

Positive vs. negative inversion exclamatives¹

Ai TANIGUCHI — *Michigan State University*

Abstract. Not all exclamatives intensify in the same way. In this paper, I examine the semantics of positive inversion exclamatives (e.g., *boy, is he an idiot!*) and negative inversion exclamatives (e.g., *isn't he an idiot!*) in English, and propose that the source of the strengthened meaning is distinct in each construction. The difference, moreover, is derivable from each sibling's question counterpart. I therefore adopt the exclamatives-as-questions approach in my analysis, although I abandon domain widening as the mechanism responsible for their out-of-the-norm meaning. I analyze inversion exclamatives as self-answered polar questions. In the positive variant, the sentence-initial particle *boy* provides the pure "extreme degree" reading canonically associated with exclamatives. Negative inversion exclamatives owe their intensity to the polarity emphaser VERUM, which is inherited from negative polar questions. At a broader level, the similarities and differences between positive inversion exclamatives, negative inversion exclamatives, and their question counterparts highlight a basic question of form and meaning with respect to sentential classes — what are exclamatives, are they questions, and what do they do? The convergence sheds light on what "exclamatives" as a natural class are, and the divergence tells a story of the diverse ways in which language can encode intensity.

Keywords: exclamatives, inversion exclamatives, polar questions, intensification, degrees, verum.

1. Introduction

This paper concerns the semantics of two types of inversion exclamatives in English: positive inversion exclamatives (Pos-Ex) and negative inversion exclamatives (Neg-Ex), both exemplified below.

- | | |
|---------------------------|----------------------------------|
| (1) Boy, is Misty grumpy! | (positive inversion exclamative) |
| (2) Isn't Misty grumpy! | (negative inversion exclamative) |

What makes (1) and (2) exclamative constructions is that they both somehow intensify *grumpy*, the predicate at hand. This intensity is often modeled as *degree* intensification in the literature; that is, (1) and (2) both mean 'Misty is very grumpy.' I argue that this is not the case. While Pos-Ex's genuinely have a degree interpretation, Neg-Ex's involve *epistemic* intensification in which the truth of a proposition is emphasized. I propose that the semantics of inversion exclamatives derive from inversion questions, which naturally accounts for the subtly different behavior of the positive vs. negative siblings.

¹I would like to thank all the wonderful people that have helped me at various stages of this project: Marcin Morzycki, Alan Munn, Cristina Schmitt, Mutsuko Endo-Hudson, Abhi Parekh, Adam Gobeski, Ai Kubota, Alicia Parrish, Cara Feldscher, Chris Bartoluzzi, Curt Anderson, Grant Rodgers Kemp, Josh Herrin, Tess Huelskamp, and the rest of my colleagues at MSU. I am also grateful for the guidance I have received from the following linguists I have crossed paths with: Alexis Wellwood, Ezra Keshet, Jessica Rett, Kyle Rawlins, Nick Fleisher, Paul Portner, Thomas Grano, Tim Leffel, and Tim Hunter. Many thanks to the audience at *Sinn und Bedeutung 21* for the invaluable comments as well. All errors are my own.

§2 will outline empirical observations about positive and negative inversion exclamatives, focusing on how they differ. §3 gives an overview of the existing accounts of exclamatives, and why they do not extend straightforwardly to the present phenomena. §4 elaborates on the tools necessary to analyze inversion exclamatives, such as the semantics of polar questions. My analysis will be presented in §5, and §6 provides a discussion for potential future work.

2. Data

2.1. Positive inversion exclamatives

The form of Pos-Ex's resemble their question counterpart, positive inversion questions (polar questions); the resemblance is highlighted in (3).

- (3) a. Boy, is Ash immature! (positive inversion exclamative)
 b. Is Ash immature? (positive inversion question)

True polar questions have rising intonation, but Pos-Ex's have a falling intonation. That Pos-Ex's are not information-seeking can further be shown by their lack of answerability, as in (4). True questions can of course be answered as in (5).

- (4) A: Boy, is Ash immature! (5) A: Is Ash immature?
 B: ?? Ash is immature. B: Ash is immature.

One property of Pos-Ex's is that they are only compatible with gradable predicates, that is, predicates with inherent scales associated with them:

- (6) a. Boy, is she { whiny / a genius / an idiot / a Pokémon fan }!
 b. ?? Wow, is that { a teacher / a salad / a raspberry / dead }!

Note that the pre-sentential particle *boy* and the like are obligatory. As (7) shows, the exclamative is highly degraded without some sort of particle preceding it.

- (7) a. Boy/man/damn/wow/god do you run fast!
 b. ?? Do you run fast!

As a spoiler alert, the particle will be directly responsible for the facts in (6). But first, let us contrast the Pos-Ex data with Neg-Ex's.

2.2. Negative inversion exclamatives

Like Pos-Ex's, Neg-Ex's have a question counterpart, which I will call negative inversion questions (also called biased polar questions). The two are identical on the surface (8a-b), except for intonation (sentence-final fall for the exclamative, rise for the question).

- (8) a. Isn't Ash immature! (negative inversion exclamative)
 b. Isn't Ash immature? (negative inversion question)

The falling intonation on Neg-Ex's is accompanied by prosodic focus on the subject (i.e., *isn't [Ash]_F immature!*) (Taniguchi, 2016). Readers should keep this intonation in mind in order to block the irrelevant question interpretation in the examples that follow.

Like Pos-Ex's, Neg-Ex's are compatible with gradable predicates:

- (9) Isn't she { whiny / a genius / a Pokémon fan }

Non-gradable predicates, however, have a peculiar status with Neg-Ex's. They are acceptable in most cases, as long as a *pejorative* reading can be construed from the predicate. The nuance is a subtle but a consistent one. In (10a) for example, the meaning of the exclamative is that she is *over-teacherly*. Similarly in (10b), being a linguist is taken to be a bad thing.

- (10) a. Isn't she a teacher! (...she's constantly telling people facts and quizzing them afterwards!)
 b. Isn't he a linguist! (...he's always asking for grammaticality judgments, even during faculty meetings!)

It should be noted that there is also a "motherese" reading of Neg-Ex's: we can imagine (10a-b) being used in reference to a child acting like a teacher or a linguist (the interjection *aww* may help bring out this interpretation). This interpretation is not an insult *per se*, but nevertheless has a demeaning quality.

This brings us to a point about gradable predicates that Neg-Ex's select for. We've seen that the most natural examples of Neg-Ex's are pejorative; this applies to the gradable predicates as well. With inherently pejorative labels, the examples in (11) are sincere insults. The meliorative predicates in (12), however, are insincere: they are *sarcastic*, thereby being pejorative.

- (11) a. Aren't you an idiot!
 (...driving while playing a game on your phone?!)
 b. Isn't he a jerk!
 (...he made a little girl cry!)
- (12) a. Isn't he a genius!
 (...he tried to charge his phone in the microwave?!)
 b. Aren't you lucky!
 (...5 exams in one day!)

Note that Pos-Ex's do not have this sarcasm effect for meliorative predicates; the examples in (13) are both sincere.

- (13) a. Boy, is he a genius!
 (... I can't believe he invented wireless phone chargers!)
- b. Damn, are you lucky!
 (... your exams were cancelled?!)

The contrast between Pos-Ex's and Neg-Ex's is illustrated below. The context in which you might say *isn't this fantastic!* is a situation in which things aren't fantastic at all, e.g., (14b); it is infelicitous in opposite cases like (15b). Although you can always force a sarcastic reading for Pos-Ex's, it is by no means the default reading — making the neutral reading of (14a) unnatural.

- (14) (You spill coffee right before a job interview.)
- a. ?? Boy, is this fantastic!
- b. Well isn't this fantastic!
- (15) (Free upgrade to business class on an international flight.)
- a. Boy, is this fantastic!
- b. ?? Well isn't this fantastic!

Curiously, when a pejorative/sarcastic reading is not possible with a predicate (e.g., *salad*), the Neg-Ex induces a state-the-obvious effect:

- (16) Isn't that a salad! (... lettuce, tomatoes, onions, cheese, croutons, the works!)
 'that salad has a lot of salad properties'

I can imagine exclaiming this in reference to a giant salad with lots of ingredients in it. The effect can be approximated as 'having a lot of salad properties', 'a very salad-y salad', or perhaps 'no doubt a salad.'

The next natural question is this: are Pos-Ex's and Neg-Ex's the same, as long as the predicate is pejorative? The answer is no. Here is one such example. The assumption is that running out of milk while pouring a glass is surely *inconvenient*, but not *very* inconvenient.

- (17) (You run out of milk while you're pouring a glass.)
- a. Well isn't this inconvenient!
- b. ?? Boy, is this inconvenient!

My judgment is that the Pos-Ex in (17b) is overly dramatic. It has the same sense of infelicitousness as saying *this is very inconvenient* in this context. In my analysis, this will follow from the fact that Pos-Ex's have a degree component to them. Neg-Ex's on the other hand clearly cannot mean *very*. The source of intensification is hard to articulate, but I think what is helpful here is the *no-doubt-a-salad salad* example from before: running out of milk while pouring a glass is *for sure* inconvenient for the pourer, even if it is not *very* inconvenient. This difference between certainty vs. degree extremity is what separates the two inversion exclamatives.

3. Previous accounts of exclamatives

Modeling the intensified degree reading of WH-exclamatives has been the objective of many studies (Grimshaw, 1979; Gutiérrez-Rexach, 1996; Portner and Zanuttini, 2000; Zanuttini and Portner, 2003; Castroviejo Miró, 2006, 2008b; Rett, 2008; Abels, 2010; Rett, 2011; Chernilovskaya and Nouwen, 2012; Delfitto and Fiorin, 2014: and many more), but how inversion exclamatives intensify — from both descriptive and theoretical perspectives — has played a relatively minor role in painting a more general picture of what the exclamative force is (see Rett (2008, 2011) for a brief discussion on Pos-Ex's; for Neg-Ex's, see Taniguchi (2016)).

In this section I will provide an overview of two popular theories regarding exclamatives, which will be useful for approximating where my analysis falls in the debate concerning the semantics of exclamatives: *exclamatives are questions* vs. *exclamatives are degree constructions*. Both approaches ultimately face difficulty with accounting for exclamatives that do not have a degree interpretation, i.e., Neg-Ex's.

3.1. Exclamatives are questions

In what I call the *question approach* to exclamatives, the semantics of exclamatives derive from actual questions. A WH-Exclamative (WH-Ex) like *How tall Steve is!* therefore underlyingly has the semantics of the question *How tall is Steve?* (Gutiérrez-Rexach, 1996; Zanuttini and Portner, 2003; Chernilovskaya, 2010). I will outline Zanuttini and Portner (2003)'s approach specifically here.

Assuming a Hamblian semantics of questions, the denotation of *How tall is Steve?* is the set of possible answers to this question. For any average person, this might range from 5ft to 6ft, for example:

$$(18) \quad \llbracket \text{How tall is Steve?} \rrbracket = \{ 5'0'', 5'1'', 5'2'' \dots 5'10'', 5'11'', 6'0'' \}$$

The fact that exclamatives have this question semantics clashes with the traditional observation that exclamatives are also factive: they embed under factive predicates (e.g., *know*) but not under non-factive predicates (e.g., *don't know*), at least under the degree interpretation of the WH-clause (Grimshaw, 1979; Abels, 2010). This is shown in (19), with *very* helping to bring out the exclamative interpretation.

- (19) a. I know how (very) tall John is
 b. # I don't know how (very) tall John is

This means that exclamatives are factive questions — and factive questions are uninformative: you are essentially asking a question while knowing the answer. Zanuttini and Portner (2003) propose that *domain widening* is responsible for making exclamatives informative. What sets exclamatives apart from questions is the inclusion of an exceptional alternative that would not normally be in the domain: the domain *widens* to include an exceptional answer to the question.

Under the same context of Steve's possible height, we may consider 6'5" as an answer, for example:

$$(20) \quad \llbracket \text{How tall Steve is!} \rrbracket = \{ 5'0'', 5'1'', 5'2'' \dots 5'10'', 5'11'', 6'0'', \mathbf{6'5''} \}$$

This widening effect is responsible for the deviation-from-the-norm reading, and makes an otherwise defective question utterance-worthy. One criticism of the domain widening approach has been that it overgeneralizes: it does not specify what the source of the exceptionality is for the exceptional alternative. For example, it is not able to bar *how tall Steve is!* from meaning 'Steve's height (5'11") is the same number as my street number (511),' despite the arguable noteworthiness of such a coincidence.

For more immediate purposes, it is not immediately clear how domain widening would apply to exclamatives with yes/no question forms, since yes/no questions have a strictly binary set of answers — p or $\neg p$ — which is unwidenable:

$$(21) \quad \text{a. } \llbracket \text{Is he an idiot?} \rrbracket = \left\{ \begin{array}{l} \text{He is an idiot} \\ \text{He is not an idiot} \end{array} \right\}$$

$$\text{b. } \llbracket \text{Boy, is he an idiot!} \rrbracket = \left\{ \begin{array}{l} \text{He is an idiot} \\ \text{He is not an idiot} \\ ??? \end{array} \right\}$$

$$(22) \quad \text{a. } \llbracket \text{Isn't he an idiot?} \rrbracket = \left\{ \begin{array}{l} \text{He is an idiot} \\ \text{He is not an idiot} \end{array} \right\}$$

$$\text{b. } \llbracket \text{Isn't he an idiot!} \rrbracket = \left\{ \begin{array}{l} \text{He is an idiot} \\ \text{He is not an idiot} \\ ??? \end{array} \right\}$$

Even if we were to somehow propose a widening mechanism for polar questions, since both negative and positive inversion questions would have the same set of answers, this predicts Neg-Ex's and Pos-Ex's to have the same semantics. This lack of variability is problematic if we are to model attested differences between the two constructions.

3.2. Exclamatives are degree constructions

A competing position is that exclamatives do not have the semantics of questions, but rather, that there is a degree morpheme responsible for the exclamative interpretation (Castroviejo Miró, 2006, 2008b, a; Rett, 2011; Wood, 2014)². I will summarize Rett (2011) as an example here.

For Rett, exclamatives encode two two illocutionary operators: an exclamation force operator (E-FORCE) and a degree measurement operator (M-OP):

²Castroviejo Miró (2008b) and Wood (2014) do incorporate questions into their analyses, although a degree morpheme, rather than domain widening, is ultimately responsible for the degree interpretation of exclamatives for them.

$$(23) \text{ M-OP: } \lambda d \lambda P \lambda x. P(x) \wedge \mu(x) = d$$

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

E-FORCE adds the evaluative content of the exclamative: it encodes the speaker's surprise about a degree that holds for some property. This accounts for the degree interpretation of exclamatives like *How tall Steve is!*, where the speaker is surprised by Steve's height (i.e., he is very tall). One advantage of strictly tying the exclamative force to degrees in this way is that non-degree interpretations of surprise can be ruled out. Even if it is surprising that Steve's height (5'11") matches my street number (511), "Steve's height = my street number" does not fall on a scale; it is not a degree, therefore it cannot be the target of surprise for exclamatives.

M-OP is necessary when the predicate to be exclaimed about lacks a scale. For example, *what a teacher!*, where *teacher* is not gradable. M-OP gives predicates like *teacher* a contextually determined scale; the scale of *amazingness* for a teacher for example. Her example, *What desserts John baked!*, with the help of M-OP, may mean 'what delicious desserts John baked' if the context is appropriate. The derivation for *What desserts John baked!* is shown below.

- (25) What desserts John baked!
- a. $\llbracket \text{M-OP desserts} \rrbracket = \lambda d. \lambda x. \text{desserts}'(x) \wedge \mu(x) = d$
 - b. $\llbracket \text{What desserts John baked} \rrbracket$
 $= \lambda d. \exists x [\text{baked}'(j, x) \wedge \text{desserts}'(x) \wedge \mu(x) = d]$

M-OP first makes *desserts* gradable, and assigns it a scale (e.g., deliciousness) and gives it a degree argument. At this point a degree d' would be provided by the context, leaving the unbound expression $\exists x [\text{baked}'(j, x) \wedge \text{desserts}'(x) \wedge \mu(x) = d']$. This is existentially closed by E-FORCE, which also adds the illocutionary force of speaker surprise:

- (26) a. $p = \exists x [\text{baked}'(j, x) \wedge \text{desserts}'(x) \wedge \mu(x) = d']$
 b. E-FORCE(p) counts as an expression if $\exists d'$ such that s_C had not expected that $d' \in D$
 c. Existential closure via E-FORCE: $\exists d'. \exists x [\text{baked}'(j, x) \wedge \text{desserts}'(x) \wedge \mu(x) = d']$ +
 Illocutionary force "speaker didn't expect p "

What desserts John baked! therefore means that the speaker is surprised that the desserts John baked are so delicious (or whatever contextually salient property). Rett speculates how E-FORCE and M-OP might apply to Pos-Ex's³ as well:

- (27) Wow, did Sue win that race!

She observes that (27) does not express speaker surprise about *Sue* winning the race, which is an individual-oriented reading. It has an event-oriented reading: the manner in which Sue won the race is noteworthy. Following this, she analyzes Pos-Ex's as an exclamation about

³She calls them *inversion exclamatives*.

eventualities, which inherit degreehood from M-OP. She remains agnostic as to why inversion exclamatives specifically care about eventualities. Tying inversion exclamatives to eventualities poses an issue, however, since some states⁴ are incompatible with Pos-Ex's:

- (28) a. Boy, is Ash an idiot!
 b. # Boy, is she a teacher!
 c. # Boy, did she hold that baby!

(28a) is unproblematic: the state of Ash being an idiot is remarkable and surprising in some way. The contrast in (28b) and (28c) are problematic, since under this analysis M-OP should still kick in to assign these eventualities a degree — but it does not. In other words, why can't (28b) and (28c) mean that the way she is a teacher or the way she held the baby is remarkable?

Contrasting Neg-Ex's with Pos-Ex's is also not easy under this account, which posits that the source of variation between different exclamative constructions is what M-OP targets. If Pos-Ex's scalarize eventualities, then what do Neg-Ex's scalarize? Borrowed unmodified, it is not obvious how M-OP would be manipulated to distinguish the two inversion exclamatives.

My proposal is closest to the question approach, although I abandon domain widening as the mechanism responsible for the intensificative meaning of inversion exclamatives. I will argue that a morpheme inherent to Pos-Ex's and a separate morpheme underlying Neg-Ex's are each responsible for generating the distinct intensificative effect for each construction. As a bonus point, analyses for both of them will derive from their question counterparts, which I will pick up as a tool for my analysis in the following section.

4. Tools

4.1. The question counterparts

I will be assuming the standard treatment of the semantics of questions as a set of possible answers (Hamblin, 1973; Karttunen, 1977). That is, the meaning of a polar question like *did Ash win?* will be treated as the set of the possible answers to this question, namely, *Ash won* and *Ash did not win*:

- (29) a. Did Ash win?
 b. {**win(a)**, **¬win(a)**}

Compositionally, one might imagine an interrogative force head that turns its propositional complement into such a question. For explicitness, I will treat the interrogative force as an instruction to add a question to the set of questions under discussion (QUDs) in the discourse. This is shown in (30).

⁴Assuming eventualities to include events and states.

- (30) $\llbracket Q \rrbracket = \lambda p. \text{QUD} + \{p, \neg p\}$
 a. $\llbracket \text{Did Ash win?} \rrbracket = \llbracket Q \text{ Ash won} \rrbracket$
 b. $= \lambda p. \text{QUD} + \{p, \neg p\}(\text{Ash won})$
 c. $= \text{QUD} + \{\mathbf{win}(\mathbf{a}), \neg \mathbf{win}(\mathbf{a})\}$
 ‘Add *Did Ash win?* to the QUD’

How is a negative polar question such as *Didn't Ash win?* different from this? One observation is that negative inversion questions have a *speaker bias* for the positive answer (Ladd, 1981; Romero and Han, 2004). In (31) the speaker has some certainty that Ash won, and the most felicitous use of the question is when they are “double checking” that their belief is indeed true. This means that in a neutral information-seeking context like the questionnaire scenario in (32), negative inversion questions are infelicitous.

- (31) Didn't Ash win?
 ‘I think Ash won, but I want to make sure’
- (32) [*On a demographic questionnaire:*]
 a. Do you have children?
 b. # Don't you have children?

This speaker bias has been analyzed using the notion of *verum*. *Verum* — the emphasis of truth — manifests in some lexical items like *really* in English, but also as auxiliary focus (dubbed *verum focus* by Höhle (1992)):

- (33) a. Ash *really* won
 b. Ash [*did*]_F win

The examples in (33) both mean ‘Ash won’ at the basic level, but there is an emphatic quality to the utterance: I am *certain* that Ash won.

Romero and Han (2004) view VERUM as an epistemic operator that encodes the speaker's desire for a proposition p to be added to the common ground (CG). If the CG is the set of propositions that discourse participants mutually agree to be true (Stalnaker, 1978, 1998, 2002), VERUM(p) says that p should be in this set. Their implementation, reformulated slightly for readability, is below:

- (34) $\llbracket \text{VERUM} \rrbracket = \lambda p \lambda w. \forall w' \in \text{EPI}_{\text{SPKR}}(w) \cap \text{CONV}_{\text{SPKR}}(w) [p \in \text{CG}_{w'}]$
 (reformulated, Romero and Han (2004))

$\text{EPI}_{\text{SPKR}}(w)$ is the set of worlds that conform to the speaker's beliefs in w , and $\text{CONV}_{\text{SPKR}}(w)$ is the set of worlds that conform to the speaker's conversational goals in w (i.e., the worlds in which there is maximal true information). Therefore, (34) says that in an ideal world w' in which what the speaker believes in w is indeed true, p is in the common ground. This translates into, from the perspective of the speaker, ‘ p should be added to the common ground.’ Romero and Han shorten this as FOR-SURE-CG(p).

The denotation for *Ash* [*did*]_F *win* — a *verum*-focused sentence — then would simply be FOR-SURE-CG(*Ash won*), in other words, ‘*Ash won* should be added to the CG.’ This is one way of modeling the sentiment of ‘*p* is definitely true.’

Didn't Ash win? is the question version of FOR-SURE-CG(*Ash won*) according to Romero and Han; the pre-posed negation signals the presence of a VERUM operator.⁵ That is, *Didn't Ash win?* decomposes into $\llbracket \text{Q VERUM Ash won} \rrbracket$. This is shown below.

- (35) Didn't Ash win?
- a. $\llbracket \text{Didn't Ash win?} \rrbracket = \llbracket \text{Q VERUM Ash won} \rrbracket$
 - b. $= \lambda p. \text{QUD} + \{p, \neg p\}(\text{VERUM Ash won})$
 - c. $= \text{QUD} + \{\text{VERUM Ash won}, \neg \text{VERUM Ash won}\}$
 - d. $= \text{QUD} + \{\text{FOR-SURE-IN-CG}(\text{Ash won}), \neg \text{FOR-SURE-CG}(\text{Ash won})\}$
‘Add this to the QUD: Are we for sure putting *Ash won* in the CG?’

Romero and Han's explanation of the speaker bias goes like this. Making reference to meta-discourse pieces like the CG is a marked move, and should be avoided if necessary. VERUM makes reference to the CG. A context in which such a move is necessary is when the speaker believes one of the answers is true, but there is evidence that another discourse participant does not share this belief. In this way, the negative inversion question becomes a necessary halt to the discourse to set things straight, to check that everyone is on the same page. But this only arises if the speaker has a bias in the first place.

4.2. Man

I will briefly outline an additional tool here: the obligatory sentence-initial particle in Pos-Ex's (e.g., *boy* is he an idiot!). I take this to be the same creature as McCready (2008)'s *man*. These particles can precede normal propositions as well:

- (36) Man, Ash is immature!
‘Ash is very immature (and I have strong feelings about this)’

Suppressing the discussion of the emotive/attitudinal content associated with the particle (see McCready (2008) for an analysis), what *man* roughly is is a long-distance *very*. It means that *immature* holds to a high degree in this case.

The issue is that *man* takes a propositional complement, which is not gradable. What is gradable is the predicate that is inside. To bridge this gap, McCready proposes a type shifter: SD (for *sentence degree*), shown below.

⁵Possibly mood agreement; or, VERUM could be directly encoded in the negation. I remain agnostic about the status of the negation.

- (37) $\llbracket \text{SD} \rrbracket = \lambda p \lambda d. p(d)$ (McCready, 2008)
 where $\lambda d. p(d)$ is a set of degrees that satisfy a gradable predicate in p ; undefined if no such predicate.

For example, $\llbracket \text{SD} \rrbracket(\text{Ash is immature})$ would return $\lambda d. \text{immature}(\text{Ash})(d)$. If on the other hand the proposition were *this is non-refundable*, the type shifting would be unsuccessful since *non-refundable* is not gradable. This prevents *boy* from being able to apply to non-gradable predicates (e.g., #*Boy, this is non-refundable!*).

Once a gradable predicate is extracted from the proposition, *man* just has to say ‘very’ of it. One formulation of this is shown in (38); \gg should be read as ‘exceeds by a large amount.’ Note that this is a large simplification of McCready’s account.

- (38) $\llbracket \text{man/boy/damn/shit/god/jesus} \rrbracket = \lambda D_{\langle d, \langle s, t \rangle \rangle}. \exists d. D(d) \wedge d \gg \text{standard}_C(D)$
 (modified from McCready (2008))

This is equivalent to the denotation of *very*. McCready has a discussion of this degree modification being at the expressive level, but I will suppress the multidimensional nature of *man/boy* for the sake of simplicity here. I will return to this point in my discussion later in the paper, however.

5. Analysis

Here is what we are trying to account for:

1. Inversion exclamatives look like inversion questions, but aren’t answerable
2. Positive inversion exclamatives are incompatible with non-gradable predicates
3. Negative inversion exclamatives don’t mean ‘very,’ but rather ‘I am certain.’

My proposal for #1 above is that exclamatives *are* questions — just self-answered ones. I propose an exclamative operator EX-OP, akin to the question operator Q. EX-OP is exactly like Q, except that the answer is provided:

- (39) $\llbracket \text{EX-OP} \rrbracket = \lambda p \lambda w. \{p, \neg p\} + \text{QUD}_w \wedge p(w)$
 ‘Turn p into a polar question, and simultaneously answer affirmatively’

This allows for exclamatives to take on the role of a question and an assertion simultaneously.

Let us step through a Pos-Ex example to illustrate this. *Boy, is Ash immature!* has the base proposition *Ash is immature*, to which EX-OP applies:

- (40) $\llbracket \text{is Ash immature!} \rrbracket = \llbracket \text{EX-OP Ash is immature} \rrbracket =$
 $\lambda w. \{ \mathbf{immature}(\mathbf{a}), \neg \mathbf{immature}(\mathbf{a}) \} + \text{QUD}_w \wedge \mathbf{immature}_w(\mathbf{a})$
 ‘Is Ash immature? Yes, Ash is immature.’

At this point, this is utterly uninformative: what is the point of a self-answered polar question? To make this mini self-monologue informative, we must intensify the answer.⁶ This is why *boy* and the like are obligatory for this construction. Its contribution (with the help of SD) is articulated below.

- (41) $\llbracket \text{SD} \rrbracket (\text{EX-OP Ash is immature})$
 $= \lambda d [\lambda w. \{ \mathbf{immature}(\mathbf{a}), \neg \mathbf{immature}(\mathbf{a}) \} + \text{QUD}_w \wedge \mathbf{immature}_w(\mathbf{a})](d)$
 $\rightsquigarrow \lambda d \lambda w. \mathbf{immature}_w(\mathbf{a})(d)$
 ‘the set of degrees that satisfy $\mathbf{immature}(\mathbf{a})$ ’

- (42) $\llbracket \text{boy} \rrbracket (\llbracket \text{SD EX-OP Ash is immature} \rrbracket)$
 $= \exists d. \lambda w. \mathbf{immature}_w(\mathbf{a})(d) \wedge d \gg \mathbf{standard}_C(\mathbf{immature})$
 ‘Ash is very immature’

In other words, *boy, is Ash immature!* ends up meaning ‘Is Ash immature? He is immature. Very immature.’ This easily explains why Pos-Ex’s are only compatible with gradable predicates: their incompatibility with non-gradable predicates reduces to *boy*’s incompatibility with such predicates.

If *boy* is the culprit in Pos-Ex’s, the morpheme responsible for the intensified reading in Neg-Ex’s is VERUM. The connection is intuitive if we assume that exclamatives derive from questions: if *Isn’t Ash immature?* decomposes into $\llbracket \text{Q VERUM Ash is immature} \rrbracket$, then *Isn’t Ash immature!* breaks down into $\llbracket \text{EX-OP VERUM Ash is immature} \rrbracket$. Let’s see how this works.

- (43) $\llbracket \text{isn’t Ash immature!} \rrbracket = \llbracket \text{EX-OP VERUM Ash is immature} \rrbracket$
 a. $\llbracket \text{VERUM Ash is immature} \rrbracket$
 b. $= \lambda w. \forall w' \in \text{EPI}_{\text{SPKR}}(w) \cap \text{CONV}_{\text{SPKR}}(w) [\mathbf{immature}(\mathbf{a}) \in \text{CG}_{w'}]$
 $\rightsquigarrow \text{FOR-SURE-CG}(\text{Ash is immature})$
 ‘We should add *Ash is immature* to the common ground’
 c. $\llbracket \text{EX-OP} \rrbracket (\text{VERUM Ash is immature})$
 d. $= \lambda w. \{ \text{FOR-SURE-CG}(\mathbf{immature}_w(\mathbf{a})), \neg \text{FOR-SURE-CG}(\mathbf{immature}_w(\mathbf{a})) \} + \text{QUD}_w \wedge$
 $\text{FOR-SURE-CG}(\mathbf{immature}_w(\mathbf{a}))$
 ‘Should we add *Ash is immature* to the common ground? Yes, we should.’

This translates into the speaker’s strong conviction that Ash is immature. How is this different from *Ash [is]_F immature*, which also asserts FOR-SURE-CG(Ash is immature)? I think this may have to do with the fact that *verum* focus is infelicitous out-of-the-blue (Gutzmann and Castroviejo Miró, 2011). For example, if you meet Ash for the first time and simply want to express how certainly immature he is, (44) is very strange.

⁶This is the same line of reasoning as Zanuttini and Portner (2003)’s motivation for domain widening.

- (44) (You meet a guy named Ash. He keeps on launching spitballs at people with a straw.)
 ??Ash [is]_F immature!

Gutzmann and Castroviejo Miró (2011) propose that this is because in order for *verum(p)* to be felicitous, *whether p* must be in the QUD in the first place. The intuition is that when you are very sure of something, there must be a reason to assert that; otherwise, just *p* would suffice. One way to make “I am sure” felicitous out of the blue is to turn it into a Neg-Ex, which has an implicit question component to it. Since you’ve snuck “are we sure?” into the QUD with it, you are able to assert “I am sure.” I suggest that this is why Neg-Ex, even as a self-answered question, is informative. This explains why *Isn’t Ash immature!* in the same context as (44) would be completely natural for expressing how blatantly immature Ash is.

6. Discussion

An observant reader may have noticed that my analysis has not yet explained why Neg-Ex’s and pejorativity go hand-in-hand. A disappointed reader will hereby learn that I do not have a good explanation for it. I do, however, have some speculations. One interesting property of Neg-Ex’s is that the negation must be preposed:

- (45) a. Isn’t he an expert!
 ≈ ‘He’s not really an expert’
 b. # Is he not an expert!

As it turns out, many insults occur at the left edge. A kind of exclamative that uses the indefinite *some* normally expresses the noteworthiness of the NP at hand, but when *some-NP* is preposed, it takes on a markedly pejorative flair:

- (46) *Some*-exclamatives (Anderson, 2016)
 a. He is some expert!
 ‘He is a noteworthy expert’
 b. Some expert he is!
 ‘He’s not really an expert’

Another pejorative construction is the *schm*-reduplication, which conveys a dismissal (pejorative) attitude towards the reduplicant. Interestingly, *schm*-reduplication must also be preposed:

- (47) *Schm*-reduplication (Grohmann and Nevins, 2004)
 a. Expert-schmexpert, his facts are half-assed!
 b. # He is an expert-schmexpert

Given these facts, I do entertain the idea of *n’t* in Neg-Ex’s occupying a position responsible for pejorative mood (e.g., PejP in Grohmann and Nevins (2004)). Much more work is needed in this area to confirm or refute this hypothesis. I leave this for future research.

Another issue concerns the level of meaning of *boy/man* and VERUM, which are both crucial ingredients in my analysis. One crucial property of the intensificative nature of pre-sentential particles like *man* is that their meaning is not at-issue; they are expressive particles (McCready, 2008). One way to test at-issue-ness is to see if the relevant part of the meaning can be contradicted:

- (48) A: Man, Ash is immature!
 B: That's not true, Ash is not immature.
- (49) A: Man, Ash is immature!
 B: ?? That's not true, Ash is not *very* immature.

When you respond *That's not true!* to *Man, Ash is immature*, what you are saying is false is the propositional content 'Ash is immature,' not the *very*-ness contributed by *man*. This suggests that the intensification via *man* does not have truth-conditional meaning. Rather, it has *expressive* meaning, a dimension separate from at-issue meaning (Potts, 2007).

Similarly, more recent takes on VERUM have shown that its meaning is also not at-issue (Gutzmann and Castroviejo Miró, 2011).

- (50) A: Ash [is]_F immature!
 B: That's not true, Ash is not immature.
- (51) A: Ash [is]_F immature!
 B: That's not true, you're not certain that Ash is immature. (You just told me a second ago that you weren't sure if he was immature or not)

My judgment is that *that's not true* cannot be targeting the speaker certainty contributed by VERUM. Following the same line of intuition, Gutzmann and Castroviejo Miró (2011) propose a multidimensional semantics of VERUM. What this suggests is that inversion exclamatives may be expressive as well. An explicitly multidimensional treatment of inversion exclamatives has yet to be proposed, but may be fruitful given the insight from the pieces we are playing with. I leave this for future research.

This work opens up the question of what exclamatives are as a sentence type. Exclamatives exclaim, but how? In the case of positive and negative inversion exclamatives, assuming a question semantics of exclamatives gives us a natural account of the subtle differences in the way they intensify meaning. EX-OP turns a proposition into a question and an assertion at the same time. This leads to intensification because without it, a self-answered question is not informative. EX-OP is where these exclamatives converge, but the intensification that results from it is not necessarily limited to degree intensification as often assumed in the literature. Exclamatives are a more heterogeneous class than one might imagine, and the semantic microvariation across exclamative subconstructions are crucial for understanding what the common mechanism across all of them are. My proposal is a simple one of form and meaning: exclamatives look like questions so questionhood must be tied to the intensity they evoke. Although not explicitly discussed here, I would expect WH-exclamatives to tell a similar story. A broader

examination of exclamative types will provide a more generalizable understanding of the exclamative force; this seems to me the logical next step in this project.

7. Conclusion

In this paper, I have analyzed the semantics of positive inversion exclamatives (Pos-Ex's) and negative inversion exclamatives (Neg-Ex's). The empirical finding is that Pos-Ex's denote the intensification of degrees while Neg-Ex's express intensified certainty. Neg-Ex's involve the polarity emphaser VERUM, which it inherits from its question cousin. Pos-Ex's intensify via the obligatory sentence-initial particle *boy*, a degree modifier. The common denominator between the two inversion exclamatives is EX-OP, which encodes exclamative meaning: a question-assertion combination. From this analysis we gain two things: exclamatives are non-information-seeking questions, and different subconstructions of exclamatives have different — but predictable — ways of intensifying. This discussion provides a lens into how natural language encodes noteworthiness and intensity, and relating interrogatives to exclamatives for untangling intensification becomes a broader project of the link between form and meaning.

References

- Abels, K. (2010). Factivity in exclamatives is a presupposition. *Studia Linguistica* 64(1), 141–157.
- Anderson, C. (2016). Kinds, epistemic indefinites, and *some*-exclamatives. Presentation at Sinn und Bedeutung 21. Edinburgh, Scotland.
- Castroviejo Miró, E. (2006). “WH”-exclamatives in Catalan. Ph. D. thesis, Universitat de Barcelona.
- Castroviejo Miró, E. (2008a). Deconstructing exclamations. *Catalan Journal of Linguistics* 7, 41–90.
- Castroviejo Miró, E. (2008b). An expressive answer: Some considerations on the semantics and pragmatics of wh-exclamatives. In *Proceedings from the 44th Annual Meeting of the Chicago Linguistic Society*, Volume 2, pp. 3–17. Chicago Linguistic Society.
- Chernilovskaya, A. (2010). Wh-exclamatives and other non-interrogative questions. In *Proceedings of the Israel Association for Theoretical Linguistics* 26.
- Chernilovskaya, A. and R. Nouwen (2012). On wh-exclamatives and noteworthiness. In *Logic, Language and Meaning*, pp. 271–280. Springer.
- Delfitto, D. and G. Fiorin (2014). Exclamatives: Issues of syntax logical form and interpretation. *Lingua* 152, 1–20.
- Grimshaw, J. (1979). Complement selection and the lexicon. *Linguistic Inquiry* 10(2), 279–326.
- Grohmann, K. K. and A. I. Nevins (2004). On the syntactic expression of pejorative mood. *Linguistic Variation Yearbook* 4(1), 143–179.
- Gutiérrez-Rexach, J. (1996). The semantics of exclamatives. In *Syntax at Sunset: UCLA Working Papers in Linguistics*, pp. 146–162.
- Gutzmann, D. and E. Castroviejo Miró (2011). The dimensions of verum. *Empirical Issues in Syntax and Semantics* 8, 143–165.
- Hamblin, C. L. (1973). Questions in Montague English. *Foundations of Language* 10(1),

- 41–53.
- Höhle, T. N. (1992). Über Verum-Fokus im Deutschen. In *Informationsstruktur und grammatik*, pp. 112–141. Springer.
- Karttunen, L. (1977). Syntax and semantics of questions. *Linguistics and Philosophy* 1(1), 3–44.
- Ladd, D. R. (1981). A first look at the semantics and pragmatics of negative questions and tag questions. In *Papers from the Regional Meeting of the Chicago Linguistic Society*, Volume 17, pp. 164–171.
- McCready, E. (2008). What man does. *Linguistics and Philosophy* 31(6), 671–724.
- Portner, P. and R. Zanuttini (2000). The force of negation in wh exclamatives and interrogatives. In L. Horn and Y. Karo (Eds.), *Negation and Polarity: Syntactic and Semantic Perspectives*, pp. 193–231. Oxford: Oxford University Press.
- Potts, C. (2007). The expressive dimension. *Theoretical Linguistics* 33(2), 165–198.
- Rett, J. (2008). A degree account of exclamatives. In *Proceedings of SALT*, Volume 18, pp. 601–618.
- Rett, J. (2011). Exclamatives, degrees and speech acts. *Linguistics and Philosophy* 34(5), 411–442.
- Romero, M. and C. Han (2004). On negative yes/no questions. *Linguistics and Philosophy* 27(5), 609–658.
- Stalnaker, R. (1978). Assertion. In P. Cole (Ed.), *Syntax and Semantics* 9, pp. 315–332. New York: Academic Press.
- Stalnaker, R. (1998). On the representation of context. *Journal of Logic, Language and Information* 7(1), 3–19.
- Stalnaker, R. (2002). Common ground. *Linguistics and Philosophy* 25(5), 701–721.
- Taniguchi, A. (2016). Negative inversion exclamatives and speaker commitment. In *Proceedings of the 24th Conference of the Student Organisation of Linguistics in Europe (ConSOLE XXIV)*.
- Wood, J. (2014). Affirmative semantics with negative morphosyntax: Negative exclamatives and the New English so AUXn't NP/DP construction. In R. Zanuttini and L. Horn (Eds.), *Micro-Syntactic Variation in North American English*, pp. 71–114. Oxford: Oxford University Press.
- Zanuttini, R. and P. Portner (2003). Exclamative clauses: At the syntax-semantics interface. *Language* 79(1), 39–81.