation or embedded speech acts in general, it is just a terminological convention.

- (1) a. (i) What a great doctor Ryan is!  
(ii) How very nice Ryan is!
  - b. (i) Sarah knows what a great doctor Ryan is.  
(ii) Sarah knows how very nice Ryan is.
- (2) a. \*What a great doctor is Ryan?
  - b. \*How very nice is Ryan?

Grimshaw (1979) points out two puzzles regarding the distribution of *what-a* exclamatives and *how-very* exclamatives that lead her to posit a separate clause type E[xclamative]. While there are some predicates like *know* that take embedded polar questions, embedded *wh*-questions, and embedded *what-a* exclamatives and *how-very* exclamatives, there is a class of emotive factive predicates like *be surprised* that take *what-a* exclamatives and *how-very* exclamatives as well as regular *wh*-questions as their arguments but disallow embedded polar questions. There is a class of predicates like *wonder* that take embedded polar questions and embedded *wh*-questions but not embedded *what-a* exclamatives or *how-very* exclamatives. There are important exceptions to this discussed in Abels (2007) to which we turn in due course. That positing a separate clause type is the most insightful solution for the selection facts has been questioned many times (Huddleston (1993); Lahiri (2000); Zanuttini and Portner (2003); d’Avis (2001, 2002); Abels (2007)).

d’Avis (2001, 2002) mentions a class of verbs like *list* in this connection. *List* only accepts *wh*-questions (‘Fred listed which people he had seen.’) but not polar questions (\*‘Fred listed whether he had seen John.’) as its complement.<sup>2</sup> This class of verb is called *verbs of incremental completion* in Schwarz (1993). Plausibly, verbs in the relevant class require a plurality of propositions as the denotation of their complement and polar question necessarily denote singular propositions.

Similarly, the fact that the verb *doubt* only accepts polar questions to the exclusion of *wh*-questions and alternative questions<sup>3</sup> can be explained if we make the following assumptions: *Doubt* requires a singular proposition as its complement. This explains why it is difficult to embed a disjunction of clauses under *doubt* and why it is impossible to embed *wh*-questions or alternative questions under *doubt*. Polar questions denote singleton sets of propositions (a view defended in Abels (2007)) and therefore behave like singulars. It might be objected here that in many context indirect questions denote the strongly or weakly exhaustive answer to the question, which is a singular proposition. However, in such contexts a factive presupposition comes into play. The general pattern is illustrated in (3) with the verb *report*, which is not factive with a declarative complement but which is factive with an interrogative complement.<sup>4</sup>

- (3) a. The New York Times reported that Iraq had tried to by Uranium from Niger. (The report later turned out to be false.)

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<sup>2</sup>*List* accepts polar questions as complements on a shifted reading where it means to include the answer in a list rather than to provide a list.

<sup>3</sup>The observation goes back at least to Karttunen (1977). Its relevance to Grimshaw’s argument was pointed out in Huddleston (1993), though he does not offer an analysis.

<sup>4</sup>The fact that the embedded question in (3b) introduces a presupposition is consistent with von Stechow’s (2004) ‘Hey, wait a minute!’ test, which will be discussed below.

- b. The New York Times reported where weapons of mass destruction had been hidden in Iraq. (# The report later turned out to be false.)

Now, if A doubts P, A must usually believe the presuppositions of P; thus, if Sally doubts that John only read War and Peace, Sally must believe that John read War and Peace, and if Sally doubts that John even eats habaneros, she must believe that John eats other things (probably including less spicy chilies). An embedded *wh*-question thus denotes either a plural or a presupposed singular proposition. Neither of them is usable: *doubt* rejects plurals as complements and gives rise to a systematic contradiction if its complement is presupposed, because then the complement of doubt has to be believed by the subject rather than doubted. Selectional restrictions very much like those discussed by Grimshaw (e.g., restrictions imposed by *list* and *doubt*) can apparently be accounted for without postulating different clause types.

In Abels (2007) I argue that one of Grimshaw’s generalizations – that emotive factive predicates do not embed polar questions – can be explained in terms of the presuppositions of these predicates together with the assumption that polar interrogatives denote a singleton set of propositions. This leaves the other generalization – that *what-a* exclamatives and *how-very* exclamatives cannot be embedded under verbs of asking – still in need of an explanation. There are reasons to believe that the answer should not be given in terms of a special exclamative clause type. First, there are exceptions to the generalization. The existence of exceptions suggests that selection for a particular syntactic type is not the right way to go. Example (4) presents a relevant case (from Abels (2007)). The important point to note is that it is usually impossible to use *welche Bullenhitze* – ‘which bull’s

heat' in real questions. This *wh*-phrase is generally restricted to occurring in exclamatives (d'Avis (2001, 2002)), and these, like English *what-a* exclamatives and *how-very* exclamatives, cannot usually be embedded under predicates of asking. The fact that such embedding *is* possible here suggests that there is no syntactic incompatibility between predicates of asking and exclamatives, which in turn entails that exclamatives need not be of a syntactically distinct type.

- (4) Wenn die Temperaturen in Gujarat schon im Winter 30°  
 if the temperatures in Gujarat already in.the winter 30°  
 übersteigen, fragen sich unsere Hörer natürlich, was für eine  
 surpass, ask self our listeners naturally what for a  
 Bullenhitze dort im Sommer herrscht.  
 bull's heat there in.the summer reigns  
 If the temperature in Gujarat is above 30°C even in winter, our listeners  
 of course wonder what unbearable heat there is there during the summer.

It seems promising to look for an explanation of the incompatibility of predicates of asking with exclamative complements in the meaning. A first hint that this is the right way to go comes from the fact that exceptions to Grimshaw's generalization like (4) are possible only in the presence of an element that can act as a filter on presuppositions. In (4), this element is the *if*-clause. A full account of Grimshaw's generalization that *what-a* exclamatives and *how-very* exclamatives cannot be embedded under verbs or asking would have to start from a description of the meaning of these predicates, a description of the meaning of regular *wh*-questions and *what-a* exclamatives and *how-very* exclamatives, and derive the incompatibility from a clash in interpretation. I will not take up this full task here but content myself with pinpointing one semantic difference between regular questions on the one hand and *what-a* exclamatives and *how-very* exclamatives on

the other.

It has long been assumed that *what-a* exclamatives and *how-very* exclamatives carry a presupposition of factivity (Elliot, 1971, 1974; Grimshaw, 1979; Zanuttini and Portner, 2000, 2003) which is absent in regular *wh*-questions. As (Grimshaw, 1979, p. 320) puts it:

The claim that I want to make here is that in exclamations, what can be termed the ‘propositional content’ is *inherently presupposed*. For an exclamation to be used appropriately, it must always be true that the corresponding proposition is presupposed to be true. The exclamation *How tall John is!* presupposes that John is tall, and an exclamation like *What big ears John has!* presupposes that John has big ears.

In this short note I provide a novel argument for an assumption along these lines. The argument comes from the observation that in embedded contexts the factive content of exclamatives projects like presuppositions do in general. Thus, despite the expressive nature of exclamatives, factivity in *what-a* exclamatives and *how-very* exclamatives is not a conventional implicature or part of their expressive content in the sense of Potts (2005, 2007a,b,c,d).

I begin by reviewing some of the controversy around the claim that *what-a* exclamatives and *how-very* exclamatives carry a factive presupposition.

## 2 Previous arguments

I will now discuss a number of arguments for and against the position that *what-a* exclamatives and *how-very* exclamatives carry a factive presupposition. The first

one has to do with the range of complements that embed *what-a* exclamatives and *how-very* exclamatives, the second one with the observation that matrix *what-a* exclamatives and *how-very* exclamatives cannot be used as answers to questions, and the third with the interaction of *what-a* exclamatives and *how-very* exclamatives with von Fintel’s ‘Hey, wait a minute!’ test.

A fourth argument is made by Mayol (2008a,b) based on Catalan *Déu n’hi do* (Mayol, 2008a,b). The argument is implicitly addressed in the section on presupposition projection, but I refrain from discussing details of the Catalan pattern, since the crucial piece of data from Mayol (2008a,b) to show that *Déu n’hi do* clauses are scopeless and that their content projects past plugs for presuppositions (the verb ‘believe’ in Mayol’s example), is contradicted in Mayol and Castroviejo Miró (2008).<sup>5</sup>

A fifth putative argument, which I also omit from discussion is given in Zanuttini and Portner (2003). It comes from examples like the following (first discussed by Elliot (1971, 1974)).

- (5) a. \*I don’t know what a great doctor Ryan is.  
b. \*I don’t know how very talented Ryan is.

Grimshaw (1979, p. 285) points out that “[t]he incompatibility between exclamatory complements and contexts of this kind can be explained if exclamations are analyzed as inherently ‘factive.’” This is true. The incompatibility *can* be explained if *what-a* exclamatives and *how-very* exclamatives are inherently pre-

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<sup>5</sup>Even if it turns out that Mayol’s (2008a; 2008b) analysis of ‘*Déu n’hi do*’ exclamatives as involving expressive meaning in the sense of Potts (2007c) is correct, this would still be compatible with the assumption that exclamatives without ‘*Déu n’hi do*’ involve presuppositions. The difference could always be blamed on ‘*Déu n’hi do*.’

suppositional. But the incompatibility of them with contexts like that in (5) does not furnish an argument for their presuppositionality lest we want to claim that the complement of ‘know’ is inherently presuppositional in the equally odd ‘I don’t know that John is in Frankfurt’ (see already Elliot (1974)). The debate whether the presuppositionality of factive complements resides in the complement or the factive predicate is too far off the main track of this paper to enter into it.

## 2.1 Non-factives are antifactive

The first argument for claiming that *what-a* exclamatives and *how-very* exclamatives are factive comes from a generalization found in Kiparsky and Kiparsky (1970). Kiparsky and Kiparsky (1970) claim that non-factive predicates are, as a matter of fact, *antifactive*. Kiparsky and Kiparsky (1970) base their classification of predicates on contrasts like the following, where *significant* and *be aware of* are factive predicates that take propositional subjects and objects respectively, whereas *likely* and *believe* are their antifactive counterparts.<sup>6</sup>

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<sup>6</sup>I borrow Zanuttini and Portner’s (2003) term ‘antifactive’ to remove an important source of potential terminological confusion. Kiparsky and Kiparsky (1970) divide proposition-taking predicates into *factive*, *non-factive*, *indifferent*, and *ambiguous*. The verb ‘report,’ for example, is treated as ambiguous, showing a non-factive use in (ia) and a factive use in (ib). Kiparsky and Kiparsky’s terminology clashes with the more widely used terminology of Hooper and Thompson (1973), where ‘report’ would be classified unambiguously as a (strongly assertive) non-factive predicate.

- (i) a. The New York Times reported that Iraq was trying to buy Plutonium from Niger, which turned out to be false.
- b. The New York Times reported the fact that no weapons of mass destruction were found in Iraq after the invasion.

While ‘report’ is non-factive in Hooper and Thompson’s sense it isn’t non-factive in Kiparsky and Kiparsky’s sense. The term *antifactive*, used in the main text, might be better able to describe the behavior that Kiparsky and Kiparsky’s term *non-factive* is intended to pick out. Similarly, we might want to use *obligatorily factive* to describe what both Kiparsky and Kiparsky



- (6) a. The fact that the dog barked during the night is significant.  
b. Gregory is aware of the fact that the dog barked during the night.  
c. \*The fact that the dog barked during the night is likely.  
d. \*Gregory believes the fact that the dog barked during the night.

Some of the literature on exclaimatives suggests that embedded exclaimatives only ever occur under (optionally or obligatorily) factive predicates (Elliot (1971); Grimshaw (1979); Zanuttini and Portner (2000, 2003)). Based on Kiparsky and Kiparsky's generalization that non-factives are antifactive, this is intended to provide a first argument for the assumption that *what-a* exclaimatives and *how-very* exclaimatives carry a factive presupposition.

This argument does not go through, however, since there are predicates that are classified in present terminology as antifactive by Kiparsky and Kiparsky and that do appear with embedded *what-a* exclaimatives and *how-very* exclaimatives.<sup>7</sup> A relevant example is the verb 'assert,' which is classified as antifactive by Kiparsky and Kiparsky (1970) on the basis of (7a). Nevertheless, 'assert' appears with embedded *what-a* exclaimatives and *how-very* exclaimatives as in (7b-c). The fact that examples like (7b) and (7c) are acceptable, is a problem for Elliot (1971); Grimshaw (1979); Zanuttini and Portner (2000, 2003). The examples show that the generalization that antifactives never accept *what-a* exclaimatives and *how-very* exclaimatives as their complements is false.<sup>8</sup>

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and Hooper and Thompson call *factive*.

<sup>7</sup>The examples in (ib-c), like many of the other examples later on in the text, were found on the world-wide web by doing google searches for strings like 'assert what a' or 'assert how very.' The examples presented in the text are a small sample of the relevant examples found and were all checked for acceptability by a number of native speakers of English.

<sup>8</sup>The argument is built on the *acceptability* of (7b) and (7c). It is independent of the fact that the author of (7b) is obviously being sarcastic and does not believe the content of the *how-very* exclaimative to be true. Such sarcastic uses can also be found of matrix exclaimatives.

- (7) a. \*I assert the fact that I don't intend to participate. (Kiparsky and Kiparsky, 1970, p. 146)
- b. Gun nuts can't even wait for the shooter's barrel to cool off before they jump in to assert how very, very important it is that everybody get to have as many guns of any variety that they desire.
- c. It would have done your heart good to have heard him assert what a valuable contribution to the cause your document is.

Given that the generalization is counterexemplified, we can not accept that reasoning built on it as valid. Thus, the first argument for the factivity of *what-a* exclamatives and *how-very* exclamatives fails.

## **2.2 *what-a* exclamatives and *how-very* exclamatives cannot be used to answer questions**

Grimshaw's main argument for treating exclamatives as inherently presuppositional comes from the fact that they cannot be used as answers to questions (Grimshaw, 1979, p. 321), (8).

- (8) Question: How tall is John?  
Answer: Very tall.  
Answer: # How tall John is!
- (9) Question: Did John leave?  
Answer: # It's odd that he did.  
Answer: # I'd forgotten that he did.

Grimshaw gives examples like (9) to show that the same is true of presuppositions – a question cannot be answered by a sentence that presupposes the answer. There is, therefore, a potential generalization across *what-a* exclamatives, *how-very* exclamatives, and factive presuppositions. This generalization furnishes an argument for treating *what-a* exclamatives and *how-very* exclamatives as presuppositional. Castroviejo Miró (2006) and Rett (2008) challenge this conclusion as too strong. Rett in particular claims that only assertions may function as answers to questions.<sup>9</sup> If it were true that questions require assertions as answers, then (8) would only show that *what-a* exclamatives and *how-very* exclamatives do not assert their content – a far cry from the claim that they are factive. This rejoinder is unconvincing, because there are contexts in which a question need not be answered by an assertion. An example is provided by the German dialogue in (10a-b). The example is in German, because English does not show a morphological distinction between the imperative (10b) and the infinitive in the fragment answer in (10c). Rhetorical questions, too, can be used to answer questions, (11), with an effect that is very different from the effect in (9).

- (10)      Question: Was soll ich machen?  
                         what should I do  
             Question: What should I do?  
  
             Answer: Geh schlafen!  
                         go.imp sleep  
             Answer: Go to sleep!  
  
             Answer: Schlafen gehen.  
                         sleep.inf go.inf

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<sup>9</sup>More precisely, Rett (2008, p. 198) attributes to Zanuttini and Portner (2003) the claim that “questions require assertions as answers.” As far as I can tell, this is neither said nor entailed by the discussion in Zanuttini and Portner (2003).

Answer: Go to sleep.

(11) Question: Have you finished your homework?

Answer: Am I superman?

The incompatibility in (8) is therefore much more specific than simply an incompatibility between a question and a non-assertion as an answer. There is a much more specific affinity between *what-a* exclamatives and *how-very* exclamatives and uncontroversial presuppositions. It is fair to conclude, then, that Castroviejo Miró (2006) and Rett (2008) are right in cautioning against taking the question/answer paradigm too quickly as incontrovertible evidence for the claim that *what-a* exclamatives and *how-very* exclamatives are inherently presuppositional, but apart from this cautioning the argument appears to stand.

### 2.3 Rejoinders to presuppositions

Rett (2008, p. 198-199) attempts a direct argument against the assumption that exclamatives are presuppositional by pointing out two paradigms that involve the reactions of interlocuters to presuppositions. The first paradigm is intended to show that the content of an exclamation can be denied (not through direct denial, but using ‘not really’), (12), while a presupposition cannot be so denied, (13).

(12) A: How very tall Elwood is!

B: Not really; he’s just wearing platform shoes.

(13) A: Mico’s wife does macrame.

B: # Not really; he’s not married.

It is not entirely clear that the ‘not really’ test always fails on presuppositions. Consider example (14), where A’s utterance carries the presupposition that Sue used to smoke. The exchange in (14) is appreciably better than (13), casting doubt on the validity of the test.

- (14) A: Sue stopped smoking.  
B: Not really. She never smoked.

The second paradigm builds on the ‘Hey, wait a minute!’ test proposed in von Fintel (2004), who adapts it from Shanon (1976). von Fintel gives the following paradigm and comments as follows: “Hearer B legitimately complains that A presupposed that someone proved the conjecture, when it was not in fact established prior to As utterance. Hearer B’ illegitimately makes a parallel complaint about an asserted, non-presuppositional component of As statement.”

- (15) A: The mathematician who proved Goldbach’s Conjecture is a woman.  
B: Hey, wait a minute. I had no idea that someone proved Goldbach’s Conjecture.  
B’: #Hey, wait a minute. I had no idea that that was a woman.

von Fintel cautiously calls this a “suggestive test.” In the context of his paper it merely functions to highlight that there is a real difference between asserted material and presupposed material. von Fintel nowhere suggests that this test constitutes either a necessary or a sufficient criterion for presuppositionality (in the relevant sense). In fact, it doesn’t. If it imposed a necessary condition, then every presupposition should pass the test. This is clearly false, as the next dialogue

illustrates.

- (16) A: Did you know that Sarah is pregnant from Ryan?  
B: # Hey, wait a minute! I didn't know that Sarah was pregnant from Ryan.

In (16), 'that Sarah is pregnant from Ryan' is presupposed by the main available criterion for presuppositionality, namely, its projective behavior. Yet, it does not pass the 'Hey, wait a minute test!' which is therefore not a necessary condition. Conversely, Potts (2002, 2005, 2007a,b,c,d) has argued at length that nominal appositives ('Chomsky, the famous linguist from MIT') and epithets ('that bastard Kresge') contribute a meaning which he calls conventional implicature and expressive content respectively and which behaves differently both from asserted content and from presupposed content. Crucially, adnominal appositives and epithets pass the 'Hey, wait a minute!' test, (17) and (18), which shows that the test does not provide a sufficient criterion for presuppositionality either.

- (17) A: That bastard Kresge was promoted.  
B: Hey, wait a minute. I didn't know you disliked Kresge.  
B: #Hey, wait a minute. I didn't know he was promoted.
- (18) A: Chomsky, the famous linguist from MIT, is coming to give a talk here next week.  
B: Hey, wait a minute. I didn't know he was from MIT.  
B: #Hey, wait a minute. I didn't know he was coming here.

In fact, Shanon (1976) himself uses the test to probe pragmatic givenness rather than what he calls ‘logical presuppositions.’ The point of his paper is to show that the two notions are distinct, as the following example (Shanon, 1976, p. 249 ex. 8, 10) is intended to show. Shanon assumes a presuppositional treatment of ‘only,’ whereby ‘I met only one woman’ presupposes ‘I met one woman’ (see Rooth (1985, 1992) for a detailed defense of this assumption). Yet, this presupposition fails the ‘One moment’ test, Shanon’s lexicalization of the ‘Hey, wait a minute!’ test.

(19) A: I met only one woman.

B: #One moment, I did not know that you met one woman.

The test then is merely a suggestive device rather than a hard and fast diagnostic. Nothing much would therefore follow if *what-a* exclamatives and *how-very* exclamatives failed the ‘Hey wait a minute’ test, as claimed in Rett (2008) and Mayol (2008a,b). The following example illustrating this claim is from Rett (2008, p 199).

(20) A: What incredibly large feet you have!

B: #Hey, wait a minute, theyre not that big!

Although we have seen that little if anything follows from this, it might nevertheless be interesting to observe that exclamatives do not fail the test completely. When the *judgment* expressed by the exclamation is taken issue with, relevant examples become acceptable.<sup>10</sup>

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<sup>10</sup>This might suggest that Grimshaw’s original view of what the precise content of the presupposition of *what-a* exclamatives and *how-very* exclamatives is might be called for.

- (21) A: I just watched Stanley Kubrick's 2001 - A Space Odyssey. Man, what a great movie!
- B: Hey, wait a minute! I didn't know you liked science fiction movies.

At present, these arguments based on rejoinders to exclamatives are inconclusive.

Overall the state of affairs is not satisfactory. The argument based on the generalization that antifactives do not embed *what-a* exclamatives and *how-very* exclamatives fails, because the generalization is wrong. The argument from the fact that *what-a* exclamatives and *how-very* exclamatives cannot be used as answers is weakened by the objection that failure to be a felicitous answer may not be a valid criterion for presuppositionality. Finally, the arguments leveled directly against the claim that *what-a* exclamatives and *how-very* exclamatives carry factive presuppositions seem weak, because they overstate the generality of the tests they rely on.

However, the hallmark of presuppositions is their behavior in complex sentences. While asserted, non-presuppositional components of meaning are manipulated at will by the embedding construction, presuppositional components are often though not always inherited by the whole construction. The phenomenon by which presuppositional components of meaning are inherited by the larger construction is known as presupposition projection, and it is governed by an intricate set of generalizations. This is the area to which we now turn.



### 3 Exclamatives and presupposition projection

Before we try to investigate the projection behavior of the putative presupposition of *what-a* exclamatives and *how-very* exclamatives, it is instructive to understand why this has not been done before. First, it was basically assumed that there are only two relevant meaning components that need to be distinguished: the assertive component and the presuppositional component. Since the main – and according to the standard view the only – embedding contexts for *what-a* exclamatives and *how-very* exclamatives are factive predicates, see section 2.1 above, any investigation of the projection behavior of presuppositions of *what-a* exclamatives and *how-very* exclamatives faces a dilemma. To investigate the projection behavior, *what-a* exclamatives and *how-very* exclamatives need to be embedded in various contexts; embedding under factive predicates, because of their presuppositionality, levels the distinction between assertion and presupposition: the asserted component of an embedded clause is inherited by the larger structure as a presupposition and so, of course, are the presuppositions of the embedded clause; hence, there is no way to get the investigation off the ground.

With Potts' claim that there is at least one more meaning component (Potts, 2002, 2005, 2007a,b,c,d), that behaves differently under embedding from the asserted and the presupposed component, an analysis of the projection behavior of *what-a* exclamatives and *how-very* exclamatives becomes a worthwhile undertaking, since, even if asserted and presupposed components project alike – as presuppositions – in factive contexts, Potts' conventional implicatures will project differently. According to Potts, conventional implicatures invariably project even in contexts where presuppositions do not project. Furthermore, where the content

of a conventional implicature is expressive, the attitude expressed must be the speaker's. We should thus be able to find out whether *what-a* exclamatives and *how-very* exclamatives give rise to conventional implicatures in Potts' sense or not.

Second, we have already challenged the generalization above that *what-a* exclamatives and *how-very* exclamatives are always embedded under factive predicates. But if the range of contexts where they appear is greater than usually assumed, we might be able to find contexts where genuine presupposition projection can be observed and distinguished from the behavior of asserted meaning components.

The literature on presuppositions distinguishes between holes, plugs, and filters for presuppositions. Holes are those operators that act on the assertion but where presuppositions are inherited unaltered by the entire construction; the most prominent examples of holes for presuppositions are clausal negation and modals. Examples of plugs for presuppositions are provided by many propositional attitude verbs expressing beliefs and verbs that report speech; the presuppositions of the embedded clause are not necessarily inherited by the embedding structure. With a verb like *believe* the presuppositions of the complement are usually attributed as beliefs to the referent of the subject of the verb – this generalization was discussed above regarding the verb *to doubt* (text below (3)). Filters for presuppositions are environments like disjunction and conditionals, where a presupposition of one clause can be prevented from projecting by material in the other clause. Consider the following examples, (22). While (22a) as a whole inherits the existential and uniqueness presuppositions of the definite description *the alien*, this is not the case in (22b). The reason is apparently that these presuppositions are satisfied by the local linguistic context of the apodosis.

- (22) a. If you want to become famous, you have to lure the alien into your kitchen.
- b. If you want to catch an alien, you have to lure the alien into your kitchen.

I have not been able to construct a case where the putative presupposition of *what-a* exclamatives and *how-very* exclamatives interacts with a hole for presupposition directly.<sup>11</sup> We will now investigate the behavior of *what-a* exclamatives and *how-very* exclamatives in the context of plugs and filters for presuppositions.

### 3.1 Plugs

Consider the examples in (23) now ((23a-d) were found on the web). They involve the presupposition plugs *tell*, *lies*, and *go on about*, and in each case, *what-a* exclamatives are embedded as complements.<sup>12</sup> None of these examples entail that the content of the exclamation is true or held as a belief by the speaker. In fact, this is openly denied in (23a-c). The context where (23d) was found ([www.helium.com/tm/402379/topic-rehashed-again-happened](http://www.helium.com/tm/402379/topic-rehashed-again-happened) accessed Oc-

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<sup>11</sup>Thus, example (ia) is ungrammatical and in (ib) it is unclear whether factivity is suppressed by the modal – which would show that factivity of exclamatives is *not* a presupposition – or whether the modalized statement is factive – which would make the example uninteresting for us. We have to turn to embedded contexts for relevant examples.

- (i) a. \*What a great writer he isn't!  
 b. What a great writer he could have been!

The simplest cases of embedded exclamatives feature them in factive contexts, which are therefore uninformative. But although we have already seen examples of embedded *what-a* exclamatives and *how-very* exclamatives that are not in a factive context ((7b) and (7c)), these examples involve presupposition plugs. I have not been able to find or construct cases where a presuppositionally inert predicate, a hole, embeds *what-a* exclamatives or *how-very* exclamatives.

<sup>12</sup>Similar examples with *how-very* exclamatives are easy to find and construct.

tober 2007) makes it clear that the writer herself does not believe that the whole situation is a great tragedy.

- (23)
- a. Friends often tell me what a wonderful cook I am - I always tell them it is the ingredients, not my skill as a cook.
  - b. Now its time for a BBQ with Beer, Friends and lots of lies about what a bad ass I am.
  - c. When one of my classmates found out which guy I was crushing on, she hooked up with him and then told him all these lies about what a terrible person I was
  - d. People shake their heads and go on about what a great tragedy the whole situation is.
  - e. At the conference every professor went on about what a great candidate for the job his most recent advisee was.

The same is true in the constructed example (23e). It is compatible with a situation in which the speaker is not convinced that every one of those talked up at the conference would be an outstanding candidate for the job. In fact, even the professors don't necessarily have to be convinced that the advisees that they are talking up actually are good candidates for the job in question. The behavior of the content of exclamatives behaves like a presupposition in that it can be plugged. It thus behaves differently from Potts' conventional implicatures. Potts (2007b) gives the examples in (24) to demonstrate that conventional implicatures, unlike presuppositions, are not plugged by verbs like 'say,' 'promise,' and 'report.' Thus, (24a) still commits the speaker to the proposition that Chuck is a confirmed

psychopath, (24b)—to the proposition that yewberry jelly is toxic in the extreme, and (24c)—to the proposition that Ed is in trouble with the law once again.

- (24) a. Sheila says that Chuck, a confirmed psychopath, is fit to watch the kids.
- b. Ali promises that yewberry jelly, toxic in the extreme, is delicious.
- c. The FBI reports that Ed, in trouble with the law once again, has fled to Florida. (Potts, 2007b, #3)

Thus like presuppositions and unlike Potts' conventional implicatures, factivity in *what-a* exclamatives and *how-very* exclamatives can be plugged.

## 3.2 Filters

When we look at filters, *what-a* exclamatives and *how-very* exclamatives again behave as though they carry a factive presupposition. This is shown in (25a-b) from the web and the constructed (25c-d). Examples (25a-b) involve conditionals embedded under *wonder* and they are similar to the German examples discussed in Abels (2007, section 3.2). As discussed in the introduction to this paper, Grimshaw (1979) had observed that verbs like *wonder* do not usually embed *what-a* exclamatives and *how-very* exclamatives as their complements. Plausibly (d'Avis, 2001, 2002) this has to do with the fact that predicates that express epistemic uncertainty cannot embed questions that presuppose their own answer.<sup>13</sup> The existence of examples like (25a-b) is not surprising if we assume that the relevant presupposition

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<sup>13</sup>This intuition is already expressed in Elliot (1971, p. 18-19), where it is noted that embedded *what-a* exclamatives and *how-very* exclamatives allow modification by 'namely'. The complement of 'wonder' does not allow this.

in the exclamative apodosis is filtered by the protasis. While this argument from (25a-b) depends on a particular analysis of Grimshaw’s generalization, (25c-d) provide more direct tests for presupposition projection. It seems clear that the entire conditional in (25c) does not presuppose that Thomas is extraordinarily tall and that the whole of (25d) fails to presuppose that the addressee be a great shot. The effect then is similar to the filtering of the presuppositions of the definite article in (22) above.

- (25)
- a. I just wonder what a great book it might have been had there been more of a “human” look at the gangs.
  - b. I can’t help but wonder how very unhappy you must be in your own life to find it necessary to spread such venom about.
  - c. If Thomas really were extraordinarily tall, his classmates would surely know how very tall he is.
  - d. If you really shoot as well as you say, you can prove to us what a great shot you are by hitting that bottle over there.

Another classic filter for presuppositions is provided by disjunction. In disjunctions, presuppositions arising in one of the disjuncts are filtered if they follow (contextually) from the negation of the other disjunct (Karttunen (1973)). We do find *what-a* exclamatives and *how-very* exclamatives embedded under disjunction, and they behave as expected. Example (26a) from the web for example clearly does not presuppose that the phrase in question is both very true and very vacant. Rather, the notion is drawn upon here that something that is very true cannot be vacant and something that is vacant cannot be very true; thus, the negation of

the first disjunct filters the factive presupposition of the second and the other way around. The same is true in the constructed (26b): something cannot be a scam and a great buy at the same time; thus, the negation of the first disjunct filters the factive presupposition of the second and vice versa.

- (26) a. “Every little piece in your life/Will mean something to someone,”  
he sang in *The Weight of the World*, returning to the phrase often  
enough for us to ponder at length just how very true that is or how  
very vacant.
- b. What a great buy! – or else what a cunning scam!

Again *what-a* exclamatives and *how-very* exclamatives behave as though they carry a factive presupposition that can be filtered, and again there is a clear distinction here between the behavior of *what-a* exclamatives and *how-very* exclamatives on the one hand and Potts’ conventional implicatures on the other: Conventional implicatures are not filtered by disjunctions and conditionals.

## 4 Conclusion

The purpose of this note was to defend empirically the idea that *what-a* exclamatives and *how-very* exclamatives carry a factive presupposition. The argument presented here will hopefully act as a stepping stone in an eventual account of Grimshaw’s generalization according to which anti-factive predicates do not (usually) embed *what-a* exclamatives and *how-very* exclamatives.

While it seems uncontroversial to claim that *what-a* exclamatives and *how-very* exclamatives do not assert their content, a defense of their presuppositional

nature was necessary for two reasons: (a) previous arguments to that effect are inconclusive and (b) the very idea has been challenged in recent literature (Castroviejo Miró (2006); Mayol (2008b,a); Rett (2008)). My defense rests on the the projection behavior of this presupposition. We observed that it can be plugged and filtered like regular presuppositions. I take this to indicate that we are dealing with a presupposition rather than a conventional implicature in Potts' sense. A further distinction between the content of *what-a* exclamatives and *how-very* exclamatives and conventional implicatures comes from the observation that, according to Potts, conventional implicatures always express the speaker's beliefs and evaluations, while in *what-a* exclamatives and *how-very* exclamatives the evaluative perspective is not necessarily the speaker's. The perspective can be shifted, as a look back at the examples in (23) and in the following example reveals. Example (27) is taken from the web and is contained in a critical discussion of media performance during the war in Iraq. The writer here compares the US media with the Nazi's propaganda machine and clearly does not believe the content of the embedded *what-a* exclamative.

- (27) The Germans also had such toadying acolytes to report what a good job they were doing liberating Europe as they cut their bloody swathe through the heart of it.

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