Exclamation, intensity, and emotive assertion

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Abstract

In this paper, we present a novel analysis of exclamations as assertions equivalent to declarative sentences with emotive verbs. Focusing on \textit{wh}-exclamatives and declarative exclamations, we offer a wide range of arguments for why they are both assertive including the fact that they can be rejected and responded to (contrary to what previous literature has assumed). We further argue that like emotive verbs, exclamations convey a presupposition not of factivity but of subjective veridicality anchored to the speaker, and assert the emotion (of surprise, amazement, or a negative emotion). Our analysis proposes a syntax-semantics for exclamations without a speech act operator, and exclamativity surfaces as an \textit{attitude} rather than a speech act. This seems to be well motivated by the Greek, German as well as English facts we examine in the paper. Illocutionary operator approaches cannot capture the facts discussed here, and they also fail to determine precisely what the exclamative force might be.

Keywords. assertion; emotive predicate; English; exclamation; exclamative; German; Greek

1. Introduction: Illocutionary force and expressivity

There is a long-standing tradition in linguistic theory postulating that a speech act (Searle 1969) is created by prefixing a proposition with an illocutionary force operator. In more recent work at the syntax-semantics interface, the classic performative hypothesis (Ross 1970; Lewis 1970) has been revived by works that propose several speech act operators in the syntactic representation of a sentence (e.g., Haegeman 2014; Krifka 2015, 2019; Portner et al. 2019; Speas & Tenny 2003; Wiltshchko 2021: Ch. 2; and many others). When we think, for example, of the contrast between assertions and questions, it is generally acknowledged that the two differ in ‘illocutionary force’ as well as syntactic structure, therefore clause type. Most formal analyses assume a logical language that reflects these differences, and a designated speech act operator such as ‘ASSERT’ and ‘?’ (Krifka 2015) serves to reflect the distinct illocutionary forces. Merchant (2010) argues that a sentence is a tuple <P,S,M,C\textsubscript{SA}>, where P is the phonological representation, S the syntactic, M the semantic representation, and C\textsubscript{SA} is the ‘speech act content’.

Assertion, question, and the imperative have been well described as speech acts characterized by a straightforward mapping between P, S, M, and C\textsubscript{SA}. When we consider exclamations the issues become: Are exclamations distinct in semantic and syntactic type from assertions? Do exclamations have distinct illocutionary force from assertions like questions or imperatives are argued to have?\textsuperscript{1} If so, what is the illocutionary force of an exclamation? In order

\textsuperscript{1} Even for these relatively straightforward cases the speech act analysis has been questioned; see Kaufmann (2012) for a modal analysis of imperatives, and Giannakidou & Mari (2022) for a modal analysis of biased questions (such as \textit{Didn’t you go to the party}? and tag questions). Both express beliefs of the speaker about the content and are not mere requests for information. There seems to be an emerging trend in the literature to re-think the boundary between assertion and non-assertions which appears to be more fluid than the speech act analyses make us expect.
to answer these questions, one must bear in mind that, unlike questions or imperatives, exclamative clause types such as *How fast he ran!* are often analyzed analogous to other clause types and even to non-clausal items that are claimed to express the same illocutionary force.

Following most of the literature, we use the term ‘exclamation’ (and not ‘exclamative’) to refer to the illocutionary component that is assumed to be the common property of those constructions. We thus use the terms ‘exclamation’ vs. ‘exclamative’ analogous to terms such as ‘assertion’ (which is the speech act) vs. declarative (which is the clause type). Let us be more specific about this distinction because throughout the paper it will be crucial to understand what we mean by ‘speech act’ and ‘illocutionary component’ in the context of our discussion.

There are a variety of syntactic forms and lexical items that are often compared to exclamatives such as *How fast he ran!*, as well as exclamations with interjections such as *Wow!* and declaratives like *Boy, it is raining!* or *I am so disgusted by your behavior!* known as sentence exclamations or declarative exclamations. Given this variety of forms that can be used for performing a so-called exclamation speech act, Zanuttini & Portner (2003) have proposed an important distinction between ‘illocutionary force’ and ‘sentential force’. The latter term is adopted form Chierchia & McConnell-Ginet (1990), and it is also often referred to as ‘illocutionary mood’ (see Hausser 1980). Zanuttini & Portner (2003) explain the distinction as follows. Building on the central role of the speaker’s intention in Searle’s (1969) speech act theory, they point out that there is a type of force that is conventionally associated with a particular sentence’s form and another type of force that crucially involves pragmatic inferencing about the speaker’s intention. To see this, let us look at some of their examples (Zanuttini & Portner 2003: 40-41):

(1) Could you come in at 9:00?

(2) a. He’s so cute!
   b. Isn’t he the cutest thing!
   c. How cute he is!

Given the relevant speaker’s intention, the sentence in (1) is interpreted as performing the illocutionary force of ordering, but the form in (1) is conventionally associated with the force of asking. In other words, the illocutionary force in many cases is not equivalent to the sentential force. Zanuttini & Portner (2003) now apply this fundamental fact to the domain of exclamatives. The examples in (2) indicate that both declaratives (2a) and interrogatives (2b) can be used with a speaker’s intention that parallels the one in exclamatives like (2c). In other words, while (2a) and (2b) differ in their sentential force—(2a) is conventionally associated with an assertion and (2b) with a question—they both share with (2c) a meaning component that most of the literature, including Zanuttini & Portner (2003), would call ‘exclamation’, referring to illocutionary force.²

In our paper, we would like to try a new and different path. We will argue that there is no illocutionary force of exclamation in the first place—and this goes against almost all the previous accounts. If we assume that there is no such thing as the illocutionary force of exclamation, then there can also be no conventional association between that (non-existing) force and a specific syntactic structure (like in accounts that propose a dedicated sentential force aka illocutionary mood for exclamations; see citations below). Since we deny the existence of a relevant illocutionary force, our approach also goes against accounts such as Zanuttini & Portner’s (2003)

² The use of an exclamation mark is a convention intended to signal the sentence type as distinct from an assertion, yet it does not correspond to a particular syntactic or morphological feature.
analysis, where they claim that the concept of sentential force cannot be applied to the exclamative clause type because there is no force-indicating element that is present in all and only exclamatives. Again, although this account concurs with our approach in denying a sentential force for exclamatives, it still presupposes the illocutionary force of exclaiming exists—and this is what we challenge in this paper.

While the sentential-force hypothesis is only advocated by some of the works on exclamatives (most of them more syntax-centered approaches; e.g., Delfitto & Fiorin 2014; Munaro & Obenauer 1999), the illocutionary force hypothesis (IFH) that there is something like the exclamation speech act is shared by almost all of the existing approaches. To our mind, the most articulated and clearest version of the IFH has been formulated by Rett (2011), whose main point is to characterize ‘exclamation’ as “a speech act with a unique illocutionary force” (Rett 2011: 439). That is, when we consider various linguistic forms such as in (2) above (incl. their relevant intonation patterns) and how they convey expressive meaning, Rett’s (2011: 413) driving hypothesis is that “a characterization of exclamation as an independent speech act best captures this relationship.”

We will discuss in more detail below how the IFH is formulated in several approaches by means of a dedicated illocutionary operator (see Section 2.1). However, at this point of the paper, we first would like to take a step back and clarify how we will use the terms that will become so central to our discussion. Let us start with the concept of expressive meaning (sometimes also called ‘expressivity’).

1.1 The notion of expressivity

In a seminal paper, Kaplan (1999) discusses the differences between the English interjections ouch! and oops! and their descriptive counterparts I am in pain and I just observed a minor mishap, respectively. His main point was to distinguish between two types of information, descriptive and expressive information, and how to account for them by means of formal semantics.

In a nutshell, the descriptive statements I am in pain and I just observed a minor mishap can be accounted for in terms of their truth-conditional contributions, whereas interjections can only be analyzed by looking at the felicity conditions of those linguistic expressions (i.e., how they can be used). For Kaplan (1999), ouch and oops thus convey expressive rather than descriptive information. While Kaplan in his discussion focused on interjections and items such as damn or bastard, Kratzer (1999) suggested that we can go ‘beyond ouch and oops’ and extend this notion of expressive meaning to further phenomena such as modal particles in German. It is important to note that in this type of work, expressive meaning is equal to use-conditional meaning, and over the last twenty years or so a whole strand of research on the ‘expressive dimension’ of meaning has developed semantic analyses for empirical phenomena that require a use-conditional level of analysis (Potts 2005, 2007a,b; Gutzmann 2015). The notion of expressive meaning does not only capture non-truth-conditional items such as interjections but accounts for all items whose meaning must be analyzed by referring to a level of meaning distinguished from the truth-conditional level. In what follows, we will call this reading ‘expressivity in a broad sense (EB)’, and with this in mind, let us now turn to the second concept of expressivity that can be found in the literature.

When we look outside the formal semantics/pragmatics literature, the term expressivity is often used to refer to aspects of language that interface with emotions. That also corresponds to our use of the term in everyday life: Situations where someone uses ‘expressive’ language, for
instance, are quite likely contexts where emotions play a key role. Although the formal literature on EB cited above often uses emotive phenomena to illustrate expressivity (like interjections, expressions like *damn* and *bastard*, etc.), the expression of emotions via language, according to EB, is just a prime example of non-truth-conditional (here: use-conditional) meaning; the class of expressive items, however, is much bigger—it includes phenomena such as appositives or certain modal-particle items (see Kratzer 1999 above) that do not convey any emotion whatsoever.

Crucially, the reading of the term ‘expressivity’ is strikingly different in the non-formal literature, as indicated by the following programmatic statement from a recent handbook article:

Human beings often have feelings about what they say, about what others say, or about what happens in the here-and-now environment. These feelings are typically expressed in non-verbal ways (facial expression, gesture, posture, etc.), but, as it turns out, language itself also provides means for expressing such feelings. Language not only has a referential, but also an expressive function. (Foolen 2016: 473)

Expressivity in this reading is thus about the expression of feelings, and it is distinguished from the referential function of language. In what follows, we will call this concept of expressivity ‘expressivity – narrow sense (EN)’. What this concept shares with the broader concept of EB is the performative character of expressivity. To see this, let us look at Foolen’s (2012, 2016) useful distinction between the conceptualization of emotions and the expression of emotions. While the former focuses on the referential function of emotion words (*joy*, *enjoy*, *happy*) and more complex expressions (figurative speech etc.), the latter explores which linguistic elements convey emotional meaning by their linguistic form. In other words, we can of course speak about emotions such as happiness and anger in descriptive terms (*I’m enjoying my time with you vs. I’m angry at you*). However, the expression of emotions, according to Foolen’s (2012, 2016) distinction, is not about what we say, but rather about how we say things. Expressivity, in this interpretation, thus refers to linguistic utterances that perform the expression of emotions rather than just referring to them. It is this notion of expressivity (i.e., EN) that we will use in the following pages to account for the empirical domain of exclamations.

Interestingly, the notion of EN can be found in the more recent formal literature too. In particular, Rett (2021a,b) proposes that expressives like *damn* form one class with emotive markers such as English *alas*, to the exclusion of other use-conditional elements (e.g., appositives) that are often referred to as expressive items in the formal semantics literature as well. Since Rett (2021a,b) discusses the distinction between illocutionary content and other types of not-at-issue meaning in this context, her recent work might also be a good starting point for us to specify how we will use the term illocutionary force in our paper.

1.2 The notion of illocutionary force

According to classic speech act theory (Searle 1969), an illocutionary force is characterized by a set of felicity conditions that hold for performing an act via a proposition-level linguistic utterance. Accordingly, a set of utterances feature the same illocutionary force if they are subject to the same set of felicity conditions. In her recent work, Rett (2021a,b) builds on this central role of felicity conditions in order to distinguish illocutionary semantic content from other types of not-at-issue meaning.
In particular, Rett (2021a,b) supports Searle’s (1969) idea that the source of unacceptability in Moore’s Paradox is denying one of the felicity conditions encoded in the illocutionary content of an assertion. The term ‘Moore’s Paradox’ refers to a philosophical paradox where a speaker asserts a proposition and at the same time denies that he believes the proposition, like in the following classic example (see Rett 2021a: 313-315 for the following examples):

(3) # It’s raining, but I don’t believe it’s raining.

Example (3) is odd because the speaker denies the illocutionary content of a felicity condition (in this case: the sincerity condition of veridicality, namely that the speaker asserts what they believe or know to be true, Giannakidou & Mari 2021). The veridicality condition is a sincerity prerequisite for assertion, yet it is not itself a feature of assertion, as asserting \( p \) does not entail that \( p \) is true (Giannakidou & Mari 2021). Rett (2021a,b) claims that Moore’s Paradox is suspended in suppositional contexts (see also Yalcin 2007):

(4) Suppose that it is raining, but that I do not believe that it is raining.

In our ears, such sentences are as infelicitous as the original Moore ones and must be marked with ‘#’. However, even if sentences such as (4) were felicitous, we would like to argue that Rett’s (2021a,b) discussion of the illocutionary status of emotive markers and expressives does not affect our claims in this paper about the non-illocutionary status of the emotive content of exclamations. Let us thus leave aside our doubts about the judgment in (4) for a moment and tentatively accept Rett’s (2021a,b) further reasoning about the pattern in (4) and its consequences.

Based on her judgment in (4), Rett (2021a,b) illustrates that the content encoded in emotive markers like unfortunately is suspended under suppose as well (5a), while other types of not-at-issue content (e.g., the higher adverb allegedly) is not (5b):

(5) a. Suppose that, unfortunately, Jane lost the race, but that I do not find it unfortunate that she did.
   b. #Suppose that, allegedly, Jane lost the race, but that no one alleged that she did.

Rett (2021b) elaborates on this situation and claims that emotive markers like unfortunately form one class with expressive items like damn or cur (Rett 2021b: 203):

(6) a. Suppose that that damn Jane lost the race, but that I really like Jane.
   b. Suppose that that cur Fido lost the race, but that I really like Fido.

All in all, Rett’s (2021a,b) recent work aims to show that emotive markers and expressives (i.e., EN-phenomena according to our distinction in Section 1.1 above) encode illocutionary content and that this type of semantic content is quite distinct from other types of not-at-issue meaning.3

As mentioned above, even if we would agree with Rett (2021a,b) that the empirical base sketched above is accurate, we can show that her argument about the illocutionary status of

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3 While we do not share Rett’s (2021a,b) judgment about (4)—see our comments above—we accept the judgments illustrated in (5a) and (6). In our view, the contrast between (4) and the judgments we see in (5a) and (6) is due to the epistemic/doxastic situation that one can switch to different contexts in (5a) and (6), whereas we cannot do that in (4): Here, the world/context of supposition and the world/context of the second sentence is the same belief state.
emotive content does not affect what we want to say about the illocutionary status of emotive content of exclamations. What is now our take on the relation between emotive language and illocutionary content? As already indicated above, we do not believe that the emotive content conveyed by exclamations should be accounted for at the level of illocutionary meaning. Rather, we submit that the meaning expressed by exclamations cuts across all speech act types and is thus compatible with a variety of felicity conditions—and this is strikingly different from some of the emotive markers Rett (2021a,b) is discussing. For instance, the emotive marker unfortunately is known to be infelicitous in questions; see Ernst (2007: 1017):

(7)  

a. They unfortunately/possibly withdrew their funds?  
b.* Did they unfortunately/possibly withdraw their funds?

To be sure, expressive items such as damn and cur in (6) are not restricted in this way, but in our view this shows that they do not interact with the illocutionary content of the whole utterance in the same way, therefore they do not form a homogenous class with emotive markers in the domain of illocutionary meaning.

If we now look at exclamations, the situation is different. We submit that what is called ‘exclamation’ in the literature actually refers to the ubiquity of emotive attitudes on the part of the speaker across all speech acts and clause types. Hence, examples of exclamation would also include utterances such as metalinguistic comparatives (8a), declarative questions (8b), and emotionally intense imperatives (8c):

(8)  

a. I’d rather die than marry him! (Giannakidou & Yoon 2011)  
b. John will come to the party?! (Really?)  
c. Open the door, damn it!

Clearly, exclamation does not reflect a specific clause type. In the present paper we will focus on wh-exclamatives (How fast he ran!) and declarative exclamations (He was so fast!). But we want to point out that the wide range of exclamation can be better captured as an attitude of emotion rather than a hard-to-define illocutionary force that maps onto a specific clause type. It seems implausible that exclamation (the illocutionary force assumed for exclamative) is a specific, distinct speech act because it appears to combine with other speech acts (with assertions in [8a], with questions in [8b], and with imperatives [8c]). The common feature of all the examples above seems to be an emotive attitude on the part of the speaker to whatever the speech act is. This will be our underlying understanding of the notion ‘exclamation’ in this paper.

One way to make sense of the examples in (8) would be to say that speech acts can also be combined, resulting in more than one illocutionary force per utterance. And indeed, an analysis in terms of multiple speech acts has been proposed for ‘mixed cases’ such as biased questions, some of which can be characterized as being both a question and an assertion—as in the following patterns involving discourse markers such as after all and tell me (see Asher & Reese 2007: 14 and Sadock 1971, 1974 for the original observation). While after all can co-occur with assertions (9a), it is infelicitous with questions (9b). For the expression tell me, it is just the other way around: tell me is felicitous with questions (10a), but it cannot co-occur with assertions (10b):

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4 Mayol & Castroviejo (2013) show that there might also be cross-linguistic variation in the context of such data.
(9) a. After all, your adviser is out of the country.
b. After all, is your adviser out of the country?

(10) a. Tell me, does John own a car?
b. Tell me, John owns a car.

If we now turn to biased questions—in what follows, questions conveying a bias toward a negative answer—we observe that they are fine with both discourse markers (Asher & Reese 2007: 18):

(11) a. After all, does John lift a finger to help around the house?
b. Tell me, does John lift a finger to help around the house?

This can be taken as evidence for the existence of multiple speech acts. If we stipulate that speech acts can indeed be combined, we could say that our examples in (8) exemplify combining the speech act of an exclamation with that of assertion (8a), with a question (8b), and with an imperative (8c). However, what does it mean to stack speech acts operators in a sentence? As far as we can tell, such a stipulation would have to be unique for these cases, and the notion of a speech ‘act’ would have to be reduced to a structure akin to embedding of attitudes—which is well motivated and attested independently. More consistently with Occam’s razor, then, instead of stipulating speech act stacking, we will take data like (8) to indicate that there is no specific, distinct speech act of exclamation speech in the first place.

1.3 The proposal in a nutshell: emotive assertion

We will propose that the classic exclamation cases How fast he ran! and He was so fast! are in fact a specific kind of assertion, one that asserts emotion and presupposes intensity. From this particular nature of what we thus call ‘emotive assertions’ the syntactic and semantic properties of at least wh-exclamatives (How fast he ran!) and declarative exclamations (He was so fast!) will be shown to follow. Our paper spells out such a proposal by building on the analysis of emotive verbs proposed by Giannakidou & Mari (2021), and takes a fresh look at wh-based exclamatives and declarative exclamations as a unified class of emotive assertions equivalent semantically to sentences with emotive predicates (be surprised, happy, amazed, disgusted, etc.).

Our approach directly challenges previous accounts which claim that exclamatives lack assertive content. The only descriptive content allowed is a factivity presupposition (relying on earlier discussions in Grimshaw 1979; Zanuttini & Portner 2003; Abels 2010); and some argue that there is expressive content (which is also not asserted). Consider the following wh-exclamative and its contents at the descriptive and expressive level:

(12) How fast Eliud Kipchoge was!

- descriptive content/presupposition: ‘It is a fact that Eliud Kipchoge was very fast.’
- expressive content/not-at-issue: ‘Speaker is amazed/surprised about Eliud Kipchoge being so fast.’

In our paper, we challenge the position that wh-exclamatives lack assertive content, and claim that the intended expressive content above is actually what the wh-exclamatives assert. We will argue,
based on data from Greek and German, that *wh*-exclamatives are emotive assertions akin to assertions of sentences containing emotive predicates such as *be amazed, be surprised* (13), and have very similar truth conditions and presuppositions:

(13) I am amazed at how extremely fast Eliud Kipchoge was.

Our claim is that (12) and (13) are identical in terms of what they assert and presuppose, and we will group them together under the label ‘emotive assertions’. They both assert that the speaker has the emotion of amazement towards the believed proposition that ‘Eliud Kipchoge was extremely fast’, and presuppose that the speaker has the belief that Eliud Kipchoge was extremely fast. Our analysis relies on new data from Greek and German and shows that acknowledging the assertive content of *wh*-exclamatives, as well as the different nature of their presupposition are long overdue.

The paper is structured as follows. In Section 2, we address two central data points that have traditionally played a significant role in the discussion of whether *wh*-exclamatives, but also exclamatives more generally (e.g., inversion exclamatives *Does he run fast!*), feature assertive content. These data points concern two questions: (i) Can the descriptive content of exclamatives be rejected? and (ii) Can exclamatives be used as responses to information-seeking questions? Our answer to both questions will be ‘yes’, in contrast to previous claims. Section 3 then turns to the syntax-semantics interface in more detail and discusses Greek data illustrating a similarity between *wh*-exclamatives and complements of emotive predicates in that both appear with the Greek complementizer *pu*. After illustrating the relevant distributions, we will argue for an analysis that exclamative sentences are equivalents to declarative assertions containing an emotive verb and its complement with an extreme degree. We will rely on Giannakidou & Mari’s (2021) recent analysis of emotive verbs. In Section 4, we will focus on data from German that further support the parallel between emotive verbs and exclamative sentences as emotive assertions, taking into account exclamative forms that appear with the German complementizer *dass*. In particular, we will demonstrate that the only complementizer German uses in exclamatives is the complementizer that is the typical element in assertive contexts. Crucially, the assertive character of these exclamatives is not only signaled by its choice of the complementizer *dass*, but also by the distribution of exclamative modal particles, which shows that exclamatives share mood features with assertive declarative clauses. Section 5 summarizes and concludes the paper.

2. *Wh*-exclamatives and declarative exclamations have assertive content

Exclamatives are often considered semantic objects that are associated with a dedicated illocutionary operator, which instantiates the exclamation speech act. Prominent examples in semantics are Rett’s (2011) ‘E-FORCE’ and Grosz’s (2012) EX operators. In the syntactic literature, so-called ‘cartographic’ approaches, which represent illocutionary components as left-peripheral syntactic projections (Rizzi 1997, 2014), have postulated a separate functional projection for exclamatives (e.g., Munaro & Obenauer’s 1999 ‘ExcICP’).

Let us first illustrate this general idea by sketching very briefly the two semantic approaches by Rett (2011) and Grosz (2012) because those two approaches most explicitly postulated a dedicated illocutionary operator for exclamations and can thus illustrate the general thinking of the IFH in the context of our discussion. Crucially, both approaches explicitly build their proposals on
a distinction between descriptive content on the one hand and expressive content on the other (both Rett 2011 and Grosz 2012 explicitly refer to the original discussion and concepts in Kratzer 1999 and Potts 2005). This dichotomy between descriptive and expressive content is an aspect of those two approaches that we think also lies at the core of many other prominent accounts, some of which we will discuss further below. For instance, Zanuttini & Portner’s (2003) claim that the descriptive content of exclamatives (i.e., their proposition, see details below) can be characterized as a factivity presupposition (and not as assertive content) is based on a general view according to which there is a “difference in force between exclamatives and declaratives like It is surprising that…, which assert closely related content” (Zanuttini & Portner 2003: 56)—and this view implies that exclamatives are somehow ‘special’ because their main illocutionary point is ‘expressive’ and not the assertion of descriptive content.

This general thinking is semantically articulated in Rett’s (2011) and Grosz’s (2012) approaches, which is why we briefly sketch them in the following section. Based on this discussion, we will then address two empirical data points that are often cited in favor of such exclamations-force approaches, which distinguish between declarative exclamations on the one hand and exclamatives on the other hand by claiming that they have different semantic and pragmatic properties (Section 2.2 and Section 2.3).

2.1 The exclamation operator

As already mentioned in Section 1 above, one of the most articulated and clearest versions of the IFH has been formulated by Rett (2011), whose main point is to characterize ‘exclamation’ as “a speech act with a unique illocutionary force” (Rett 2011: 439). Rett’s (2011) illocutionary account is motivated by the intuition that, at the level of illocutionary force, there is no difference between exclamatives (e.g., How fast he is!) and declarative exclamations (e.g., He is so fast!). This is an intuition that we share.

However, while Rett’s (2011) consequence is to postulate an additional operator that can capture the similarities between those different utterance types, our claim will be that we can account for the relevant similarities without adding an force operator, and instead manage with the illocutionary force of assertion that we must postulate in our syntax-semantics anyway. In (14), we see Rett’s (2011: 429) formulation of her illocutionary operator E-FORCE, which is based on Kratzer’s (1999) account of German modal particles as expressive items (see Section 1.1 above).

(14) E-FORCE(p), uttered by sC, is appropriate in a context C if p is salient and true in wC. When appropriate, E-FORCE(p) counts as an expression that sC had not expected that p.

The modeling of the illocutionary force of exclamations in (14) includes a speaker in a Context (sC) and a world of utterance (wC), and the force of an exclamation expresses that some proposition p was not expected by the speaker sC.

See also Gutiérrez-Rexach (1996, 2001) and Postma (1996) for alternative (but less influential) semantic proposals of an intensional operator EXC(LAMATIVE) over propositions.

Another reason why we first focus on those two approaches is that their empirical domain is the class of exclamations in general, and not only the narrow class of exclamatives like in most of the existing literature. In a similar vein, the goal of our paper is to provide a new theory for exclamations, not only for exclamatives—this is why we believe our focusing on Rett (2011) and Grosz (2012) is justified.
The main point of Rett’s (2011) analysis now is that the input for the E-FORCE operator is different in exclamatives (How fast he is!) and declarative exclamations (He is so fast!). In other words, exclamatives and declarative exclamations differ in their content. Let us first look at Rett’s (2011: 430) analysis of declarative exclamations like in (15):

(15) (Wow,) John won the race!
   a. p = λw.wonw (john, ix[race"w(x)]]
   b. E-FORCE(p), uttered by sC, is appropriate in a context C if p is salient and true in wC. When appropriate, E-FORCE(p) counts as an expression that sC had not expected that p.

(15) illustrates that exclamations such as John won the race! denote propositions (15a), and the interaction of the illocutionary operator and p is thus straightforward (15b). When we now turn to exclamatives, Rett’s (2011) claim is that they denote degrees, not propositions (for reasons discussed in Rett 2008 and in Section 3 below). Accordingly, she proposes the following modeling where we look at a two-step analysis containing a proposition with an unbound variable (16b), which is then bound via existential closure in (16c) so that the proposition D(d’) can function as the input to the illocutionary operator (Rett 2011: 431):

(16) How tall John is!
   a. λd.tall(john,d)
   b. tall (john,d’)
   c. E-FORCE(p) counts as an expression that ∃d’ such that sC had not expected that D(d’).

As mentioned above, we share with Rett (2011) the goal to provide a unified analysis for cases such as (15) and (16). However, our claim will be that both (15) and (16) can be analyzed as assertions at the level of illocutionary force, and so we don’t need any additional operator such as E-FORCE in (14) above. More specifically, regardless of the question of force, the distinctive feature of all the different forms of exclamations is that they convey intense emotion. Assertions, crucially, can also convey such emotion, and in this case we are looking at declarative exclamations such as (15) above. The declarative exclamations are typically marked by interjections and an exclamation mark in written form—Wow, that was an amazing meal!—or a simple addition of so: He runs so fast! The literature, including Rett’s (2011) account sketched above, typically dissociates wh-exclamatives from those declarative cases, but we will show that there is no good argument for doing so. If the two behave in a similar manner with respect to tests of content (see Sections 2.2 and 2.3 below), and declarative exclamations are assertions, then wh-exclamatives must be assertions too. But before we discuss the details of our criticism in the following sections, let us have a brief look at another IFH approach, which puts an emphasis on the non-truth-conditionality of exclamatives and thus, similarly to Rett (2011), distinguishes exclamatives from declarative exclamations by not acknowledging the assertive character of exclamatives.

Like Rett (2011), Grosz’s (2012) account is an IFH approach that provides a unified illocutionary operator (his ‘EX’) for both exclamatives and declarative exclamations. However, and also along the lines of Rett’s (2011) analysis, he proposes that EX combines differently in the semantic composition of exclamatives on the one hand and in the composition of declarative exclamations on the other hand. Let us first look at how Grosz’s (2012) analyzes exclamatives.
In the case of exclamatives, EX combines with a truth-conditional expression of type \( \langle s,t \rangle \) (i.e., a truth-conditional argument of propositional type; i.e., functions from indices ‘s’ to truth-values, where ‘t’ is the type of truth-values) and maps this proposition onto felicity conditions that detail the speaker’s attitude towards the proposition. Crucially, the resulting denotation is not truth-conditional, but, according to Grosz, ‘felicity-conditional’. In particular, he claims that application of EX to a proposition yields a one-dimensional meaning of type \( E \) (defined as the type of expressive meaning). Consider the following example and the representation in (17’); see Grosz (2012: 118):

(17) Boy, is it snowing!

(17’) \[
\begin{align*}
\text{EX(snow)} : & \ E \\
\text{snow} : & \langle st \rangle \\
\text{EX} : & \langle st, E \rangle
\end{align*}
\]

Grosz claims that EX removes its propositional complement from the level of descriptive at-issue meaning, and shifts it to the level of expressive meaning. By contrast, Grosz continues, if one utters a declarative exclamation like (18), one still expresses a truth-functional statement (i.e., that it was snowing in Barcelona):

(18) It’s snowing in Barcelona! (It hasn’t snowed for years!)

To us, and many native speakers, the declarative exclamation in (18) sounds every bit as ‘expressive’ as the exclamative in (17), it is therefore not clear empirically that the two categories must be distinguished. The only difference (and the most crucial one for many approaches) is claimed to be that the expressivity in one case seems to be about the degree of snow (in [17]) whereas in (18) it seems to be about the fact that it is snowing. Other than that, declarative and ‘exclamative’ sentences seem to be expressing an amazement stance, and can be thought of as variants of the same kind of attitude. Yet in the approach to exclamations sketched in (17) above, declarative exclamations are assigned a multidimensional meaning (with an expressive and a descriptive, truth-functional) component, whereas exclamatives are said to lack assertive meaning.

Following Potts (2005, 2007a), we could say that the descriptive propositional part \( \langle st \rangle \) combines with the expressive part \( \langle st,E \rangle \) by means of the composition operator ‘\( \cdot \)’, which combines both meanings, passes the descriptive content up, and interprets it relative to the context modified by EX (see also Gutzmann 2015 on several applications of such a ‘multidimensional’ semantics). Formally, the composition operator ‘\( \cdot \)’ yields the following result (Potts 2007a: 187):

(19) \[
\left[ \text{EX} \right]^C \cdot \left[ \text{snow} \right]^C = \left[ \text{snow} \right]^C \left[ \text{EX} \right] \left( \left[ \text{snow} \right]^C \right)
\]

\footnote{In addition, exclamatives in many languages other than English can also express non-degree meaning (e.g., emotion about the fact that it is raining, and not about the degree of rain); see d’Avis (2002); Truckenbrodt (2013); Nouwen & Chernilovskaya (2015); Trotzke & Villalba (2021), and Section 4 below. That is, the observation that emotion is only about a degree in (17) cannot be considered a general feature that holds across languages and across all types of exclamatives. What seems to characterize exclamations as a whole (including both exclamatives and declarative exclamations) is the attitude of emotion (toward a fact, \textit{It is snowing!} or a degree), and it seems unhelpful to place unjustified barriers between instantiations that are otherwise substantially similar.}
According to this multidimensional analysis, the operator EX passes the descriptive content of \[\text{snow}\] unchanged—that is, it is at-issue and it can be asserted or questioned. However, its context of interpretation is altered by the content of the operator. So, in contrast to the representation for exclamatives illustrated in (17), the result for declarative exclamations, according to Grosz’s (2012) approach, is the following two-dimensional semantic object:

\[
\begin{align*}
\text{snow: } \{st\} \\
\text{EX(snow): } E \\
\text{snow: } \{st\} \text{ EX: } \{st, E\}
\end{align*}
\]

But, as we said before, is there independent undisputed empirical evidence that exclamatives and declarative exclamations differ substantially or at all? In the literature, we find two central data points that are cited in favor of distinguishing between the two: (i) the descriptive content of exclamatives is said to not be denied, but the descriptive content of declarative exclamations can; and (ii) exclamatives, unlike declarative exclamations, have been claimed to not be used as responses to information-seeking questions. Let us now examine these empirical data points.

### 2.2 The descriptive content of all exclamations can be denied

It is commonly claimed that declarative exclamations count as assertions and their descriptive content can thus be ‘denied’, whereas the descriptive content of \(wh\)-exclamatives cannot be denied—an indication that they do not make a contribution to the discourse. The intended difference is reflected below (examples and judgments by Rett 2008, 2011):

\[
\begin{align*}
\text{(21) A: } & \text{(Wow,)} \text{ John bakes delicious desserts!} \\
& \text{B: No (he doesn’t), these are store-bought. John’s actually a terrible cook.}
\end{align*}
\]

\[
\begin{align*}
\text{(22) A: } & \text{(My,)} \text{ What delicious desserts John bakes!} \\
& \text{B: ? No (he doesn’t), these are store-bought. John’s actually a terrible cook.} \\
& \text{B’: Not really; these are store-bought. John’s actually a terrible cook.}
\end{align*}
\]

\(Wh\)-exclamatives, as can be seen in (22B’), can indeed be denied by phrases like \textit{not really} etc. (see Rett 2008: 199-200); therefore the reported difference in judgment regarding a direct rejection such as \textit{No} needs to be updated. The question is: why is \textit{No} excluded? External negations such as \textit{No} are known to be anaphoric responses to the previous \textit{utterance} (Horn 2001; Giannakidou 1997, 1998; Giannakidou & Stavrou 2009), and can be used to \textit{reject} various aspects of the utterance including what is asserted (in which case we talk about denial proper) but also what is presupposed or implicated in which case the negation is metalinguistic (on rejecting presupposed content, see Beaver & Denlinger 2020). The so-called denial test is therefore more appropriately understood as a rejection test. In (21) and (22) what is rejected is the presupposition that John bakes delicious desserts, and it can be perfectly done with \textit{not really}, which is understood as more subtle rejection.
Remarkably, the ill-formedness of *No* reported by Rett (2008, 2011) can also be challenged. Other English speakers we consulted find no trouble responding *No* to this sentence—so the judgments in (22) are quite subtle, to say the least. When we look at one of our own native languages, Greek, our introspective judgment clearly is that both types of sentences can be routinely rejected by the negative particles *Oxi/Ba/A, ba*:

(23) A: Po po, o Janis ftiaxni nostima glyka!
    wow the John makes delicious sweets
    ‘Wow, John bakes delicious desserts!’
B: Oxi/Ba/A, ba! Ta agora apo to zaxaroplasteio.
    ‘No! These are store-bought.’
B’: Oxi/Ba/A ba! Dhen mou aresoun.
    ‘No! I don’t like them.’

(24) A: Ti nostima glyka pu ftiaxni o Janis!
    what delicious sweets that bakes the John
    ‘What delicious desserts John bakes!’
B: Oxi/Ba/A, ba! Ta agora apo to zaxaroplasteio.
    ‘No! These are store-bought.’
B’: Oxi/Ba/A ba! Dhen mou aresoun.
    ‘No! I don’t like them.’

We find no empirical contrast in Greek or English. We discuss the form of Greek *wh*-exclamatives in more detail below, but at this initial stage suffice it to note that: (i) the Greek *wh*-exclamative appears as a *what*- and not as a *how*-exclamative, unlike English, (ii) the *what*-exclamative contains the complementizer *pu* suggesting some sort of embedding (which we come back to), (iii) both types can be rejected with a number of negators that include the external particle *Oxi* ‘No’ but also the rejection particle *(a)* *ba*. These (more colloquial and quite common) rejection markers can also be used to reject regular declarative assertions (i.e., declaratives that do not express any surprise or amazement like in [23] above):

    the John makes delicious sweets
    ‘John bakes delicious desserts.’
B: Oxi/Ba/A, ba! Ta agorazi.
    ‘No! He buys them.’
B’: Oxi/Ba/A ba! Dhen mou aresoun.
    ‘No! I don’t like them.’

The rejection expressed by negating the previous assertion is indistinguishable from the rejection of an exclamative. And, we repeat, the English translations contain equally flawless rejections. Hence, when we understand the issue to be about rejection and not narrow denial (which is strictly speaking negating the proposition by *n’t/dhen* which differ morphologically from *No/Oxi*), the idea that exclamatives cannot be rejected is simply a non-starter. Given the Greek data and the weakness of the original English contrast, declarative exclamations and *wh*-exclamatives surface as more similar than different.
Castroviejo Miró (2008) offers a similar discussion to ours. Consider her examples (27):

(27)  a.  A: How tall Bill is!
    b.  B1: #That’s not true, you are not emotional.
    c.  B2:  Come on, he’s not that tall.

Castroviejo Miró claims that “(27b) is impossible, because the speaker’s emotional state cannot be denied, but a sentence like (27c) is acceptable and felicitous in this dialogue because what is being denied is not the speaker’s attitude but rather the sentence that one can infer when interpreting a *wh*-exclamative, i.e., that Bill is very tall. We cannot reply by denying that the speaker believes it, but we can deny the believed content.” These are observations that we share.

Importantly, recent experimental work also challenges the presumed judgment difference between declarative exclamations and *wh*-exclamatives showing that judgments in (22B) above do not stand up to empirical scrutiny that measures the acceptability of relevant patterns. In particular, Villalba (2017) argued based on two experiments that the descriptive content of exclamatives is semantically ‘at-issue content’ and hence amenable to rejection in a discourse. This recent research on Spanish and Catalan exclamatives is further supported by a large-scale acceptability study (n=112) by Trotzke (2019) on German exclamatives where he demonstrates that there is no difference between *wh*-exclamatives and other forms of exclamations (notably declarative exclamations) when testing the felicity of different rejection strategies like the ones introduced above in (21) and (22).

More specifically, participants in this study had to rate the acceptability of Speaker B’s denials on a scale ranging from 1 (= very bad) to 6 (= very good). Crucially, all judgments of exclamation items were at ceiling (ranging from 5.2 to 5.7) and thus in accordance with filler items presenting perfect mini-dialogues (e.g., *wh*-question + corresponding declarative response); see Trotzke (2019) for full set of German items and detailed statistics. Table 1 summarizes some of the results relevant in our context:

<table>
<thead>
<tr>
<th>Exclamation type</th>
<th>strong denial (e.g., <em>No!</em>…)</th>
<th>weak denial (e.g., <em>Not really,… That’s not quite true…</em>; German: <em>Nicht wirklich, … Das stimmt nicht ganz…</em>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>declarative</td>
<td>5.55</td>
<td>5.70</td>
</tr>
<tr>
<td><em>wh</em>-exclamative</td>
<td>5.28</td>
<td>5.46</td>
</tr>
</tbody>
</table>

Table 1. Summary of some ratings from Trotzke (2019).

As Table 1 indicates, both utterance forms allow rejection, and prefer the subtle strategy labelled as weak denial (e.g., *not really* etc.). This indicates that the descriptive content is indeed in a way backgrounded in exclamatives like (22), and this backgrounding is the same in declarative exclamations (21) signaled by the overall preference for subtle rejection in this study. Note that although Trotzke’s (2019) study on German exclamatives differs from Villalba’s (2017) study on

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8 Very briefly, a two-way ANOVA revealed significant main effects of both EXCLAMATION TYPE (*p* < .001) and DENIAL STRATEGY (*p* < .001), but there was no significant interaction (*p* > .05); see Trotzke (2019: 530-531) for further details.
Romance (both in the choice of materials and in the methodology used), the two experimental studies taken together support our intuition about the Greek and the English data: the descriptive content of exclamatives can indeed be rejected—suggesting that exclamatives feature assertive force. In other words, the rejection strategies of exclamatives and declaratives look more similar than expected under a hypothesis where exclamatives lack assertive force. The rejections appear to target the same descriptive content in both cases.

Additionally, why should we postulate a factivity presupposition to account for the descriptive content of exclamatives like, for example, Zanuttini & Portner (2003) do? Since no one to date has proposed that we need factivity presuppositions to account for the descriptive contribution of declaratives like (21), such an approach would also be on the wrong track when dealing with the descriptive content of exclamatives. Let us now strengthen the empirical claim that exclamatives do not differ much from declarative exclamations by looking at how both can be used as responses to information-seeking questions, the second central data point often cited in favor of distinguishing between the two.

### 2.3 Exclamatives can be used as responses to information-seeking questions

In this section, we examine the felicity of responses in certain dialogue sequences involving exclamatives. Just like with rejection, we think of ‘response’ as encompassing direct answers to information-seeking questions but also other more indirect moves in a dialogue (e.g., by means of pragmatic inferencing/implicatures; see Holtgraves 1998; Walker et al. 2011; de Marneffe & Tonhauser 2019). This will become clear in a moment.

Grimshaw (1979: 321) famously argued that exclamatives are always infelicitous as responses to questions. Here is her prominent example:

(26) A: How tall is John?
B: # How tall John is!
B’: John is very tall.

The *wh*-exclamative presumably conveys the same descriptive content as the declarative assertion in (26B’)(though it would be more accurate to say that it is equivalent to *John is extremely tall*, an end-of-scale degree, a point to which we return). Yet, the argument goes, declaratives are felicitous responses, but an exclamative is not; hence the exclamative lacks assertive content. Zanuttini & Portner (2003) and many others further claimed that the only descriptive content of exclamatives is a factivity presupposition, and a presupposition cannot serve as a response providing new information.

It is important to note that claims such as Grimshaw’s based on (26) are (again) focused on the syntactic form of an exclamative, and not on exclamations more generally. As we pointed out in Sections 2.1 and 2.2, there is no difference in content between an exclamative like *How tall John is!* (26B) and a declarative of the form *John is so tall!* (26B’)—which is, by the way, also an imperfect answer:

(26’) A: How tall is John?
B: # How tall John is!
B’: # John is so tall!
If we only take Grimshaw’s (1979) account, then we would expect that the declarative form in (26B’), even when used as an exclamation, should be fine. But then it’s not clear why the exclamative in (26B) should be ruled out, given that both the exclamative and the declarative exclamation can express the same kind of emotion towards the very same content.9

Importantly, we will argue, the ability or not to respond to a question is not necessarily evidence for assertive force or lack thereof. Many questions, for example, can be responded to by other questions—often rhetorical—or imperatives:

(27) A: Who came to the party?  
   B: Who didn’t? (Intended to convey: Everyone did).  
   B’: Ask Mary. (Intended: She will tell you).

Being a response to a question and being an assertion are not the same thing, and Grimshaw’s initial argument needs to be seen in this light.10 One could argue, of course, as Sadock (1971), Han (2002), and Giannakidou & Mari (2022) do, that rhetorical questions like (27B) are equivalent to assertions semantically, in which case the clause type (question) does not determine the semantic value or discourse function. And if that is the case, then the distinct clause type of exclamative does not necessitate a distinct semantic or pragmatic type either.

Secondly, while the previous literature has mainly focused on the type of responses, we would like to explore the type of questions instead. When we do that, we find that exclamatives can indeed be used to respond to information-seeking questions as long as they do not yield a mismatch at the level of information structure. Look at the following patterns:

(28) A: How fast was Eliud Kipchoge?  
   B: Eliud Kipchoge was [very] fast.  
   B’: # [How fast Eliud Kipchoge was!]  
   B’’: # [Eliud Kipchoge war was aber auch Part schnell fast!’]  

The declarative (28B) is a perfect response to a narrow-focus question (28A). (28B’) is odd as already pointed out in the literature. Crucially, (28B’’)—a German declarative featuring the exclamative particles aber auch—is as bad as (28B’), although the syntax is clearly ‘assertive’ (more on these particles in Section 4). However, (28B’’), due to the use of those exclamative particles (and the corresponding exclamative intonation), is interpreted as an exclamation with declarative and hence assertive syntax (hence as a declarative exclamation, see our discussion in Sections 2.1 and 2.2 above). Hence, the infelicity of (28B’) does not, again, prove non-

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9 Again, note that our account aims at a unified treatment of exclamatives and declarative exclamations—not by saying that both share an exclamation operator (like previous accounts did, see Section 2.1), but by highlighting that both are essentially assertions. Since assertions can function as responses to information-seeking questions, we thus predict that both syntactic forms (exclamatives as well as declarative exclamations) can function as responses to information-seeking questions.

10 Let us add some clarification on whether the responses in (27) constitute answers to the question. It seems clear that they do. In (27B), the content conveyed is that there were a lot of people, and in (27B’) that I do not know the answer to the question. The notion of content includes both what is asserted and what is implicated, and a response—as opposed to an ‘answer’—provides content. Our point here is that, if we want to be consistent about the fact that responding to a question is not merely asserting a direct answer, we cannot use an unqualified notion of ‘answer’ as a diagnostic for assertion.
assertiveness. Instead, it might be due to the nature of the question. (28A) asks directly what the degree of fastness was. But if, as we are suggesting, the speaker’s belief of the extreme degree of fastness is presupposed (see Section 3), then offering a wh-exclamative to this type of question is infelicitous.

Contrast the above with the following examples, where the question is not directly about the degree of fastness:

(29)  
A:  Tell me, how did Eliud Kipchoge do in the race?  
B:  [He was very fast.]_{F}  
B’:  My god! [How fast he was!]_{F}  
B’’:  My god! [Der ‘this-one’ war ‘was’ aber_{PART} auch_{PART} schnell ‘fast’!]_{F}

When the information-structural context is changed to a broad-focus question, we see a clear improvement of both the exclamative (29B’) and the declarative exclamation (29B’’). We claim that (29B) is also fine in such a context because it no longer expresses narrow focus as in (29B), but instead it can also be interpreted as an all-focus declarative.\(^{11}\)

In a similar vein, consider again the following scenario, where the answerer is already in a heightened emotional state:

(30)  
Context: I consider Trump to be a liar, but unfortunately people believe him. After watching one of his rallies, my friend asks and I respond as follows:  
Q: Why don’t you say anything?  
A: How ecstatic Trump’s crowd was!  
B: How manipulative Trump was!

In this context, the exclamative is a fine answer. Once the context is a bit richer about the emotional state, a response with an exclamative is acceptable. We believe that the reason why the original Grimshaw example was incongruent was because of the presuppositional load of emotive assertions (as we will show soon) can get in the way. Note that in the original sequence an emotive assertion is also odd:

(26’)  
A:  How tall is John?  
B:  # I am amazed at how tall John is.  
B’:  John is very tall.

These patterns suggest that the second major data point in the literature intended to show that exclamatives lack assertive content is questionable: exclamatives can indeed be used as responses to information-seeking questions provided that they occur in a relevant information-structural and

\(^{11}\) The only place in the literature where we found similar cases of exclamatives serving as responses to information-seeking questions is Chernilovskaya et al.’s (2012: 118):

(i)  
A: Did you enjoy your vacation?  
B: What great fun we had!

However, they do not provide any explanation for why (i) is acceptable (stressing that it remains a puzzle), and they claim that it is not possible to construe felicitous examples for non-polar information-seeking questions like Grimshaw’s (1979) wh-cases. We do both: We provide an explanation in terms of information structure, and, based on that hypothesis, illustrate how (and why) exclamatives can also be felicitous as responses to information-seeking wh-questions.
rich enough context. The point is, crucially, that Grimshaw’s initial example was out of the blue, but as it turns out relying on out of the blue context does not give accurate results.

Since there is no other substantial argument for a difference between declarative exclamations and exclamatives, we will move on to our proposal, which is that exclamations as a class (\textit{wh}- and declarative ones) indeed convey descriptive content and are emotive assertions of intensity.

3. Greek exclamatives and emotive \textit{pu}

In this section, we present new data from Greek exclamative structures suggesting an affinity of exclamations to emotive assertions such as \textit{I am amazed/surprised that Bill bakes delicious desserts, I am amazed at how delicious the desserts Bill bakes are.} Based on the empirical parallels, we extend the category of emotive assertion to include both \textit{wh}-exclamatives and declarative exclamations, and propose a syntax that captures that.

Before we dive into the details of our approach and the relevant data from Greek, we would like to point out that our main goal in this paper is not to highlight cross-linguistic differences between various ways of how languages express exclamations.\footnote{This is a hot topic in the literature on \textit{wh}-exclamatives (see d’Avis 2016; Nouwen & Chernilovskaya 2015), but we are interested in exclamations more generally (including declarative exclamations, see Sections 1 and 2 above).} Quite the contrary. We discuss the Greek patterns (and later in Section 4 below data from German) because we think that the morphosyntax of exclamations in those languages overtly instantiates relevant features of exclamations that, according to our approach, tell us something about the domain of exclamations more generally and across languages. In other words, what we propose in the following sections can also be applied to other languages, most notably also to English, as this language—and the associated arguments and literature—were at the center of Sections 1 and 2. We noted already that our core claim is that \textit{wh}-exclamatives are emotive assertions akin to assertions of sentences containing emotive predicates such as \textit{be surprised} etc. and have very similar truth conditions and presuppositions.

For English, such an approach has been discussed as well (see already Grimshaw 1979). However, one of the main arguments against an analysis of English exclamatives that assimilates matrix configurations and embeddings under predicates such as \textit{be surprised} is that there seem to be more options for the \textit{wh}-element in embedded configurations than for the corresponding matrix versions (see Lahiri 2000: 361-362; Rett 2008: 191-192). Look at the following examples from Lahiri (2000: 361):

\begin{enumerate}
\item[(31)]\begin{enumerate}
\item a. It is surprising who came to the party.
\item b. * Who came to the party!
\end{enumerate}
\end{enumerate}

For Rett (2008), the ungrammaticality of (31b) is evidence for the degree restriction that she claims holds for English exclamatives. According to her approach, only a restricted class of \textit{wh}-elements—namely those that express degree readings—can occur in English matrix exclamatives. We will come back to this restriction in more detail in Section 3.4 below, but for now we would like to point out that this central argument against an analysis of exclamatives akin to
configurations with emotive predicates does not really convince us because we actually do observe matrix versions of non-degree configurations such as (31a) above:

(32) Look who came to the party!

The requirement of initial look! in this type of exclamation is reminiscent of other English idiosyncracies such as the strong preference for initial interjections in English inversion exclamatives (McCawley 1973; [33a]), which are totally fine without such introducing elements in languages like German and Dutch (e.g., Brandner 2010).

(33) Boy, is syntax easy!

All in all, while we of course acknowledge the rich typology and fascinating morphosyntactic variation of exclamations across languages, we do not think that this formal variation necessarily corresponds to a semantic variation. Exclamations, we claim, in potentially any language can be analyzed as emotive assertions, and we see no reason not to extend the account sketched next for Greek and German to English, since the language-specific arguments against it (see [31] above) turn out to be weak as soon as the discussion takes into account richer contexts and data. Let us now turn to exclamatives in Greek and what they can teach us about the semantics of exclamations more generally.

3.1 Greek what-exclamatives: Distribution of pu

There is not much discussion of exclamatives in the Greek literature, and our goal in this paper is to document the core patterns. Recall our earlier presentation of the Greek data. We noted that (i) in Greek wh-exclamatives appear with what and not as a how-exclamative (like English), and (ii) the what-exclamative contains the complementizer pu, suggesting some sort of embedding:

(34) Ti nostima glyka (pu) ftiagni o Janis!
what delicious sweets that bakes the John
‘What delicious desserts John bakes!’

(35) Ti grigora pu/*oti/*na etrekse o Kipchoge!
what fast that.pu run.3SG the Kipchoge
‘How fast Kipchoge ran!’

In employing the complementizer pu, Greek exclamatives look like complements of emotive verbs, which famously in the Greek literature select this complementizer. In order to appreciate the significance of this fact, consider that Greek has four complementizers: oti/pos (indicative), na (subjunctive), and pu which is the emotive indicative (see Giannakidou 2016; Roussou 2020). Of these, only pu appears after verbs of emotion:

(36) I Ariadne thavmase pu/*oti/*na o Kipchoge etrekse toso grigora.
the Ariadne was.amazed that.pu the Kipchoge run.3SG so fast
‘Ariadne was amazed that Kipchoge ran that fast.’
Giannakidou (2009, 2016) and Giannakidou & Mari (2021) offer extensive discussion of Greek mood patterns. The key piece is the use of the emotive pu in the exclamative. Also important is the use of what instead of English how. What plus ADJ is not an otherwise attested combination in Greek, and is certainly not the way to form a degree question. As we can see below, the degree question requires, like in English, a how wh-phrase, specifically poso ‘how much’:

(39) Poso/*Ti grigora etrekse o Kipchoge?
how/what fast run.3SG the Kipchoge
‘How fast did Kipchoge run?’

(40) Poso/*Ti psilos ine o Andreas?
how/what tall is the Andreas
‘How tall is Andreas?’

Greek wh-exclamatives are thus clearly distinguished from interrogative structures in Greek, and as we argue later, the what-ADJ combination can be thought of as a realization of an abstract extreme degree morpheme akin to so. In further support of this, consider that neutral degree how-much questions are incompatible with pu:

(41) * Poso psilos pu ine o Andreas?
how tall pu is the Andreas
‘How tall is Andreas?’

For completeness, we should mention that the degree wh-word can be used in an exclamative, but the structure is more marked, and some speakers have difficulty with it:

(42) ?Poso psilos ine o Andreas! [marked exclamative]
how tall is the Andreas
‘How tall Andreas is!’

However, as already mentioned, this is a marked way to form an exclamative, the default being the what/pu variant. What is central in this data is that (a) the use of pu makes Greek exclamatives look like embedded sentences, specifically on a par with complements of emotive verbs, and (b)

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13 Greek is well known to allow polymorphy in grammar, from person marking to comparatives and imperatives, hence the use of multiple strategies is not a surprise. As we say in the text, however, the two strategies in the exclamative are not in free variation. The what/pu exclamative is the standard way, the degree strategy being marked.
use of *ti* ‘what’ plus adjective to indicate the high degree. Let us consider now the properties of emotive verbs.

### 3.2 Emotive verbs: Subjective veridicality presupposition and emotive assertion

Contrary to what is often claimed in the literature, emotive verbs do not have a factivity presupposition. Huddleston & Pullum (2002), Egré (2008), Giannakidou (2016), and Giannakidou & Mari (2021) point out a number of examples illustrating this point:

(43) Falsely believing that he had inflicted a fatal wound, Oedipus regretted killing the stranger on the road to Thebes.

Huddleston & Pullum (2002) claim that in this sentence *it is not entailed* that Oedipus inflicted a fatal wound. Here is another example:

(44) John wrongly believes that Mary got married, and he regrets that she is no longer unmarried. (Egré 2008: 30).

Giannakidou (2016) summarizes that “one can have an emotive attitude towards something that one *believes* to be a fact, but may not *actually* be a fact. One may *believe* that something happened (*a believed* fact) and then feel happy or sad about it. Hence, emotive verbs need not be veridical in the objective sense (as *know* is) but subjectively, since emotive verbs still rely on the emotive subject’s full commitment to *p*.” Giannakidou continues that some emotive verbs, in addition, have a contrary presupposition (see also Baker 1970 who proposed it for all emotives):

(45) Negative presupposition of contrary emotive factives (Giannakidou 2016)

\[
[i \text{ is surprised that } p] \quad \text{is defined if only if: } i \text{ believed that } \neg p, \text{ at a time } t' < t_u \text{ (where } t_u \text{ is the utterance time).}
\]

This is the reason why the sentence below is odd:

(46) Ariadne is surprised that Nicholas participated in the marathon, *and* she always thought that he would do it.

In other words, contrary emotive predicates such as *be surprised, be amazed* are defined based on the individual anchor *i*’s prior beliefs, and carry a negativity expectation.\(^\text{14}\) I am amazed at, and surprised by something only if I expected it not to be the case. When the complement concerns a degree, this negativity is responsible for producing intensity:

(47) Ariadne is surprised at how tall Nicholas is, *and* she always thought that he is extremely tall.

\(^\text{14}\) Giannakidou & Mari (2021) also mention that not *all* emotive verbs are contrary. For instance, *John is happy that his wife is pregnant—and he always thought that this is possible!* is totally fine. Our point here is that exclamatives contain contrary emotives such as *be surprised* because we want to capture the unexpectedness of the degree (see discussion in the next section).
In (47), the use of surprise and how tall drives the intensity of the statement: the extreme degree is contrary to expectation. Interestingly, how tall gets interpreted as extremely tall in this context, despite the fact that it lacks an apparent degree modifier—a point to which we return. In any case, it is the combination of the contrary emotive be surprised with the extreme degree that produces an intensity of emotion otherwise not attested with emotives as a class: John is amazed that Mary is here is emotive but not intense.

We will lay out now the latest version of the theory of Giannakidou & Mari (2021) (GM) for emotive verbs that we will adopt. All emotive predicates (like glad, sad, happy, surprised, etc.), according to GM, express emotions. Emotions are attitudes (or, psychological states) towards believed facts or potential facts (as with fear). Emotive attitudes are gradable: one can be very sad, a little bit sad, terribly sad—or, on the other hand, not sad at all, or only a little bit sad. It is therefore no accident that emotional attitudes often employ adjectives that are gradable and scalar.

GM propose a mapping from degrees of emotions to worlds, which we illustrate with their example, irritated. The scalar predicate establishes a threshold $d$, above which one is irritated and below which one is not. The mapping partitions the emotive modal base $\mathcal{E}$ into worlds above the threshold in which $i$ has the emotion and those in which she does not. This partition is driven by the threshold $d$. Note (see Figure in [48]) that in the worlds in which $i$ has the emotion, $p$ is true. In other worlds, $\mathcal{E}$ is a set of worlds ordered by the emotion (sentiment) $S$, we can think of it as the emotive modal space. The set of worlds is partitioned into two equivalence classes of worlds. One is the set of worlds in which the attitude holder has the emotion and $p$ is true. The other one is the set of worlds in which the attitude holder does not have the emotion and $p$ is false.

(48)

This partitioning allows us to define Positive-Extent-worlds (PE) for $p$:

($48'$) $\text{PE}_p = \{w' \in \mathcal{E}_p : w' \text{ where the propositions in } \mathcal{P} \text{ are true}\}$
In other worlds, $\mathcal{E}$ is a set of worlds ordered by $S$. The set of worlds is partitioned into two equivalence classes of worlds. One is the set of worlds in which the attitude holder has the emotion and $p$ is true, i.e., the positive extent (PE). The other one is the set of worlds in which the attitude holder does not have the emotion and $p$ is false. Here, the set $\mathcal{P}$ is the singleton set $\{p\}$. So $\mathcal{PE} \mathcal{P}$ contains all the worlds in which $p$ is true. In $\mathcal{PE} \mathcal{P}$, $i$ has sentiment $S$. But not all worlds in $\mathcal{E}$ are $\mathcal{PE}$ worlds for $p$; $\mathcal{E}$ only partially supports $p$ since $\mathcal{PE} \mathcal{P}$ is a subset of $\mathcal{E}$ (the emotive space). The complement of $\mathcal{PE}$ contains $\neg p$ worlds. The semantics proposed here may remind the reader of the Best ordering used for modals (Portner 2009); it is indeed a similar ordering function, only for GM, the ordering source for emotion merely contains $p$.

The starting point of this section was our observation that the use of the complementizer $pu$ in Greek exclamatives suggests that we could also look at exclamatives as instantiating embedded structure, on a par with complements of emotive verbs. If exclamatives are parallel to emotive structures in this particular sense, they are also not factive and carry a similar presupposition and assertion. The presupposition is subjective veridicality, i.e., that the individual anchor $i$, which is the subject of the attitude verb, believes $p$ to be true, and the assertion says that in all worlds where $i$ has the emotion designated by the predicate the content $p$ is also true:

\begin{enumerate}
\item $\mathcal{E}$ is defined iff
\begin{enumerate}
\item $\mathcal{Dox}(i)$ contains only $p$ worlds (subjective veridicality)
\item $\mathcal{E}$ is nonveridical and contains $p$ and $\neg p$ worlds (emotive nonveridicality)
\item If defined: $\forall w' \in \mathcal{PE} \mathcal{E} (w') \mathcal{P}(w')$ (assertion of emotion)
\end{enumerate}
\end{enumerate}

The indices correspond to the following. $\mathcal{Dox}(i)$ is the set of doxastic alternatives, i.e., belief worlds, of the individual anchor $i$, which is the subject of the sentence who bears the emotion. $\mathcal{Dox}(i)$ is veridical, i.e., entails $p$ since all worlds in it are $p$ worlds. This is the subjective presupposition of belief of $i$, and not factivity. $\mathcal{E}$ is the emotion space, which is partitioned into a positive (PE) and a negative extent. The emotive assertion conveys that in all worlds consistent with the emotion of the subject $i$, $p$ is true. In addition, contrary emotives have the negative expectation presupposition such as (45) which adds a counterexpectation that brings intensity.

Adopting this parallelism between emotives and exclamatives, we argue that wh-exclamatives and declarative exclamations have the assertion and presuppositions conveyed by sentences with emotive verbs. The intensity of exclamatives suggests the presence of a negative presupposition such as (45). Syntactically, we posit a higher emotive $V$ for exclamatives, and we proceed now to show how this works at the syntax-semantics interface.

### 3.3 The syntax and semantics of emotive assertions I: emotive $V$

In this section, based on the above analysis we argue that exclamatives, such as (50), are emotive assertions akin to assertions containing the predicates be amazed, be surprised overtly in (51):

(50) How fast Eliud Kipchoge was!

(51) I am amazed at how fast Eliud Kipchoge was.
We claim that these sentences are identical in terms of what they assert and what they presuppose, and we will therefore group them together under the label ‘emotive assertions’. They both assert that the speaker has the emotion of amazement towards the believed proposition ‘Eliud Kipchoge was extremely fast’, and presuppose that the speaker has this very belief.

Let us begin our analysis by pointing out that our idea of treating the sentences above as one single phenomenon is not uncommon in the linguistic literature—quite the contrary, in fact. It is reminiscent of the phenomenon of ‘insubordinate clauses’, where embedded clause structures are used as root clauses (see, e.g., Evans 2007; D’Hertefelt 2018; and Section 4 below for more references). For many of those insubordinate cases (e.g., English wish-clauses: *If only Kipchoge participated in the race!*), grammar reference books characterize them as incomplete sentences where a matrix frame is omitted (Quirk et al. 1985; Huddleston & Pullum 2002: Ch. 10). In our analysis, we adopt this general explanation but we, for the first time, explore how it can be formally spelled out at the syntax-semantics interface, and which conclusions can be drawn from such an approach for the illocutionary or not status of exclamations.

To begin with, note again that the empirical basis of our proposal is that (i) exclamatives in general feature assertive content (Section 2) and that (ii) the distribution of the Greek complementizer *pu* makes Greek exclamatives look identical to complements of matrix clauses containing emotive verbs (Section 3.1). Based on those observations, we therefore submit that the wh-exclamative is the complement of a silent declarative main clause containing an emotive predicate (52), and that this declarative, at the level of illocutionary force, is nothing more than an assertion. As a first step, let us thus sketch our claim as follows:

(52) [\text{null-cp} \ldots \text{V-emotive} [\text{cp} [\text{C pu} \ldots \text{]]}]

(52) illustrates that the embedding predicate of the silent matrix clause involved in the interpretation of the exclamative must be emotive (‘V-emotive’) because otherwise the predicate would not select the complementizer *pu* instead of other C elements in the inventory of Greek (Section 3.1 above). Plus, the predicate must also be emotive because the exclamative features an expressive interpretation (which can be paraphrased as ‘Speaker is amazed at *p*’). Importantly, the emotive component of exclamatives in our analysis is not a part of its illocutionary force; rather, it is part of the proposition. To see this, compare our approach to the famous ‘performative hypothesis’ by Ross (1970), which is also postulating a silent main clause. Look at two of his examples (Ross 1970: 222-223):

(53) a. Prices slumped.
   b. I say to you that prices slumped.

Ross (1970: 223) claims that sentences like (53a) “must be analyzed as being implicit performatives, and must be derived from deep structures containing an explicitly represented performative main verb.” In other words, the sentence (53a) involves a syntactic deep structure that contains two sentences (53’), and the two sentences are derived from each other via transformational rules, which we cannot discuss in detail here.

(53’) a. [s Prices slumped.]
   b. [s I say to you [s (that) prices slumped.]]
Our idea of a silent matrix clause is very similar, but it crucially differs from Ross’s account because we are not deriving a speech act (aka the illocutionary force) from a silent main clause. Instead, we postulate a null element to represent parts of the propositional content of exclamatives that we think are implicitly understood, but not phonetically spelled out in exclamatives. Note, again, that we claim that (50) and (51) are identical in terms of what they assert and what they presuppose, and that both are ‘emotive assertions’. A performative analysis à la Ross (1970) for those cases would therefore look like (54), where the deep structure illustrates that the whole utterance is interpreted as an assertion:

(54) [s I assert that [s I am amazed at how fast Eliud Kipchoge was!]]

Our approach in (52) differs from (54) and is not performative. Rather, (52) says that the Greek exclamative (55) is a fragment of the declarative version in (56):

(55) Ti grigora pu etrekse o Kipchoge!
what fast that.pu run.3SG the Kipchoge
‘How fast Kipchoge ran!’

(56) Meno ekpliktos pu o Kipchoge etrekse toso grigora!
stay surprised that.pu the Kipchoge run.3SG so fast
‘I am surprised/amazed that Kipchoge ran so fast.’

The content of the missing emotive verb is one that includes a counterexpectation, as we mentioned earlier, and it can be positive (as we are discussing here) or negative (as in I am bothered by what I perceive as Kipchoge running extremely fast).

Nevertheless, both the exclamative in (55) and the declarative in (56) are assertions, with emotive matrix verbs specifying the emotion based on counterexpectation. This type of assertion, which we call ‘emotive assertion’ functions pragmatically like any other type of assertion. That is, we can apply the following speech act paraphrase of an assertion from Truckenbrodt (2006: 264-265) to both (55) and (56) above (S = speaker; A = addressee):

(57) Speech act paraphrase/emotive assertions (55) and (56):
‘S wants from A that it is common ground that S is surprised/amazed that Kipchoge ran so fast.’

According to Truckenbrodt, the major speech acts— assertions and questions— always have the common ground as the ‘epistemic desideratum’, which he articulates by means of the epistemic meaning component ‘it is common ground that/whether…’15 Another key feature of this account of speech acts is that Truckenbrodt (2006: 263-264) conceptualizes “all sentential speech acts as volitional on the part of the speaker […] S wants something, wishes for something, invites A to do something etc.” The speech act paraphrase in (57) articulates this concept for our cases of emotive assertions which work just like any other cases of assertions.

15 According to this account, the speech act paraphrase for a question like Has Eliud won the race? would be ‘S wants from A that it is common ground whether Eliud has won the race.’
Given the two examples in (55) and (56), two remaining issues regarding our structure in (52) arise:

- How can the different word orders in the Greek exclamative (55) and the Greek declarative (56) be accounted for?
- How should we account for the fact that exclamatives are always interpreted as conveying the surprise of the speaker (and not that of any other subject)?

Let us start with the second question. Exclamatives are always anchored to the speaker, and it is thus no surprise that the sentiment conveyed belongs to the speaker. According to our approach, this can be accounted for by saying that exclamatives appear to be first person emotive assertions, and the omission of the higher verb becomes akin to the omissions found in other first person cases, e.g., in first person doxastics, e.g., *John is a good student* is equivalent to *I think/believe John is a good student*.

Conceptually, the necessity of speaker orientation can also be understood to follow from general assumptions about pragmatic inferencing and origo. If we formalize [+speaker orientation] as the more general feature [+origo], there is only one option for [+origo] (I, here, now), but many options for [-origo] (1st person, 2nd person, 3rd person; here, somewhere else; past, present, future). Based on Gricean Manner and Quantity reasoning, the hearer interprets the unspecified structure (52) as the simplest unmarked [+origo], which means that the subject of the matrix clause containing the emotive predicate V-emotive is pragmatically derived as being the speaker (and the whole event as taking place in the here and now, which is true of the exclamative). We can thus revise our representation as follows, where [+origo] stands for ‘speaker, here, and now’:

(52') \[
\text{[NULL-CP ... [vP XP-subject[+origo] V-emotive [CP [C pu ... ]]]]}
\]

Let us now turn to the other issue mentioned above: How can the different word orders we see in (55) and (56) be derived syntactically?

(55) Ti grigora pu etrekse o Kipchoge!
what fast that.pu run.3SG the Kipchoge
‘How fast Kipchoge ran!’

(56) Meno ekpliktos pu o Kipchoge etrekse toso grigora.
stay surprised that.pu the Kipchoge run.3SG so fast
‘I am surprised that Kipchoge ran that fast.’

Note again that despite lacking an apparent degree modifier, both relevant phrases in the two examples (i.e., *ti grigora* and *toso grigora*) get interpreted as ‘extremely fast’, yielding the respective intensities of the utterances. In this respect, the two phrases are interpreted in the same way (see Section 3.4 below for more details on this degree interpretation). However, while *toso*

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16 Recent work by Sode & Truckenbrodt (2018) and Truckenbrodt (2019) likewise uses [±origo] in its syntax, but in a slightly different context (namely as a verbal mood feature to characterize different clause types in German, in combination with the two syntactic operators WANT and BELIEVE).
grigora can stay in situ (58a), ti grigora has to move to the left periphery of the CP headed by the complementizer pu (55), otherwise the sentence becomes ungrammatical (58b). Why is that so?

(58) a. O Kipchoge etrekse toso grigora!
    the Kipchoge run.3SG so fast
    ‘(Wow!) Kipchoge ran so fast! (It’s faster than anyone had expected!)’

   b. * O Kipchoge etrekse ti grigora.
      the Kipchoge run.3SG what fast
      (intended: same as [58a])

To understand this pattern, it is also important to see that in the version with toso grigora the syntactic structure is in fact ambiguous between an emotive reading (that carries the negative expectation presupposition; see Section 3.2) and a non-emotive reading illustrated in (58’a):

(58’a) a. O Kipchoge etrekse toso grigora.
    the Kipchoge run.3SG so fast
    ‘(Oh well,) Kipchoge ran so fast. (It’s not surprising at all that he is the winner again.)’

The two readings are disambiguated by different intonation and pragmatic context, and the syntactic configuration as such does not provide any cue for the relevant interpretation. This is completely different in the case of ti grigora: here, the word order in (58b) is not possible, and the only grammatical version in (55) obligatorily results in an emotive interpretation which carries the negative expectation presupposition.

This data pattern is reminiscent of other emotive syntactic constructions where the movement of a phrase to the left periphery is likewise obligatory, and where we can thus observe a root/non-root asymmetry. A case in point is the English phrase wh-the-hell. In particular, as first noted by Lasnik & Saito (1984), English appears to disallow a wh-word with the hell to remain in situ (e.g., *Who is in love with who the hell?; see also Pesetsky 1987). Den Dikken & Giannakidou (2002) have shown that the grammatical version where wh-the-hell moves to the left periphery (e.g., What the hell is he doing?) carries a presupposition of negative attitude and can thus be considered emotive.

The same also holds for many more cases where the wh-element has a degree reading similar to our Greek case ti (‘what’) in ti grigora (‘what fast’). For example, the phrase [how cool] in (59) must move to the left periphery when expressing the degree reading (59a), but it is ungrammatical in situ (59b)—in contrast to the non-degree reading, which is fine in both (59c) and (59d); see Trotzke (2020); Nye (2009):

(59) a. How cool is that! [emotive reading]
   b. * That’s how cool! [intended: emotive reading]
   c. How cool is that? [question reading]
   d. That’s how cool? [echo-question reading]

---

17 In many languages of the world, intonation is used for signaling exclamation readings of utterances—a topic to which we have nothing new to add in this paper on the syntax-semantics of exclamations (but see recent experimental work by Bianchi et al. 2016; Repp 2020; Rett & Sturman 2020).
Given these similarities, in what follows we adopt a syntactic analysis that has already been used for emotive syntactic constructions which feature a root/non-root asymmetry like the ones illustrated above. In particular, Bayer & Trotzke (2015) and Bayer & Dasgupta (2016) have proposed a syntactic agreement mechanism for what they call ‘emphatic fronting’ and ‘emphatic topicalization’, respectively. Our Greek case of obligatory movement of *ti grigora* combined with the presence of the complementizer *pu* is a particularly striking case in this context because of the overt (and likewise obligatory) complementizer *pu*, which we know is emotive (see Section 3.1). Let us now turn to our analysis in more detail.

According to Chomsky’s (2000, 2001) so-called ‘probe-goal agreement’ mechanism, a probe with an unvalued (uninterpretable) feature \( u_F \) scans its locally accessible c-command domain for a category with a matching (interpretable) feature \( i_F \) that values \( u_F \) (and thus causes its deletion). According to Chomsky (2001: 5), “[t]he natural principle is that the uninterpretable features, and only these, enter the derivation without values, and are distinguished from interpretable features by virtue of this property.” Given this conceptual background, we notice a problem, however. We would have to postulate an emotive feature in \( C^0 \) (associated with *pu*) that probes the degree phrase \(*ti grigora*\). This emotive feature, by virtue of its unvalued status, would have to be uninterpretable, according to Chomsky’s (2001) valuation/interpretation biconditional:

\[
(60) \quad [\text{NULL-CP} \ldots [\text{CP} \quad [C' \quad pu_{\text{Emotive}} \quad [... \quad [XP \quad ti grigora]_{\text{Emotive}} \ldots ]]]]
\]

However, note that the emotive interpretation of *pu* is independent of the degree expression; *pu* can also appear without the expression of extreme degree—the only licensing condition being that *pu* is embedded by an emotive predicate in the matrix clause. In other words, the degree phrase contributes to the emotive interpretation (adding intensity; see Section 3.4 below), but it does not constitute emotivity. Accordingly, we need a theory that, in addition to (61a), allows configurations where the licensing direction is turned around as in (61b).

\[
(61) \quad \begin{array}{ll}
  \text{a.} & X \quad Y \\
  \text{b.} & X \quad Y \\
  u_F & i_F \\
  i_F & u_F
\end{array}
\]

In accordance with recent approaches by Bayer & Trotzke (2015); Bayer & Dasgupta (2016); and Trotzke (2017a), we therefore adopt the feature-sharing version of Agree formulated by Pesetsky & Torrego (2007: 268):

(62) *Agree: feature-sharing version*

a. An unvalued feature \( F \) (a probe) on a head \( H \) at syntactic location \( \alpha \) (\( F_\alpha \)) scans its c-command domain for another instance of \( F \) (a goal) at location \( \beta \) (\( F_\beta \)) with which to agree.

b. Replace \( F_\alpha \) with \( F_\beta \), so that the same feature is present in both locations.

Importantly, the approach to probe-goal agreement as feature sharing by Pesetsky & Torrego (2007) dissociates agreement from interpretability. It allows an interpretable feature to probe an
uninterpretable matching feature (adopting a notational convention, in [63b,c] agreement is expressed by an arbitrary value that fills the empty slot in [ ]).

(63) a. \[\text{NULL-CP} \ldots \text{[CP} \quad \text{[C' pu} \quad \ldots \text{[XP ti grigora] \ldots \text{]]]} \quad \quad \text{== AGREE \implies} \quad \text{iEmotive[ ] uEmotive[ ]}\]

b. \[\text{[NULL-CP} \ldots \text{[CP} \quad \text{[C' pu} \quad \ldots \text{[XP ti grigora] \ldots \text{]]]} \quad \quad \text{== MOVE \implies} \quad \text{iEmotive[4] uEmotive[4]}\]

c. \[\text{[NULL-CP} \ldots \text{[CP} \quad \text{[CP' pu} \quad \ldots \text{[XP ti grigora] \ldots \text{]]]} \quad \quad \text{iEmotive[4] uEmotive[4]}\]

(63) illustrates that the degree phrase [ti grigora] becomes part of the emotive interpretation of the utterance via agreement, and this agreement triggers movement of the degree phrase to the specifier of emotive pu.

One question that could be raised in the context of our analysis in (63) is why we still need the matrix NULL-CP structure containing the V-emotive that selects the emotive complementizer pu in our syntax for the Greek exclamative. Note that the literature on emphatic fronting and topicalization cited above deals with movement types that can be characterized as main clause phenomena. In other words, we could just as well claim, as one could argue, that the emotivity is not encoded in a still higher matrix structure by the null V-emotive, but rather by the complementizer pu (and thus in the \(C^0\) position) alone. Under this hypothesis, we would no longer propose that the Greek exclamative formed with ti grigora is an embedded structure (where pu is selected by a matrix V-emotive); rather, Greek exclamatives like (55) would be main clauses, involving the agreement and movement illustrated in (63), but crucially without the higher NULL-CP. Such an approach would in fact be in line with the more common view of exclamatives, according to which they are main clauses and contain their emotive component (often in the form of an exclamation operator) in the left periphery of the matrix CP (see Munaro & Obenauer 1999 for a cartographic account and Section 2.1 above for the general approach).

There are two major arguments against such an objection to our analysis: First, the core of our argumentation in this paper is that exclamatives are fully identical to assertions like (64) in terms of what they assert and what they presuppose, hence our analysis and the notion of ‘emotive assertion’ in Section 3.2 above.

(64) Meno ekpliktos pu o Kipchoge etrekse toso grigora!
    stay surprised that.pu the Kipchoge run.3SG so fast
    ‘I am surprised/amazed that Kipchoge ran so fast.’

The empirical base for those who claim that assertions and exclamatives are not identical in their semantics/pragmatics has been discussed in Sections 2.2 and 2.3, and we hope to have shown convincingly that this empirical base is shaky at best. If it is thus the case that the assertion in (64) and the corresponding exclamative in (55) are mere versions of each other, we would like to represent this fact by means of a common syntax—and this is exactly what we are proposing above
with our claim that exclamatives are embedded (signaled in Greek by the obligatory overt complementizer) under an assertive V-emotive.

The second argument in favor of our approach and against a main clause analysis concerns the observation that exclamatives behave fundamentally differently from other syntactic configurations that look like embedded structures, but are in fact ‘insubordinated’ main clause uses of embedded syntax. In order to show that, we will turn to German data in Section 4 below because German is particularly rich in its inventory of embedded clause structures used as main clauses (e.g., Truckenbrodt 2013).

For now, we conclude that our syntactic analysis above can account for the different word order we have seen in the Greek exclamative with ti grigora, while at the same time representing the fact that the exclamative is identical in meaning to the corresponding declarative emotive assertion where an emotive predicate selects the complementizer pu and embeds a proposition that is, again, identical to the proposition conveyed by the exclamative. We now turn to a further similarity between exclamatives and their declarative counterparts and focus on their common degree interpretation.

### 3.4 The syntax and semantics of emotive assertions II: SO-degree

The pu-complement in the declarative contains toso grigora ‘that fast’, which gets interpreted as ‘extremely fast’. Ti grigora ‘what fast’ seems to be interpreted the same way. But toso grigora, ti grigora do not contain overt degree morphology. Where does the extreme degree come from? The same question arises with the wh-exclamative strategy in general, since in all languages that have it, a wh-word is used receiving a high degree meaning.

The existence of degree is so central to the content of the wh-exclamative that Rett (2011) posits a Degree Restriction which says that only wh-phrases which can receive degree readings are acceptable in wh-exclamatives. For instance, who and where are excluded: *Where Eliud ran the race! *Who Eliud beat at the race!\(^{18}\) The use of the Greek ti ‘what’ seems to challenge this generalization, and we will argue here that it does receive degree meaning. This degree use of wh morphology, we will argue, is a realization of an abstract extreme degree morpheme that we will call SO-degree. John ran so fast! has precisely this intense degree interpretation, and also lacks an apparent degree modifier such as very, extremely and the like (for a detailed discussion of such extreme degrees, see Morzycki 2012). Here we will propose the following:

\[(65) \quad [SO \text{ Adjective}] = \text{the property of the Adjective defined to an extreme degree by the speaker.}\]

\(^{18}\) Notice also that in the structure Look who/what we do have wh-exclamatives without any apparent degree reading (see also our remarks at the outset of Section 3 above):

(i) Context: an unexpected visitor came. A: Look who is here!
(ii) Context: I found something unexpected. A: Look what I found!

These speak to our earlier point in 2.3 that in richer contexts the data improves. These are morphologically wh-exclamative with who and what, but there is no adjective to receive a degree reading. We could argue that there is indeed degree reading in them, as in exclamations too, but it applies to the emotion: my amazement is extreme. In any case, the potential for extreme degree appears to be a crucial piece of the exclamative, and one that distinguishes it from assertions with emotive verbs which lack it.
The concept of ‘extreme’ in degree, we believe, has an objective basis and is not purely subjective: a temperature of 25 C is not extremely hot, though it might be perceived as such by someone with sensitivity to heat. It is not decisive for our discussion to establish the precise nature of extreme degree, and the relatively uncontroversial assumption that it relies on both fact and some subjective factors will suffice. Importantly, just like the emotion itself, the extreme degree will be also anchored to the speaker, the extremity of degree will always be defined subjectively by him or her. Notice that even in embeddings the actual so morpheme can be defined wrt the speaker: *Ariadne thinks that Nicholas is so smart!* conveys the speaker’s attitude of extreme smartness (as well as Ariadne’s in a different interpretation). The unembedded so, of course, is anchored to the speaker only: *Nicholas is so smart!*

One could ask whether there is a relation between the intense degree and the surprise reading that seems to characterize exclamatives. We talked about the surprise reading resulting from the emotive predicate itself which is a contrary emotive that has, according to Giannakidou (2016), the negative presupposition in (45), repeated here:

(45) Negative presupposition of contrary emotive factives (Giannakidou 2016)

\[ [i \text{ is surprised that } p] \text{ is defined if only if: } i \text{ believed that } \neg p, \text{ at a time } t' < t_u \text{ (where } t_u \text{ is the utterance time).} \]

Hence it appears that surprise is not directly due to the intense degree, and this is consistent with the observation that one can be surprised that \( d \) without \( d \) being significantly high, and, vice versa, \( d \) can be significantly high without the speaker being surprised that \( d \). The current analysis does not reduce the surprise to the intense degree, and we wanted to clarify this point here.

The exclamative, thus, in addition to the negative presupposition above, has the following meaning components; the relevant anchor is always the speaker \( s \), and \( \mathcal{E} \) is the emotive space contributed by the null predicate (‘V-emotive’ in our syntactic analysis above) be surprised/amazed:

(66) \[ [\text{Ti grigora pu etrekse o Kipchoge!} ]^{\text{w,Dox}(s)}, \mathcal{E} \text{ is defined iff} \]

\[ a. \text{Dox}(s) \text{ contains only worlds where Kipchoge run SO-fast (subjective veridicality)} \]
\[ b. \text{The emotion space } \mathcal{E} \text{ is nonveridical and contains } p \text{ and } \neg p \text{ worlds (nonveridicality of emotion).} \]
\[ c. \text{If defined: } \forall w' \in \text{PE}_\mathcal{E}: \text{Kipchoge ran SO-fast in } w' \text{ (assertion of emotion)} \]

This analysis derives the meaning of the \( wh \)-exclamative without positing an exclamation or expressivity operator, and captures its affinity with the emotive predicate, while also allowing a very intuitive capturing of the degree generalization. As we mentioned earlier, emotive verbs can take less intense complements, i.e., lacking the SO-degree; they are thus neutral in intensity. Emotive verbs as a class, as we said earlier, are also not all contrary (recall our earlier discussion, see also Giannakidou & Mari 2021). The difference, therefore, between a regular emotive assertion and the \( wh \)-exclamative is that the latter always expresses a contrary emotive stance towards a proposition that contains an extreme degree. We can think of this as intense emotivity—and we believe that such intense emotivity lies at the foundation not just of exclamatives but of the broader phenomenon of mirativity (which also has a contrary presupposition).
Crucially, intensification (SO-degree) in exclamatives is always part of the content since it is due to the emotive assertion hence it patterns with other forms of ‘emphasis for intensity’ at the propositional level (see Beltrama & Trotzke 2019 for several lexical and syntactic strategies). In other words, intensification does not derive from an illocutionary operator, but from the emotive assertion plus extreme degree if the degree is available. According to our analysis in (66), it is now easy to see that the declarative exclamation can receive exactly the same treatment:

\[ \text{[O Kipchoge etrekse toso grigora! ‘Kipchoge run so fast!’]}^{w, \text{Dox}(s)}, F \text{ is defined iff} \]

- a. \text{Dox}(s) contains only worlds where Kipchoge run SO-fast (subjective veridicality):
The speaker believes that Kipchoge ran SO-fast
- b. The emotive base E is nonveridical and contains \( p \) and \( \neg p \) worlds.
- c. If defined: \( \forall w' \in \text{PE}: \text{Kipchoge ran SO-fast in } w' \) (assertion of emotion)

Hence, there is no difference between the declarative exclamation and the \textit{wh}-exclamative—as we have been arguing with regards to negation and responses to \textit{wh}-questions (Sections 2.2 and 2.3). Both feature embedding under a covert contrary emotive predicate \textit{be} surprised/amazed, and a SO-degree morpheme (though a declarative emotive may lack it, recall \textit{It snowed in Barcelona}!). The realization of the extreme degree can be \textit{so} or a \textit{wh}-morpheme, but also interjections such as \textit{wow} or \textit{boy} as in \textit{Wow, he ran fast!}, and \textit{Boy, it rained!} where it is understood that he ran fast and that it rained a lot. In cases where the degree SO is absent such as \textit{It snowed in Barcelona}! there is mere expression of intensity due to the counterexpectation of the null emotive verb.

Our analysis, by not appealing to illocutionary operators, argues that exclamation is an \textit{attitude} rather than a speech act, and this seems to be well motivated by the facts we examined in the preceding discussion. The illocutionary operator approaches will have difficulties capturing the similarities between emotive attitudes and exclamatives we pointed out and, most importantly, they could not establish exactly what the exclamative illocutionary force might be.

What \textit{could} it be? It is very hard to offer an answer because exclaiming seems to cut across clause types, including declaratives (including SO-assertions). As already mentioned at the outset of our paper, more examples that might fall into one class with exclamatives semantically include metalinguistic comparatives (68a), questions (68b), and imperatives (68c):

\begin{enumerate}
  \item a. I’d rather die than marry him! (Giannakidou & Yoon 2011)
  \item b. John will come to the party?! (Really?)
  \item c. Open the door, damn it!
\end{enumerate}

Given this variation, it seems implausible to say that the force claimed for exclamatives is a specific, distinct speech act. Rather, the common semantic feature of all those examples is an attitude of emotion, and while these are not \textit{wh}-exclamatives, they arguably fall under the category of exclamatives in that they are emotive utterances with counterexpectation. We think this broadening of perspective offers a promising basis for understanding the representation of emotion in language including a number of phenomena that fall under the rubric of ‘mirativity’ involving certain lexical and/or morphological markers (DeLancey 1997; Peterson 2010) or syntactic

Note that there are also strategies of intensification (even with SO-degrees) that are based on adding non-descriptive content like intensifying speaker commitment and attitudes; cf. the use of so-called ‘drama \textit{so}’ (see Beltrama & Trotzke 2019 for detailed discussion and comparison to SO-degrees that are part of the denotation):

\begin{enumerate}
  \item Chris is SO next in line (Potts 2005)
\end{enumerate}
strategies of ‘mirative fronting’ (Cruschina & Bianchi 2021; Trotzke 2017b). As for the respective syntactic expressions, the central idea of our analysis of the exclamative cases has been that they are embedded structures, but of course the function of emotivity in non-assertions like the above sentences will require some more research—a task that we leave for future research.

In the following final section, we present data from another language that further support our central idea that exclamatives are in fact assertions. In particular, we turn to German because this language is particularly rich in exclamatives as well (see d’Avis 2016). What is more, German, in its inventory of exclamatives, often uses syntactic configurations that have been termed ‘insubordinates’ in the literature. In the following section, and based on our analysis above, we will claim that these syntactic structures (at least in the domain of exclamatives) are not ‘insubordinated’ at all: they can be characterized as emotive assertions and are thus embedded under a null predicate ‘V-emotive’, just like we have argued for the Greek data above.

4. German exclamatives as subordinated structures

In this section, we focus on a phenomenon that has been termed ‘insubordination’ by Evans (2007) in a cross-linguistic perspective: the use of embedded clause structures as root clauses (see also D’Hertefelt 2018 for recent typological work). German is particularly rich in these constructions, which have been discussed in terms of ‘independently used verb-final clauses’, so-called ‘solitaires’ (Schwabe 2006, 2007), and ‘V-final root clauses’ (Truckenbrodt 2006). In this context, a prominent case are dependent clauses that take on an emotive interpretation as soon as they are used in root contexts: so-called that-exclamatives.

4.1 Germanic insubordination

Let us consider an example. As soon as the following German embedded clause introduced by dass (‘that’) in (69a) is used as a root clause, it takes on an emotive meaning and is interpreted as an exclamative (69b). We abstract away from prosodic differences here; see Truckenbrodt (2013) for the relevant intonational patterns.

(69) a. Ich weiß, [dass der schön singen kann].
   I know that this.one beautiful sing can
   ‘I know that he can sing beautifully.’
   b. Dass der schön singen kann!
   that this.one beautiful sing can
   ‘How surprising that he can sing beautifully!’

This pattern can also be found in further Germanic languages. Consider examples from Dutch (70a) and Swedish (70b); see Bennis (1998) and Delsing (2010):

(70) a. Dat hij die boeken kan lezen!
   that he those books can read
   ‘Wow, he can read those books!’
b. Att du hann till mötet!

[Swedish]
that you reached to meeting.DEF

‘What a surprise that you reached the meeting!’

These cases are interesting and relevant in the context of the Greek data that employ a complementizer (pu) we discussed earlier. On a par with Greek, this type of complementizer exclamative—at least in Dutch and German—features a word order that is typical of embedded configurations in those languages (i.e., SOV). In what follows, we will focus on German to illustrate that this data point. Before we discuss the details, let us highlight that the German data in particular dovetail nicely with our analysis proposed above, where exclamatives are embedded under a null V-emotive, and further support the idea that exclamatives are in fact assertions. Specifically, German features many cases where embedded syntax is used as a main clause, and it is easy to see how those cases differ from the exclamatives, where we have been claiming throughout the paper that they are not main clauses, but rather embedded structures under a null V-emotive (see Section 3.3).

To illustrate this point, let us briefly look at the case of so-called verb-final ob-interrogatives in German. The complementizer ob (‘whether’) in German is used for embedded questions, but can also head an independent main clause, expressing a special question-interpretation (see Zimmermann 2013 for details). The crucial point in our context is that the variants in (71a) and (71b) cannot be used in the same pragmatic context, indicating that the ob-interrogative in (71b) cannot be treated as an elliptic version of the structure in (71a); example and judgement taken from Sode & Truckenbrodt (2018: 123-124) and Truckenbrodt (2013: 235):

(71) A: Warum versuchst du, den Stein zu heben?
   ‘Why are you trying to lift the stone?’
B: a. Ich will wissen/frage mich, ob ich das schaffe.
   I want know/ask myself whether I that manage
b. ≠ # Ob ich das schaffe?
   whether I that manage

Now recall what we have already illustrated in Section 2.3 in great detail: exclamatives can in fact be used as responses to questions in a dialogue, in contrast to what the previous literature has claimed. Observe the following pattern, where we see that both the declarative assertion (72a) and the exclamative (72b) can be used for responding to the question in (72):

(72) A: Wie denkst du über Eliud im Olympia-Marathon?
   ‘How do you think about Eliud in the Olympic Marathon?’
B: a. Ich bin überrascht, dass er so schnell war!
   I am surprised that he so fast was
b. Dass er so schnell war!
   that he so fast was

The felicity of German that-exclamatives as responses to questions has recently also been confirmed experimentally by Trotzke & Villalba (2020) who additionally show that this pattern also holds for Catalan, another language that features that-exclamatives. The contrast to the infelicity observed for the ‘insubordinated’ ob-interrogative in (71) is sharp, and (72) suggests that
the two dass-configurations in (72a) and (72b), in contrast to the two interrogative variants in (71), are indeed identical in meaning, and not only in their syntax. This supports our central claim that (72b) is an elliptical version of the structure in (72a)—in contrast to ‘insubordinated’ cases like German ob-interrogatives, which indeed instantiate main clauses.

We are aware that our approach to analyze exclamatives like (72b) as elliptical versions of emotive matrix predicates is of course not uncontroversial, although very natural and obvious in our view. Particularly in the theoretical literature on German syntax, we find some arguments against it, based on prominent assumptions in the literature on the syntax of ellipsis in general (see Merchant 2001; Merchant 2019 for overviews). In what follows, we briefly sketch a core argument against analyzing cases like (72b) as matrix clause deletions, and we highlight why we think this argument does not rule out the approach advocated in our paper.

The argument has been formulated by Grosz (2012: 96-103) for verb-final optatives in German, which have also been claimed to be elliptical versions of matrix configurations, in this case featuring wish-predicates. This argument might also be applied to our German dass-exclamatives such as (72b) above. In a nutshell, the argument is that because-clauses cannot take wide scope and modify a matrix structure in discourses like (73), while because-clauses cannot take scope over a null predicate in cases such as (74):

(73) A: Was hat Dich so erstaunt?
    what has you so amazed
    ‘What is it that has amazed you so much?’
B: Dass Eliud eine Pause gemacht hat, weil er arbeitssüchtig ist.
    that Eliud a break made has because he workaholic is
    ‘…that Eliud took a break because he is a workaholic.’
    because he is a workaholic > [B is amazed that Eliud took a break]

(74) Dass Eliud eine Pause gemacht hat (#weil er arbeitssüchtig ist)!
    that Eliud a break made has because er arbeitssüchtig ist
   *because he is a workaholic > [Speaker is amazed that Eliud took a break]

According to Grosz (2012), this shows that any analysis of (74) cannot contain an emotive null-predicate because otherwise it would be possible for the adverbial clause to take scope over that predicate. We disagree with this conclusion because we do not think that the patterns in (73) and (74) can be explained on purely syntactic grounds. It is rather uncontroversial in the literature on ellipsis—and especially so in the literature on VP-ellipsis—that discourse structure, and not only syntactic (identity) conditions, play a huge role in the acceptability and the typology of ellipsis, maybe more than commonly assumed (see Frazier & Clifton 2005, 2006 for seminal work).

Given this perspective, it is clear for us why (74), in contrast to (73), is not possible: In (73), B’s amazement is discourse-given because Speaker A presupposes that amazement and explicitly asks about the reason for it. This is totally different in (74). Here, the speaker’s amazement is not given, but ‘only’ present, according to our analysis, in the underlying syntactic structure. In fact, this is the reason why exclamatives like (74) can be uttered out-of-the-blue, while other complement uses of dass-clauses in German like in (73) cannot be uttered without discourse-given material. Note also that in our analysis, we are not claiming that the syntax of the null predicate does specify any discourse-related projections such as Topic or Focus, see our syntax in Section 3.3 above.
After clarifying this point and having pointed out why German *dass*-exclamatives, in contrast to insubordinated structures (see [71] above), are embedded under a null V-emotive as well, let us now discuss German exclamatives in more detail and thereby provide some more evidence from German that exclamatives are indeed assertive.

4.2 German exclamatives: Embedding, assertiveness, and particle distribution

Note first that unambiguous exclamatives in German are always verb-final and thus feature embedded word order. This holds for *that*-exclamatives (75a) and *wh*-exclamatives alike (75b):

(75) a. Dass der schön singen kann! [only exclamative]
   that this.one beautiful sing can
   ‘How surprising that he can sing beautifully!’

b. Wie schnell der laufen kann! [only exclamative]
   how fast this.one run can
   ‘How fast he can run!’

It has often been pointed out in the literature that the clause type ‘exclamative’ in German is intended to cover many more configurations (e.g., *wh*-V2- or V1-exclamatives); see d’Avis (2016) for a recent overview. However, an example like (76) is structurally ambiguous between a question and an exclamation reading (the same holds for V1-exclamatives, modulo intonational differences due to word order). This is why German makes heavy use of so-called modal particles (also called ‘discourse particles’; more on this below), which clearly disambiguate between the exclamation (77a) and the question (77b) reading:

(76) Wie schnell ist der ist!/? [question or exclamative]
   how fast is this.one is

(77) a. Wie schnell ist der aber auch ist! [only exclamative]
   how fast is this.one PART PART is
   ‘How fast he is!’

b. Wie schnell ist der denn/wohl ist? [only question]
   how fast is this.one PART PART is
   ‘How fast is he (I’m wondering)?’

Again, it is important to note in this context that German features a clear distribution of modal particles across different sentence types (see Thurmair 2013 for a comprehensive overview and relevant tables summarizing the distribution). For instance, particles like *denn* in (77b) can only occur in questions, not in exclamatives. On the other hand, *aber auch* can only occur in exclamative, not in questions. Of course, not only modal particles, but also intonational means help to disambiguate between the two readings (for V1-exclamatives in this context, see Brandner 2010), and it has recently been shown which prosodic features exactly are involved in distinguishing between V2 *wh*-questions and V2 *wh*-exclamatives in German (Repp 2015, 2020). Be that as it may, we highlight again here that the only syntactic configurations that unambiguously
express the exclamative reading are the verb-final structures in (75) above—and this corresponds to the embedded word order, as already mentioned.

When we now turn to the choice of complementizers, we observe that the case of dass-exclamatives are the only version where German uses a complementizer in exclamatives. Crucial for our claim that exclamatives are emotive assertions and, syntactically, the complement of assertive clauses is the fact that in German the complementizer dass (‘that’) is the typical complementizer that is selected by verbs in assertive contexts (78a), and it is also fine with emotive predicates (78b), as already seen in (72a) above. However, it is completely ungrammatical in interrogative contexts (78c):

(78) a. Andreas glaubt, dass Eliud eine Pause gemacht hat. Andreas believes that Eliud a break made has ‘Andreas believes that Eliud took a break.’
    b. Andreas ist erstaunt, dass Eliud eine Pause gemacht hat. Andreas is amazed that Eliud a break made has ‘Andreas is amazed that Eliud took a break.’
    c. * Andreas möchte wissen, dass Eliud eine Pause gemacht hat. Andreas wants to.know that Eliud a break made has

Accordingly, the only case in German where we find a realization of the C position in exclamatives suggests that this position can only be filled by an element that is known for occurring only in assertive contexts. Other non-assertive C choices like interrogative ob already introduced in (71) above are not available both with emotive predicates (79a) and in exclamatives (79b):

(79) a. * Andreas ist erstaunt, ob Eliud eine Pause gemacht hat. Andreas is amazed whether Eliud a break made has
    b. # Ob Eliud eine Pause gemacht hat! (only reading: deliberative question) whether Eliud a break made has

The German facts support our analysis for the Greek exclamatives in Section 3 above in two crucial ways: (i) unambiguous exclamatives in German always feature embedded (i.e., verb-final) word order and (ii) the predicate that embeds the exclamative must indeed be part of an assertive speech act because otherwise the choice of dass (‘that’) remains unaccounted for. The German data thus complement the Greek data in a very nice and compelling way: while Greek demonstrates the necessity for postulating a higher emotive predicate ‘V-emotive’ for selecting the emotive complementizer pu in exclamatives, the German observations make clear that, at the same time, the null predicate indeed is selecting assertiveness. Crucially, recall that Greek pu cannot appear in non-assertive contexts either; cf. example (40) above, repeated here for convenience, and the corresponding embedded structure (80b):

(80) a * Poso psilos pu ine o Andreas? how tall pu is the Andreas ‘How tall is Andreas?’
    b. * O Janis theli na kseri pu efije o Andreas. the John wants SUBJ know.3SG pu left.3SG the Andreas ‘(Intended: ‘John wants to know whether Andreas left.’)
In sum, Greek morphosyntax distinguishes between assertive and non-assertive complementizers, but then further distinguishes between emotive and non-emotive assertive complementizers. German only makes the former distinction, but taking both data sets into account supports an analysis where exclamatives are a combination of being assertive and expressive at the same time.

Let us end this final section with a further observation about German exclamatives that indicates that exclamatives indeed must be assertive by looking at how exclamatives in German make use of modal particles—functional elements of the clause that are known to depend on relevant force/sentence-mood features. As already mentioned above (see [77]), otherwise identical structures like (81) can be disambiguated by modal particles in German:

\[
\begin{align*}
\text{(81) a. } & \text{ Wie schnell ist der aber auch ist!} [\text{only exclamative}] \\
& \text{how fast is this.one PART PART is} \\
& \text{‘How fast he is!’} \\
\text{b. } & \text{ Wie schnell ist der denn/wohl ist?} [\text{only question}] \\
& \text{how fast is this.one PART PART is} \\
& \text{‘How fast is he (I’m wondering)?’}
\end{align*}
\]

Crucially now, the same exclamative particles can not only also occur in dass-exclamatives (82a) (as could maybe be expected), but also in declaratives (82b), turning the declarative into a declarative exclamation:

\[
\begin{align*}
\text{(82) a. } & \text{ Dass Eliud aber auch so schnell ist!} \\
& \text{that Eliud PART PART so fast is} \\
& \text{‘How surprising that Eliud is so fast!’} \\
\text{b. } & \text{ Eliud ist aber auch schnell!} \\
& \text{Eliud is PART PART fast} \\
& \text{‘Wow! Eliud is so fast!’}
\end{align*}
\]

Note that these particles are completely ungrammatical in questions:

\[
\begin{align*}
(83) * & \text{ Was hat Eliud aber auch gemacht?} \\
& \text{what has Eliud PART PART made} \\
& \text{‘What has Eliud done?’}
\end{align*}
\]

As already discussed in Section 2, the literature generally postulated that declarative exclamations like (82b) feature assertive force. Accordingly, an approach that suggests itself here is that particles of the type illustrated above are fine in wh-exclamatives (81a) and that-exclamatives (82a) too because the exclamatives fall into one natural class with the declarative (82b): all of these utterances are ‘emotive assertions’. The distribution of German particles is just an expected reflex following from this assumption. All of this is in line with our general approach (see above) where exclamative sentences are equivalents to an assertive declarative containing an emotive verb and its complement. With these final thoughts in mind, let us now turn to our general conclusion.
5. Conclusion

We proposed here a new theory of exclamation as emotive assertion, specifically a manifestation of a (contrary) emotive attitude towards an extreme degree which we called SO-degree. We suggested a syntax-semantics of exclamations that relies on a number of parallelisms between the complements of emotive verbs and exclamative sentences—and which explains their intensity and assertive content while also capturing Rett’s (2011) degree generalization by reframing it within an assertion frame. Evidence for our analysis was provided by the Greek, German, and English facts we examined in the paper demonstrating structural similarities between complements of emotive verbs, *wh*-exclamatives, *that*-exclamatives, and declarative exclamations. The difference, ultimately, between a regular emotive assertion and the exclamative one is that the latter always expresses a contrary emotive stance towards a proposition that contains an extreme degree while assertions with emotive verbs can be neutral in intensity.

It appeared that it makes little sense to talk about exclamation as a speech act; rather, we argued, exclamation is an emotive attitude. The speech act approaches will have difficulty capturing the structural and semantic similarities we presented here (word order, distribution of functional elements like complementizers and particles)—and, equally importantly, it remains illusive what the illocutionary force ‘exclamation’ might be. We saw that exclamation characterizes assertions, but also questions and imperatives; it is therefore not a distinct speech act. The framework we proposed here can be extended to capture a number of phenomena that fall under the category of exclamation, including ‘mirative’ structures which seem to contain the contrary counter-expectation presupposition. We hope that future research will undertake the task of exploring these predictions.
References


Kaplan, D. (1999). The meaning of *ouch* and *oops*: Explorations in the theory of meaning as use. Ms., UCLA.


