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Discourse-related *Wh*-Movements in English Exclamatives

Yasuhiro Iida

1. Introduction

This paper examines the distribution of English exclamatives primarily focusing on the movements of the exclamative *wh*-phrases. The English exclamatives employ two *wh*-phrases, namely *how* and *what*; and these *wh*-phrases can appear in either a matrix or an embedded clause. Also, like the interrogative *wh*-phrases, they undergo an overt *wh*-movement to the clause initial position, accompanying an adjective phrase or a DP. Typical examples are given below.

- (1) a. How beautiful this rose is!
b. What a beautiful rose this is!
- (2) a. It is amazing how beautiful this rose is.
b. It is amazing what a beautiful rose this is.

One of the most obvious differences between the exclamative and the interrogative *wh*-phrases is that the former type expresses some particular speaker's attitude towards the exclaimed proposition. With this intuitive observation and the viewpoint of syntax and pragmatics, this paper considers how the exclamative *wh*-phrases are licensed and what triggers their *wh*-movement.

The organization of the paper is as follows: Section 2 briefly provides some fundamental properties of English exclamatives, with the comparison to the English interrogatives. There, Ono's (2006) analysis of the exclamatives is introduced, as well as one potential remaining issue. To solve the issue, in Section 3, we propose an alternative analysis partly adopting Ono's analysis, but mainly focusing on the discourse-related properties of the exclamatives: the implication of speaker's emotive attitude. Section 4 concludes the paper.

2. Data and Previous Analysis

2.1 Properties of Interrogative and Exclamative *Wh*-movements

The exclamative *wh*-phrases behave like the interrogative ones in several respects. First, both of them undergo overt *wh*-movements. The below examples show that the exclamative *wh*-phrases cannot be left in situ in either a matrix or an embedded clause (Nelson 1997, Ono 2002, 2006).¹

¹ However, the interrogatives allow a multiple *wh* construction like *Who bought what?*. Thus, the (un)availability of a multiple *wh* construction should be regarded as a difference between the interrogatives and the exclamatives.

- (3) a. *What an expensive present you gave to what a stupid boyfriend!
 b. What an expensive present you gave to such a stupid boyfriend! (Ono 2006:113)
- (4) *John realizes what an expensive present you gave to what a stupid boyfriend.
 (Ono 2006:113)

Also, neither an exclamative nor an interrogative wh-phrase can be extracted alone out of an adverb phrase or a DP (Ross 1969, Merchant 2001). Compare *how* examples below.²

- (5) a. *How₁ does he want [a [t₁ detailed] list]?
 b. *How₁ he wants [a [t₁ detailed] list]! (Ono 2006: 93)

Given that an overt wh-movement is necessary in the exclamatives, our next concern is which position the exclamative wh-phrases move to. As for the interrogative wh-phrases, it has been assumed in the literature that they move to the different positions depending on the clause types (e.g., den Dikken and Giannakidou 2002). More specifically, under the widely accepted Rizzi's (1997) multiple layered CP in (6), a wh-phrase in a matrix clause moves to the [Spec, FocP], while a wh-phrase in an embedded clause moves to the [Spec, CP].

- (6) [CP ...[C [TopP ...[Topic [FocP ...[Focus [IP ...]]]]]]]

Such a difference becomes clearer when a wh-phrase and a topic phrase co-occur in the same clause. The reason is, in order to make a grammatical sentence, the different ordering restrictions between the wh-phrase and the topic phrase arise: the wh-phrase in a matrix clause should follow the topic phrase, whereas the wh-phrase in an embedded clause should precede the topic phrase (Pesetsky 1989). These different ordering restrictions are exemplified in (7) and (8), respectively.

- (7) a. ? A book like this, **why** should I buy?
 b. * **Why**, a book like this, should I buy? (Pesetsky 1989: 13)
- (8) a. ? I wonder **why**, a book like this, I should buy.
 b. * I wonder, a book like this, **why** I should buy. (Pesetsky 1989: 13)

Interestingly, the exclamative wh-phrases are also subject to the ordering restriction, and thus show a similar ordering pattern with respect to the co-occurring topic phrase, as shown in (9) and (10).

² As for the exclamative *what* examples, see Ono's (2006: 94) example below.

(i) *What₁ he wrote [t₁ a long paper]!

- (9) a. ? To a jerk like him, **what an expensive present** you gave!
 b. * **What an expensive present**, to a jerk like him, you gave!
- (10) a. ? It's awful **what an expensive present**, to a jerk like him, you gave.
 b. * It's awful to a jerk like him, **what an expensive present** you gave. (Ono 2006: 111)

With these different landing sites, let us next take a closer look at the embedded exclamatives, where a significant difference from the interrogative appears.

2.2 Relationship with the Predicates

Despite several similarities between the interrogative and the exclamative wh-phrases we saw above, we can also find some significant differences, especially when they are in the embedded clause.³ Let us confirm with (11) that the interrogatives can be selected by the verbs like *wonder* and *ask*, while the exclamatives cannot as shown in (12).

- (11) a. Fred will ask [whether he is a fool]. (Ono 2006: 101)
 b. Susan wonders [whether her parents live in a large house]. (Ono 2006: 100)
- (12) a. * John will ask [what a fool he is]. (Ono 2006: 100)
 b. * Susan wonders [what a cheap house her parents bought]. (Ono 2006: 100)

Rather, the exclamatives must be selected by the predicates that have to do with factivity (Kiparsky and Kiparsky 1970, Elliot 1987, Grimshaw 1979). For instance, Ono's (2006) examples (13a) and (13b) show that the factive predicates such as *be amazing*, *be surprised at* can select the exclamatives, while (13c) gets the ungrammatical result since *be unclear* is not a factive predicate. *Be unclear*, however, does not have any problems to select the interrogatives, as shown in (13d).

- (13) a. It's amazing what a fool he is.
 b. I was surprised at what a large house he lives in.
 c. * It is unclear how big a house he has.
 d. It is unclear whether he has a big house.

Secondly, and more importantly in this paper, the interrogatives must be selected very locally,

³ The exclamatives can have a modifier like *very/extremely/unbelievably* right before an adjective, while the interrogatives cannot. In this paper, the presence/absence of these modifiers is not a crucial issue.

- (i) a. How (very) expensive a ring he bought!
 b. How (*very) expensive a ring did he buy? (Ono 2006: 94)
- (ii) a. It's amazing how (very/unbelievably/extremely) long he can stay under water.
 b. I wonder how (*very/unbelievably/extremely) long he can stay under water. (Elliott 1974: 234)

while such a local relation is not necessary for the exclamatives. More specifically, the sentence becomes ungrammatical once the interrogative-taking verbs like *wonder* and the interrogative are separated as in (14b).

- (14) a. I wonder whether it is unclear Mary likes Christmas shopping.
 b. *I wonder it is unclear whether Mary likes Christmas shopping. (Ono 2006: 102)

However, this is not the case in the exclamatives, as we can see with the examples below.

- (15) a. *It is unclear how big a house he has. (=13c)
 b. Mary *regrets/realizes* that it is unclear how very big a house he has.
 c. *Mary *thinks/says/claims* that it is unclear how very big a house he has. (Ono 2006: 111)

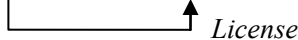
(15a) is ungrammatical because the exclamative is not selected by a factive predicate. What is significant here is the grammatical amelioration in (15b). There, despite the presence of the non-factive predicate *be unclear*, the sentence becomes grammatical once a factive predicate (i.e., *regret/realize*) appears in a higher position. In contrast, (15c) shows that putting a non-factive predicate (i.e., *think/say/claim*) in a higher position does not make any grammatical difference.

Ono (2006) explains this amelioration by arguing that the exclamative wh-phrases are licensed when a specific veridical item, such as a factive operator in the C, c-commands them (e.g., Melvold 1991, Watanabe 1993, Zanuttini and Portner 2003). Therefore, strictly speaking, the embedded exclamatives are not “selected” by the factive predicate under his analysis; but rather, they are just licensed by the c-commanding veridical item. Recalling the different landing sites of the wh-phrases, which are depicted in (16), we consider Ono’s (2006) analysis more in detail in the next subsection.

- (16) a. Matrix clause: [Spec, FocP]
 b. Embedded clause: [Spec, CP]

2.3 Ono’s (2006) Analysis

In a matrix clause, without any problems, the factive operator in the C (C_{FACT}) c-commands and licenses the exclamative wh-phrase in the [Spec, FocP], as illustrated below.

- (17) a. What a big house he has!
 b. $[_{\text{CP}} C_{\text{FACT}} [_{\text{FocP}} [\text{what a big house}]_i [_{\text{Foc}} [_{\text{IP}} \text{he has } t_i]]]]$


When it comes to the embedded exclamatives, the *wh*-phases are moved to the [Spec, CP], and therefore the embedded C_{FACT} fails to c-command the *wh*-phrase. In such a case, Ono argues that, instead of C_{FACT} , the factive predicate c-commands and licenses the *wh*-phrase.

- (18) a. It is amazing what a tall man Mary met!
 b. It is amazing_{FACT} [CP [what a big house]_i C_{FACT} [FocP Foc [IP he has *t_i*]]]
-

Now, confirm that Ono's analysis can properly capture the paradigm in (15). The licensing process in (15a-c) can be described as below.

- (19) a. * It is unclear_{non-FACT} [CP [how very big a house] [C [TopP [FocP [IP he has]]]]].
-
- b. Mary realizes_{FACT} [CP that it is unclear_{non-FACT} [CP [how very big a house] C_{FACT}[he has]]].
-
- c. * Mary thinks_{non-FACT}[CP that it is unclear_{non-FACT}[CP[how very big a house] C [he has]]].
-

(19a) is ungrammatical because there is no proper licenser for the exclamative *wh*-phrase; and by the same token, (19c) can be correctly ruled out. On the contrary, (19b) accomplishes a licit licensing process with a new c-commanding licenser in the higher level, although the sentence constructs the same structure as the (19a) until the intermediate level of the derivation.

Accordingly, with the c-commanding way of licensing, Ono's (2006) analysis successfully accounts for the properties of the exclamative *wh*-phrases in both the matrix and the embedded clauses. However, there are still several remaining issues under his analysis. For instance, as Ono (2006: 114) himself notices, the motivation for the exclamative *wh*-movements is left unclear. More specifically, if the c-commanded relation from a higher factive item is the only requirement to license the exclamative *wh*-phrase, it should be possible to license the *wh*-phrase in the base-generated position, and also there should be no need to move it to the [Spec, FocP] or the [Spec, CP]. However, as we saw in (3) and (4), no in situ exclamative *wh*-phrase is allowed. In order to avoid this undesirable situation, an alternative analysis is provided in the next section, significantly focusing on the discourse related properties of the exclamatives.

3. Alternative Analysis with Discourse-related Movements

Thus far, we witnessed that although Ono's (2006) analysis successfully explains the distribution of the exclamative *wh*-phrases, it fails to show a clear motivation for the *wh*-movement.

Thus, adopting Ono's analysis in a part, this section provides an alternative analysis from the discourse-related point of view.

3.1 Proposal

One of the most obvious characteristics of the exclamatives is their implication of speaker's attitude or emotion. For instance, Castroviejo Miró (2008) points out that an utterance of the exclamatives contains two implications: the descriptive content and the expressive content. In terms from Chernilovskaya, Condoravdi and Lauer (hereafter CCL: 2012), these two contents can be defined as (20a) and (20b), respectively. Also, an apparent example is given in (21) with its specific two implications.

- (20) a. The descriptive content specifies that the described amount, which is determined compositionally from the make-up of wh-clause, is high and this is presented as a true fact about the world.
 b. The expressive content is about an emotive attitude the speaker has towards the descriptive content. Examples of such attitudes include surprise, amazement, and awe, but their precise nature is not specified. (CCL 2012: 109)
- (21) How many people took part in the rally!
 a. Many people took part in the rally. *descriptive content*
 b. The speaker is impressed/amazed/surprised/awed... by the number of people who took part in the rally. *expressive content* (CCL 2012: 109)

Our main focus here is put on the expressive content, which conveys the speaker's emotive attitude. This type of implication is tightly connected to the exclamatives and thus cannot be denied. See the utterance in (22), which is followed by (23).

- (22) a. How many papers she wrote in her first year!
 b. What insightful ideas she came up with! (CCL 2012: 112)
- (23) I am not surprised, though. She is our smartest student. (CCL 2012: 112)

At first glance, (23) appears to deny the emotive attitude, but according to CCL (2012: 112), the sentence "simply serves to better circumscribe the attitude expressed, by excluding surprise". To put this differently, the exclamatives always convey some kinds of speaker's attitudes such as surprise or amazement, as our intuition naturally agrees.

Considering such a necessary implication of speaker's attitude, we propose that, in the exclamatives, the Foc Head and the wh-phrase bear the attitude feature, and their checking

operation is implemented via the Spec-Head relation in the FocP. The exclamative wh-phrase, therefore, obligatorily moves to the [Spec, FocP] to check the attitude feature, and the proper checking operation guarantees the speaker's attitude (or, the expressive content) of the exclamatives. The rest of this paper provides more specific derivations and demonstrates how this feature interacts with Ono's (2006) factivity licensing operation.

3.2 The Matrix Exclamatives

First, under our analysis, a matrix exclamative (24a) contains the Foc with the attitude feature (Foc_{ATT}), as well as Ono's (2006) C with a factive operator (C_{FACT}).

(24) a. What a big house he has!

b. [CP [C_{FACT} [FocP **Wh-Exc** [Foc_{ATT} [IP ... t]]]]]
License via c-command *Feature Checking via Spec-Head Relation*

The wh-movement to the [Spec, FocP] is triggered for the checking purpose with the Foc_{ATT}. Therefore, the exclamative wh-movement in (24) is crucially different from the interrogative wh-movement like the one in (7), which assumed to be triggered by the [Q] feature. In (24), after the proper checking operation, the speaker's attitude of the exclamative is specified, and the c-commanding C_{FACT} licenses the raised wh-phrase.

3.3 The Embedded Exclamatives

In the case of the embedded exclamatives like (25a), the embedded clause has the Foc_{ATT} and C_{FACT} as shown in (25b). Then, its following derivations proceed like (25c-d).

(25) a. It is amazing what a tall man Mary met.

b. amazing [CP [C_{FACT} [FocP [Foc_{ATT} [IP ... **Wh-Exc** ...]]]]]
c. amazing [CP [C_{FACT} [FocP **Wh-Exc** [Foc_{ATT} [IP ... t ...]]]]]
Feature Checking via Spec-Head Relation
d. amazing_{FACT} [CP **Wh-Exc** [C_{FACT} [FocP t [Foc [IP ... t ...]]]]]
License via c-command

As a first step in (25c), the wh-phrase is raised to the [Spec, FocP] to check the attitude feature. However, unlike the case in (24), the wh-phrase should continue to move up to the CP area, given that the embedded wh-phrase ends up in the [Spec, CP] (i.e., (16b)). Thus, following Ono (2002), we attribute this wh-movement to the Clause Typing (Cheng 1991), which is defined below.

- (26) Every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C^0 is used or else fronting of a wh-word to the Spec of C^0 is used, thereby typing a clause through C^0 by Spec-head agreement. (Cheng 1991: 29)

By moving the embedded wh-phrase to the [Spec, CP], the clause type is determined as an exclamative. Then, as a final step in (25d), the wh-phrase in the [Spec, CP] is c-commanded and licensed by the factive predicate.

In summary, we saw that, by assuming the Foc_{ATT} in the exclamatives, it becomes possible to guarantee the necessary implication of the speaker's attitude and provide a motivation for the wh-movement in the exclamatives. In a matrix clause, the wh-phrase is raised to the [Spec, $FocP$] to check the attitude feature; and in an embedded clause, the wh-phrase is raised to the [Spec, $FocP$] first, and then further moved to the [Spec, CP] for the clause typing operation.⁴

3.4 Why the Attitude Feature in the Foc ?

Before concluding this paper, it is worth noting the principal reasons to assume the attitude feature in the Foc . First, only to explain the exclamative wh-movements, we simply do not want to make up a special functional projection which is very unique to the exclamatives, for example the Exclamative projection ($ExcP$) (Ono 2002), or the attitude phrase ($\otimes P$) (Huang and Ochi 2002).⁵ Under the current analysis with the Foc_{ATT} , however, we can move the exclamative wh-phrases to the [Spec, $FocP$] without invoking any additional projections.

Second, our Foc_{ATT} makes it possible to provide a unified account for the multiple focus structures in English. As exemplified in (27), it is widely known that English does not allow a multiple focus sentence. In fact, as given in (28), a multiple exclamative sentence is not allowed, either.

- (27) a. * It is [three books] [to Mary] that John sent *e e* yesterday.
 b. * THREE BOOKS, TO MARY, John sent *e e* yesterday. (Ono 2002: 22)
- (28) a. * What a long paper John sent to what a famous publisher!
 b. * How fast John ate what a big steak! (Ono 2002: 21)

⁴ We have left unexplained why it is only in the embedded exclamatives that the wh-phrase is raised to the [Spec, CP], even after the checking of the attitude feature. However, since there are several differences between the matrix clauses and the embedded clauses first of all (e.g., the presence/absence of the Sub-Aux inversion in the direct/indirect questions), it is still not unreasonable to assume slightly different derivations between the matrix exclamatives and the embedded exclamatives.

⁵ In fact, Ono (2002) postulates the $ExcP$ in order to explain the inversed word order of the wh-exclamatives (*how rich my parents are/what a nice car John drives*) and the non-wh-exclamatives (*he wrote such a great book/you wrote so interesting a paper*). In this paper, we do not go into these non-canonical word orders for the sake of space limitation.

Adopting Rizzi's (1997) argument that the focus projection must be uniform, these ungrammaticalities can be uniformly explained by saying that two different focus phrases cannot simultaneously compete for the single [Spec, FocP].

Third, it might be possible to extend our analysis to so-called the wh-the-hell expressions, which also express speaker's particular attitude, since they also show a similar ordering restriction to the exclamative wh-phrases. First, confirm with (29) that the wh-the-hell cannot stay in-situ, just like the exclamative wh-phrases. Then, from the contrast between (30) and (31), we can find that the wh-the-hell in the matrix clause targets the [Spec, FocP], while the one in the embedded clause targets the [Spec, CP] (e.g., den Dikken and Giannakidou 2002, Huang and Ochi 2003).

- (29) a. **Who the hell** saw what?
 b. * Who saw **what the hell**?
 c. Who bought **what** for him? (Huang and Ochi 2003: 279)
- (30) a. ? A book like this, **why the hell** should I buy?
 b. * **Why the hell**, a book like this, should I buy? (Ono 2006: 104)
- (31) a. ? I wonder **why the hell**, a book like this, I should buy.
 b. * I wonder, a book like this, **why the hell** I should buy. (Ono 2006: 104)

Of course, the wh-the-hell can function as the interrogatives, and thus its obligatory wh-movement can be triggered by the [Q] feature. At the same time, it is also possible to employ the wh-the-hell only to express speaker's emotive attitude, and in such a case, we could attribute the wh-movement to our attitude feature in the Foc, instead of the [Q] feature. Furthermore, to the extent that our Foc_{ATT}-based wh-movement analysis is on the right track, the ordering difference between (30) and (31) could be explained in the same line as the one observed with the exclamative wh-phrases in.⁶

Consequently, by assuming the Foc_{ATT}, there arises a possibility to provide a unified account for more wide variety of the discourse-related phenomena.

4. Concluding Remarks

In this paper, adopting Ono's (2006) c-command-based analysis, it was shown that the obligatory wh-movement in the exclamatives can be explained with the attitude feature in the Foc. In our analysis, the exclamative wh-phrase is first raised to the [Spec, FocP] to establish the Spec-Head relation with the Foc_{ATT}, and the proper feature checking with the Foc_{ATT} guarantees the speaker's emotive attitude, which is tightly connected to the exclamatives. However, since the Foc_{ATT} is not created only for the English exclamatives, there are still more possibilities to extend

⁶ Also, it might be possible to extend our analysis to so-called the rhetorical questions, since those questions are generally used to express some speaker's emotive attitude, but not to require any answers.

our analysis to wide variety of discourse-related phenomena, such as the wh-the-hell expressions.

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