



On the existence of Korean degree *what*-exclamatives*

Okgi Kim
(Kyung Hee University)

Kim, Okgi. 2024. On the existence of Korean degree *what*-exclamatives. *Linguistic Research* 41(1): 135-168. This paper attempts to demonstrate the existence of Korean degree *what*-exclamatives and to provide a precise characterization of them. Close investigation of Korean degree *what*-exclamatives offers an unusually rich set of linguistic diagnostics that we can use to investigate cross-linguistic variation in *what*-exclamatives. In analyzing *wh*-exclamatives, there is an ongoing debate in the literature as to whether the construction denotes a set of propositions or a degree property and whether it counts as an assertion or an expressive in terms of illocutionary force. This paper presents fresh insights into the aforementioned issues by suggesting that Korean degree *what*-exclamatives denote a maximal degree derived via a maximality operator $\{ku/i\}$ lehkey 'so', and further that they have assertive speech acts. This view allows us to account for various regular as well as idiosyncratic properties of Korean degree *what*-exclamatives. (Kyung Hee University)

Keywords *what*-exclamative, degree interpretation, maximality operator, assertion, *i*-level exclamation, *e*-level exclamation

1. Introduction

While *what*-exclamatives have been extensively studied in other languages, Korean, to my knowledge, has been considered a *wh*-in situ language that may not employ *what*-exclamatives, for example, corresponding to those in English, German, and Japanese presented in (1).¹

* This work has been developed from one of the chapters of my dissertation (Kim 2022). I would like to thank the audiences at the 52nd Annual Meeting of the North East Linguistic Society (NELS), the 96th Annual meeting of the Linguistic Society of America (LSA), and the 15th Arizona Linguistics Circle (ALC). I also wish to thank the anonymous reviewers for their valuable comments and suggestions. The usual disclaimers apply.

- (1) a. What an expensive car John bought! (English)
 b. Was für Schuhe die getragen hat! (German)
 What for shoes she wears has
 ‘What shoes she wore!’ (Driemel 2016: 199)
 c. Taro-wa nante oisii dezaato-o tukuru no-daroo! (Japanese)
 Taro-TOP what delicious dessert-ACC make FOC-MOOD
 ‘What delicious desserts Taro makes!’ (adapted from Hirayama 2021: (1b))

The present study, however, attempts to analyze *mwe-l* {*ku/i*}*lehkey* ‘what so’ clauses like the answers in (2) as variants of Korean *what*-exclamatives.

- (2) A: John-i 5ek ccali cha-lul sa-ss-tay.
 John-NOM 5million won car-ACC buy-PST-DECL
 ‘(I heard that) John bought a car that costs 5 million won.’
 B1: wa, mwe-l kulehkey pissan cha-lul sa-ss-e!
 wow what-ACC so expensive car-ACC buy-PST-EXCL
 ‘Wow, what an expensive car he bought!’
 B2: wa, mwe-l kulehkey pissa!
 wow what-ACC so expensive
 ‘Wow, how very expensive it is!’
 B3: wa, mwe-l kulehkey pissakey sa-ss-e!
 wow what-ACC so expensively buy-PST-EXCL
 ‘Wow, how very expensive it is!’
 A: kulekey!
 yeah
 ‘Yeah!’

As observed here, the assumed *what*-exclamative in Korean involves the in-situ accusative-marked *wh*-phrase *mwe-l* ‘what-ACC’, the degree adverb {*ku/i*}*lehkey* ‘so’, and the sentence ending particle *-e*, which is often treated as an exclamative ending particle in informal settings (Nam and Ko 1993; Youn 2000; Mun 2013). In the examples under

1 The abbreviations that I used here are as follows: NOM (nominative), ACC (accusative), GEN (genitive), MOD (modifier), EXC (exclamative), PST (past), QUE (question), DECL (declarative), AUX (auxiliary), TOP (topic), CONN (connective), COP (copular)

consideration, the nominal *wh*-expression is non-argumental with no canonical *wh*-meaning as in information-seeking *wh*-questions. Its non-argumental behavior is evident given that the addressee A agrees with B's utterance by responding with *yeah* (cf. A: What did you read? B: #Yeah!).

It has been noted in previous literature (Castroviejo 2021; Rett 2011, a.o.) that *what*-exclamatives in English and other languages including Catalan necessarily receive degree interpretations (specifically degree properties) (cf. Zanuttini and Portner 2003; Gutiérrez-Rexach 2008). For example, (1a) is being used to exclaim that the car John bought is more expensive than the speaker expected. In this sense, Korean *what*-exclamatives are also taken as degree constructions: those in (2) are uttered to express that the extreme/high degree of expensiveness of the car John bought has violated the speaker's expectation. In this study, our main concern is to investigate grammatical characteristics of such 'degree' *what*-exclamatives in Korean.

One of the remarkable features of Korean degree *what*-exclamatives is that they must involve a degree/scalar expression like *{ku/i}lehkey* 'so'. For example, if the degree adverb *kulehkey* is omitted in (2B), as in (3), the result no longer expresses an exclamative attitude at the unexpected degree in question but rather the unexpected 'event' in the sense of Nouwen and Chernilovskaya (2015). This is the exact opposite of English, which does not permit the presence of *so* in *what*-exclamatives, as in (4).

- (3) mwe-l #(kulehkey) pissan cha-lul sa-ss-e!
 what-ACC so expensive car-ACC buy-PST-EXCL
 '(Int.)What an expensive car he bought!'
- (4) What (*so) expensive cars he bought!

Here I claim that such a discrepancy between Korean and English *what*-exclamatives lies in what counts as a degree operator, one that contributes to deriving a degree reading. The main argument in this sense is that unlike in English, where the *wh*-word *what* is treated as a degree operator (Rett 2011), in Korean the degree adverb *{ku/i}lehkey* is assumed to figure as the corresponding operator (specifically, maximality operator). As such, Korean degree *what*-exclamatives provide a variety of linguistic diagnostics that we can use to develop our current understanding of cross-linguistic variation in *what*-exclamatives.

The remainder of the paper is organized as follows. The next section presents key syntactic and semantic/pragmatic properties of Korean degree *what*-exclamatives, while

referring to their counterparts in other languages when relevant and necessary. Section 3 then offers an analysis within a compositional semantics. Based on the proposed analysis, Section 4 discusses two types of Korean *what*-exclamatives and their implications. Section 5 concludes.

2. Key grammatical properties

2.1 Grammatical status of an exclamative *wh*-element

A unique property of an exclamative *wh*-element in Korean degree *what*-exclamatives comes from its morphosyntactic behavior. As given in the contrasts below, the *wh*-expression in question can appear only in its reduced form with or without a Case marker.

- (5) a. *mwe(-l)* kulehkey maywun kochwu-lul mek-ess-e!
 what-ACC so spicy pepper-ACC eat-PST-EXCL
 ‘What spicy peppers you ate!’
 b. **mwues(-ul)* kulehkey maywun kochwu-lul mek-ess-e!
 what-ACC so spicy pepper-ACC eat-PST-EXCL
 ‘What spicy peppers you ate!’
- (6) a. *sakwa-lul mwe(-l)* kulehkey ppalli mek-ess-e!
 apple-ACC what-ACC so quickly eat-PST-EXCL
 ‘How (very) quickly you ate the apple!’
 b. **sakwa-lul mwues(-ul)* kulehkey ppalli mek-ess-e!
 apple-ACC what-ACC so quickly eat-PST-EXCL
 ‘How (very) quickly you ate the apple!’

As shown in (5b) and (6b), the unreduced *wh*-form *mwues*, no matter whether it is Case-marked or not, cannot be substituted for its reduced form. Tentatively, this fact could be interpreted as an indication that the reduced form *mwe(-l)* has undergone grammaticalization into a non-argumental exclamative element for some reason, whereas its unreduced counterpart still remains as an interrogative argumental element. Under this view, the inability of *mwues(-ul)* to be licensed in degree *wh*-exclamatives would be due

to its argumenthood: in (5b) and (6b), the *wh*-element fails to serve as an argument in the given sentence, leading to the ungrammaticality. In the meantime, close and careful investigation of exclamative *mwe(-l)* in terms of grammaticalization should be performed so that we can better understand its grammatical status in degree *wh*-exclamatives. But doing so goes beyond the scope of this paper, and thus I leave it as a question for future research.

Another interesting behavior of the exclamative *wh*-word under discussion is that it is only able to bear either accusative or nominative Case:

- (7) pi-ka mwe- $\{l/ka/*uy/*lopwuthe\}$ ilehkey manhi o-ass-e!
 rain-NOM what-ACC/NOM/GEN/from so much come-PST-EXCL
 ‘What a heavy rain it was!’

I tentatively assume that the accusative or nominative Case on the exclamative *wh*-element is an inherent Case, not a structural Case. This assumption could receive support from the observation that the accusative exclamative *wh*-element in (7) can occur with the intransitive verb *o* ‘come’ requiring no direct object. Hereafter, for the sake of convenience, the term MWE will be used to refer to the three *wh*-variants *mwe-l*, *mwe-ka*, and *mwe*.

As mentioned at the outset, the exclamative *wh*-phrase MWE does not contribute an interrogative meaning as in information-seeking *wh*-questions. Consider (8).

- (8) A: mwe-l kulehkey maywun kochwu-lul mek-ess-e!
 what-ACC so spicy pepper-ACC eat-PST-EXCL
 ‘What spicy peppers you ate!’
 B1: kulekey.
 yeah
 ‘Yeah.’
 B2: #hallaphinyo-lang kwueylo
 jalapeño-and güero
 ‘jalapeño and güero’

The reply in (B2) is infelicitous in the given context because A’ utterance is interpreted not as an information-seeking *wh*-question asking about what spicy peppers the addressee

ate, but as a degree *wh*-exclamative expressing the speaker's surprise at the extreme spiciness of the pepper in question.

2.2 Internal structure of an exclamative *wh*-phrase

As with their counterparts in other languages such as English, Dutch, and Japanese, Korean degree *what*-exclamatives involve what Corver (1990) calls the exclamand, i.e., the gradable predicate whose quality or quantity is characterized as 'noteworthy' on the part of the speaker. The exclamand in Korean degree *what*-exclamatives is more flexible than in English ones with respect to its syntactic realization. Observe the following examples:

- (9) a. John-un mwe-l kulehkey **pokcaphan** mwuncey-lul
 John-TOP what-ACC so complex question-ACC
 mantul-ess-e!
 make-PST-EXCL
 'What complex questions John made!'
- b. iken mwe-l ilehkey **elye**-we!
 this what-ACC so difficult-EXCL
 'How difficult this is!'
- c. Mimi-nun mwe-l kulehkey **ppalli** talli-ess-e!
 Mimi-TOP what-ACC so quickly run-PST-EXCL
 'How quickly Mimi ran!'
- (10) a. {What/*How} a **difficult** question it is!
 b. {*What/How} **pretty** she is!
 c. {*What/How} **slowly** my mother drove!

As shown in (9), in Korean the exclamand can be an attributive/adnominal adjective, a stative verb, or an adverb.² On the other hand, in English *what*-exclamatives an attributive adjective can function as the exclamand, whereas a predicative adjective or an

2 While some Korean linguists (e.g., Sohn 1999; Kang 2006) argue for a distinct category of attributive adjectives, other linguists, including Kim (2002), propose to analyze attributive/adnominal adjectives as stative verbs inside relative clauses. In this study I chose to use the term "attributive adjective" for a cross-linguistic comparison of the adjectival exclamand.

adverb cannot, in which case *how* stands in for *what* as an exclamative *wh*-unit.

Japanese and Dutch *what*-exclamatives pattern like Korean counterparts in that they allow for various forms of the exclamand, as illustrated in (11) for Japanese and (12) for Dutch.

- (11) a. John-wa nante **takusanno** hon-o yonda-nodeshoo!
 John-to what many book-ACC read-EXCL
 ‘How many books John read!’
 b. John-was nante **kasikoi**-ndeshoo!
 John-TOP what smart-EXCL
 ‘How smart John is!’
 c. Kanozyo-wa nante **hayaku** hasiru-nodaroo
 she-TOP what fast run-EXCL
 ‘How fast she runs!’ (adapted from Ono 2006)
- (12) a. Wat een **benen** heeft Marie!
 what a legs has Mary
 ‘What legs Mary has!’
 b. Wat **mooi** was ze vroeger!
 what beautiful was she formerly
 ‘How beautiful she was in the past!’
 c. Maar wat **getranspireerd** had Jan!
 But what perspired had John
 ‘How John had perspired!’ (adapted from Corver 1990)

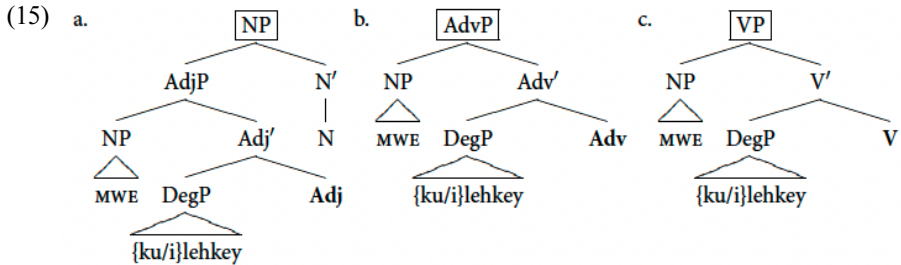
It has been generally accepted that the exclamative *wh*-word *what* in English *wh*-exclamatives forms a syntactic constituent with the following phrasal sequence containing the exclamand, resulting in an exclamative (*wh*-)phrase (Corver 1990; Zanuttini and Portner 2003; Rett 2011; a.o.). A clear piece of evidence for the claim is that in forming a well-formed *what*-exclamative the obligatory fronting of *what* needs to pied-pipe the rest of the expressions comprising the exclamative phrase, as evidenced by the contrast given in (13).

- (13) a. [What a nice professor]₁ Mary is t₁!
 b. *What₁ Mary is [t₁ a nice professor]!

I argue that in Korean degree *what*-exclamatives, the exclamative *wh*-word MWE builds an exclamative phrase with the exclamand. This view is supported by the fact that an exclamative phrase can be scrambled as a whole into a sentence-initial position, just like its English counterpart:

- (14) a. [mwe-l kulehkey pokcaphan mwuncey-lul]₁ John-un t₁
 what-ACC so complex question-ACC John-TOP
 mantul-ess-e!
 make-PST-EXCL
 ‘What complex questions John made!’
- b. [mwe-l kulehkey ppalli]₁ Mimi-nun t₁ talli-ess-e!
 what-ACC so quickly Mimi-TOP run-PST-EXCL
 ‘How quickly Mimi ran!’

As an attempt to analyze the internal structure of an exclamative phrase in Korean degree *what*-exclamatives, I further assume that a gradable predicate (adjective, adverb, or (stative) verb), i.e., the exclamand, takes as its complement a Degree Phrase (DegP) headed by the degree adverb *{ku/i}lehkey* and then the resulting intermediate phrase combines with the nominal *wh*-phrase MWE as its specifier, forming a well-formed exclamative phrase. This is illustrated in (15).



In each of the tree structures above, the lexical element in bold type functions as the exclamand, and the top-most phrase indicated by a box constitutes an exclamative phrase, which can be scrambled as a whole, as seen in (14). In addition, as given in (15a), when an attributive adjective figures as the exclamand, its maximal projection involving MWE

forms a head-specifier relation with the noun. The embedding of an exclamative *wh*-unit within an attributive adjective phrase can be also observed in Dutch *wh*-exclamatives, as in (16).

- (16) a. Jan heeft [een [maar wat slimme] dochter!
 John has a but what smart daughter
 ‘John has such a smart daughter!’
- b. We hadden [een [wat mooi] uitzicht] vanaf die bergtop!
 We had a what beautiful view from that mountain-TOP
 ‘We had such a nice view from that mountain-top!’

The validity of the proposed internal structure of an exclamative phrase in Korean can be confirmed by the scrambling examples presented in (17). Compare them with the canonical *wh*-interrogatives in (18).

- (17) a. *[kulehkey pokcaphan mwuncey-lul] John-un mwe-l
 so complex question-ACC John-TOP what-ACC
 mantul-ess-e!
 make-PST-EXCL
 ‘What complex questions John made!’
- b. *[kulehkey ppalli] Mimi-nun mwe-l talli-ess-e!
 so quickly Mimi-TOP what-ACC run-PST-EXCL
 ‘How quickly Mimi ran!’
- (18) a. [kulehkey pokcaphan mwuncey-lul] John-un way mantul-ess-ni?
 so complex question-ACC John-TOP why make-PST-QUE
 ‘Why did John make such complex questions?’
- b. [kulehkey ppalli] Mimi-nun way talli-ess-ni?
 so quickly Mimi-TOP why run-PST-QUE
 ‘Why did Mimi run so quickly?’

The *what*-exclamative in (17a) is ruled out under the present analysis because the non-constituent sequence *kulehkey pokcaphan mwuncey-lul* has been scrambled over the subject. The ungrammaticality of (17b) is driven by the scrambling of the intermediate phrase (i.e., Adv^v) alone, leaving behind its specifier MWE. In both of the exclamatives,

if MWE moves together with the sequence in question, then they become well-formed, as we already have seen in (14). In the meanwhile, as illustrated in (18), the same string of words can freely undergo scrambling in typical *wh*-interrogatives since it does not form a constituent with the given *wh*-phrase.

2.3 Degree interpretations

By defining exclamations as “a natural class of utterances which express that a particular proposition has violated the speaker’s expectations (p. 412),” Rett (2011) classifies them into two subtypes: sentence exclamations and exclamatives, the latter of which are further divided into *wh*-exclamatives, inversion exclamatives, and nominal exclamatives. Each type is exemplified in (19) and (20).

- (19) (Wow,) John bakes delicious cookies! (sentence exclamation)
 (20) a. (My,) What delicious cookies John baked! (*wh*-exclamative)
 b. (Boy,) Does John bake delicious cookies! (inversion exclamative)
 c. (My,) The delicious cookies John bakes! (nominal exclamative)

Rett argues that whereas sentence exclamations receive propositional interpretations, exclamatives can only have degree interpretations (specifically, degree properties), which she calls the *degree restriction*. For instance, the sentence exclamation in (19) is taken to assert the proposition that John bakes delicious cookies and also express that the proposition has violated the speaker’s expectation. The utterance of the *wh*-exclamative in (20a), on the other hand, expresses that the cookies that John baked are more delicious than the speaker expected; this speaker unexpectedness then gives rise to a sense of surprise or relevant emotional feelings.

As Rett notes, the degree restriction holds even for *wh*-exclamatives that do not contain overt gradable or amount predicates whose quality or quantity is exclaimed about. Consider (21) for instance.

- (21) What cookies John baked!

The *wh*-exclamative can be felicitously uttered to express that the degree to which the

cookies John baked instantiate some gradable property (e.g., deliciousness) surpassed the speaker's expectation.

Sentence exclamations and *wh*-exclamatives also differ markedly with respect to the nature of violated expectation of the speaker. According to Rett's (2011) view, sentence exclamations involve non-scalar expectations, where the speaker expected *p*, but the expectation has been violated (i.e., $\neg p$). By contrast, *wh*-exclamatives are associated with scalar expectations, where the speaker expected a particular degree of a gradable property, but the expected degree has been surpassed by the actual degree. The association of sentence exclamation (19) with non-scalar expectations is supported by the fact that its utterance can be followed by a clarifying sentence like *I guessed that he would not bake delicious cookies*, but not by a sentence like *I guessed that he would bake delicious cookies, but not this delicious!* On the other hand, the association of *wh*-exclamative (20a) with scalar expectations allows for it to be naturally continued with either *I guessed that he wouldn't bake delicious cookies* or *I guessed that he would bake delicious cookies, but not this delicious!*

Rett's ideas concerning the core meanings of *wh*-exclamatives would make it plausible to treat MWE-*{ku/i}lehkey* clauses as *what*-exclamatives, in that they, as with English counterparts, have an interpretation of speaker unexpectedness and only receive degree interpretations. To illustrate this, let us consider (22).

- (22) ku khemphyuthe-nun mwe-l kulehkey pissa!
 the computer-TOP what-ACC so expensive
 'How expensive the computer is!'

The *wh*-exclamative is felicitously uttered only in a context where the actual degree of expensiveness of the computer in question has surpassed the (maximum) standard established by the speaker's expectation. In other words, it expresses that the computer's price is (much) more expensive than the speaker expected. This expectation contravention is empirically verified by the fact that it is odd to continue the exclamative by saying something like *The price is exactly what I expected*, as in (23).

- (23) ku khemphyuthe-nun mwe-l kulehkey pissa! (#nay-ka
 the computer-TOP what-ACC so expensive I-NOM
 cenghwakhi yeysangha-n kakyek-i-ney.)

exactly expect-MOD price-COP-DECL

‘How expensive the computer is! The price is exactly what I expected.’

In addition, the degree reading of (22) is supported by its association with a scalar expectation: it can be naturally followed by a clarifying sentence like *I guessed that the computer would be expensive, but not this expensive!* or *I guessed that you wouldn’t buy an expensive computer.*

2.4 Emotional attitudes

Exclamatives differ from other clause types in that they necessarily convey expressive attitudes on the part of the speaker, such as surprise, amazement, and unexpectedness (Gutiérrez-Rexach 2008; Nouwen and Chernilovskaya 2015; Rett 2008, 2011; Villalba 2008). Such emotive attitudes are assumed to be pragmatically evoked by the speaker’s unexpectedness towards the high/extreme degree of the individual/event in question. Observe (24).

- (24) a. What an expensive wine it is! #Which doesn’t surprise me at all,
because it’s kosher.
b. The wine is extremely expensive, which doesn’t surprise me at all,
because it’s kosher. (adapted from Villalba 2008: 15)

In (24a), the *wh*-exclamative is uttered to express the speaker’s surprise at the extreme degree of expensiveness of the wine under consideration. This expressive attitude makes the exclamative semantically incompatible with the continuation.

Degree *what*-exclamatives in Korean, as in other languages, express the speaker’s emotional feelings such as surprise and amazement:

- (25) a. mwe-l kulehkey pissan khemphyuthe-lul sa-ss-e!
what-ACC so expensive computer-ACC buy-PST-EXCL
‘What an expensive computer you bought!’
b. #mwe-l kulehkey pissan khemphyuthe-lul sa-ss-e! cenhye
what-ACC so expensive computer-ACC buy-PST-EXCL at all

nollap-ci ahn-a.
 surprise-conn not-DECL
 ‘What an expensive computer you bought! I’m not surprised at all.’

The exclamation in (25a) is used to exclaim that the speaker is surprised at the extreme degree of expensiveness of the computer in question. This emotional attitude on the part of the speaker is empirically evidenced by the fact that the exclamation cannot be naturally continued with a sentence like *I’m not surprised at all*, as illustrated in (25b).

2.5 Assertiveness

Previous literature on exclamatives has produced no consensus on the matter of whether the propositional content of exclamatives is presupposed to be true, i.e., whether they are factive or not. This debate has extended to the issue of whether exclamatives can serve as responses to information-seeking questions. A defender of the factivity analysis argues that exclamatives cannot be used as answers to information-seeking questions, since they lack assertive content. This argument is first made by Grimshaw (1979). Consider (26).

- (26) A: Did John buy a big car?
 B1: #What a big car John bought!
 B2: John bought a big car.

Unlike the declarative sentence, the exclamative clause cannot be used as an answer to the *yes-no* question. In order to account for this, Grimshaw adopts a general conversational principle, which states that the response to a question cannot constitute a sentence that presupposes the answer to that question. This principle is independently verified by the dialogue in (27).

- (27) A: Did Bill leave?
 B: #It’s odd that he did.

The answer with the factive expression *It’s odd that ...* is infelicitous since the presupposed proposition that Bill left is what the question is asking about. The same line

of reasoning applies to (26): since the exclamative clause presupposes the proposition that John bought a big car (on Grimshaw’s view), the presupposed proposition cannot be the proper response to the question. Meanwhile, the declarative sentence is felicitous since its propositional content is asserted. Based on this discussion, Grimshaw argues that the descriptive content of exclamatives is presupposed, but not asserted (see also Zanuttini and Portner 2003).

Trotzke and Giannakidou (2021) argue against the view that the descriptive content of exclamatives is presupposed. Instead, they propose to analyze exclamatives as what they call “emotive assertions”, which are semantically equivalent to assertions of declarative sentences with emotive predicates such as *be surprised/amazed*. Consider (28).

- (28) a. How fast Eliud Kipchoge was!
 b. I am amazed at how fast Eliud Kipchoge was.
 (Trotzke and Giannakidou 2021: 15)

On their view, both the *wh*-exclamative and the declarative behave alike with respect to assertion and presupposition: they both assert the speaker’s emotional attitude (i.e., amazement) towards the believed proposition that Eliud Kipchoge was extremely fast, and presuppose that the speaker has this very belief.

According to Trotzke and Giannakidou’s account, the ill-formedness of (29B2) is due to mismatch in information structure, regardless of assertive force.

- (29) A: How fast was Eliud Kipchoge?
 B1: Eliud Kipchoge was [very]_f fast.
 B2: #[How fast Eliud Kipchoge was!]_f
 B3: #[Eliud Kipchoge war^{‘was’} aber_{part} auch_{part} schnell^{‘fast!’}!]_f

The *how*-question, as a narrow-focus question, is asking about the actual degree of fastness of Eliud Kipchoge’s running in the race. However, the exclamative in (29B2) presupposes the speaker’s belief that Eliud Kipchoge was extremely fast, which in turn makes it inappropriate as the response providing new information. The German declarative sentence containing the exclamative particle *aber auch* in (29B3) is presented to show that the infelicity of the exclamative is irrelevant to assertiveness: even though the declarative is assertive, it cannot function as the answer to the question.

I concur with Trotzke and Giannakidou's view by arguing that Korean degree *what*-exclamatives express assertive speech acts, based on attested examples like the following:

- (30) A: mwe-l ilehkey pissan senmwul-ul sa-ss-e!
 what-ACC so expensive gift-ACC buy-PST-EXCL
 'What an expensive gift you bought!'
 B: ani. pyello an pissa.
 not much not expensive
 'No. It's not that expensive.'
- (31) A: Mimi-ka ecey Lampolukini-lul sa-ss-tay.
 Mimi-NOM yesterday Lamborghini-ACC buy-PST-DECL
 '(I heard that) Mimi bought a Lamborghini yesterday.'
 B: wa, mwe-l kulehkey pissan cha-lul sa-ss-e!
 wow what-ACC so expensive car-ACC buy-PST-EXCL
 'Wow, what an expensive car she bought!'
 A: na-to kulehkey sayngkakhay!
 I-also so think
 'I think so!'
- (32) A: nay senmwul ettay?
 my gift how
 'How do you like my gift?'
 B: mwe-l ilehkey yeypun senmwul-ul sa-ss-e! komawe!
 what-ACC so pretty gift-ACC buy-PST-EXCL thank you
 'What a pretty gift you bought! Thank you! (≈ The gift is much prettier than I expected! Thank you!)

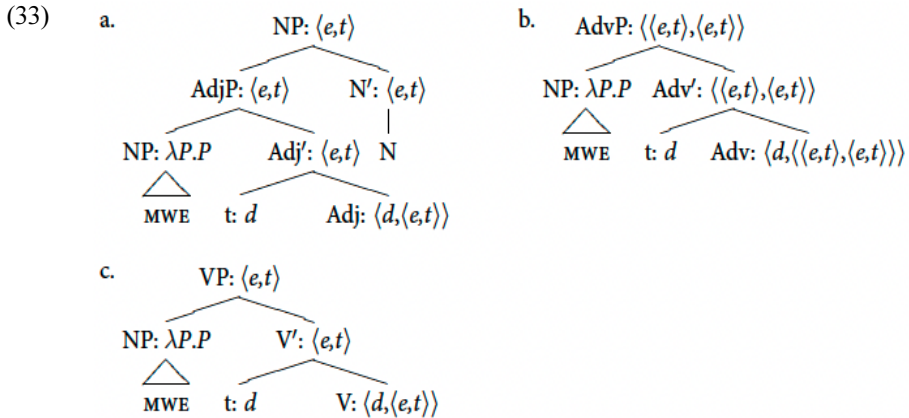
(30) and (31) illustrate that the content of the MWE-exclamative can be denied/rejected or can be referred to by the propositional anaphor *kulehkey* 'so'. (32) shows that the MWE-exclamative can be used as a response to the information-seeking question. In order to capture this assertive force of Korean *what*-exclamatives, I will propose that they involve an assertive force operator.

3. Compositional analysis

Having established the grammatical properties of Korean degree *what*-exclamatives, we are now in a good position to turn to a syntactic and semantic analysis of them.

3.1 Semantics of an exclamative *wh*-phrase

In terms of exploring the semantics of an exclamative *wh*-phrase, I assume that the exclamative *wh*-expression MWE denotes an identity function (see Rett 2011 and Castroviejo 2021 for a similar point for English exclamatives and Catalan exclamatives, respectively); gradable predicates take degrees as their argument (Heim 1985, 2000; Kennedy and McNally 2005; von Stechow 1984); and the degree adverb *{ku/i}lehkey* ‘so’, which will be analyzed as a maximality operator based on Heim (2000) and Rullmann (1995), raises at LF up to the CP domain. Based on these assumptions, the denotation of each type of exclamative *wh*-phrases is taken to be derived in a compositional manner, as illustrated in (33).



The LF-raising of *{ku/i}lehkey* leaves a trace of type *d* in each of the exclamative phrases. This degree-denoting trace is taken by the gradable predicate (adjective, adverb, or stative verb) as its degree argument. The resulting phrase then composes with MWE denoting an identity function, yielding an exclamative phrase of the same type. In the case of an exclamative NP, the AdjP combines with the head noun via Predicate Modification.

The present semantic analysis of an exclamative *wh*-phrase offers a straightforward way to account for the fact that non-gradable adjectives, like relational adjectives, cannot be used in Korean degree *what*-exclamatives, as illustrated below.

- (34) a. mwe-l kulehkey {pissan/#suphochu} kapang-ul sa-ss-e!
 what-ACC so expensive/sports bag-ACC buy-PST-EXCL
 ‘What an {expensive/sports} bag you bought!’
 b. namwu-ka mwe-l ilehkey {ssek/#cwuk}-ess-e!
 tree-NOM what-ACC so rotten/die-PST-EXCL
 ‘How {rotten/dead} the tree is!’

In both of the examples, the non-gradable, relational adjective *suphochu* ‘sports’ and the non-gradable stative verb *cwuk* ‘die’, both of which are of type <e,t>, fail to be used as the exclamand because they are unable to semantically compose with the degree argument represented by the trace of *{ku/i}lehkey*. One thing to note here is that if the adverbial expression *{ku/i}lehkey* is interpreted as *like this/that*, then the sentences could become felicitous, obtaining ‘propositional’ readings, just like English sentence exclamations: that is, (34a) would be construed as ‘You like sports bags like that!’ and (34b) as ‘The tree died like this!’

Note that the occurrence of overt gradable predicates as the exclamand is necessary in licensing Korean *what*-exclamatives with degree interpretations:

- (35) a. mwe-l kulehkey #(pissan/khun) kapang-ul sa-ss-e!
 what-ACC so expensive/big bag-ACC buy-PST-EXCL
 ‘What an (expensive/big) bag you bought!’
 b. mwe-l kulehkey #(swipkey) mwuncey-lul phwul-ess-e!
 what-ACC so easily question-ACC solve-PST-EXCL
 ‘How easily you solved the question!’

Under the present account, the lack of an overt gradable predicate makes the degree-denoting trace of *{ku/i}lehkey* unsolved, thus leading to type mismatch at later compositional stages: for example, in an exclamative NP, without an overt gradable adjective, the degree trace cannot compose with the head noun of type <e,t>.

3.2 Maximality operator *{kw/i}lehkey* ‘so’

As for English *what*-exclamatives, Rett (2011) treats *what* as a degree operator that denotes a type-flexible identity function. Consider the following step-by-step compositional derivation for the exclamative *What delicious cookies John baked!*

- (36) [what_j [[t_{j<d>} delicious cookies]_i John baked t_{i<x>}]]
- [[John baked t_{i<x>}]] = baked'(j,x)
 - [[t_{j<d>} delicious cookies]] = λx.cookies'(x) ∧ delicious'(x,d)
 - [[t_{j<d>} delicious cookies]] (λx_i.[[John baked t_{i<x>}]])
= λx.baked'(j,x) ∧ cookies'(x) ∧ delicious'(x,d)
 - [[what]] (λd_j.[[t_{j<d>} delicious cookies John baked t_{i<x>}]])
= λdλx.baked'(j,x) ∧ cookies'(x) ∧ delicious'(x,d)
 - ∃closure λd∃x[baked'(j,x) ∧ cookies'(x) ∧ delicious'(x,d)]

One of the main points here is that the trace of the degree operator *what* allows for the intersection between the gradable adjective and its head noun. Without the degree-denoting trace, such an intersection is not achieved due to type mismatch.

Unlike in English *what*-exclamatives, in Catalan *quin*-exclamatives the *wh*-word *quin* ‘what/which’ as a determiner head cannot be adjacent to a gradable adjective; the two expressions are separated by the degree quantifier *tan* ‘so’ (and the head noun), as shown in (37) (Castroviejo 2021).

- (37) [DP Quines [NP postres [DegP tan [AP delicioses]]]] que ha preparat en
 what desserts so delicious that has prepared the
 Joan!
 John
 ‘What delicious desserts John prepared.’

This apparent structural difference would make it implausible to treat *quin* as a degree operator whose trace serves as a degree argument of the gradable adjective. Therefore, Castroviejo (2021) proposes to treat the degree quantifier *tan* as a degree operator in obtaining the degree property. If Castroviejo’s analysis is on the right track, it suggests

that the treatment of an exclamative *wh*-word as a degree operator does not hold cross-linguistically.

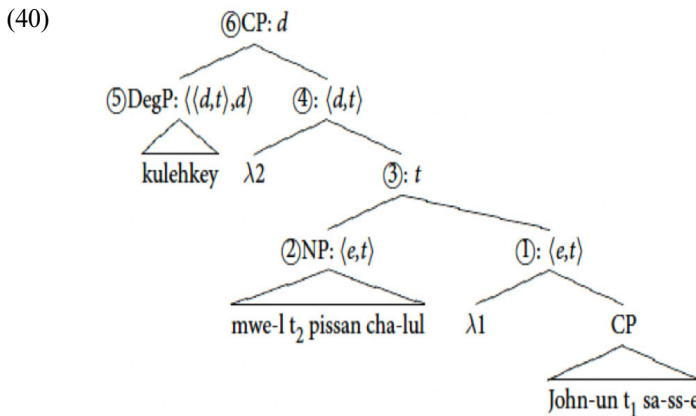
Korean degree *what*-exclamatives are superficially similar to Catalan counterparts in that the degree adverb *{ku/i}lehkey* ‘so’ intervenes between the exclamative *wh*-element MWE and a given gradable predicate. Hence, as explained above, it would be quite demanding to analyze MWE as a degree operator feeding a degree argument to the gradable predicate. Thus, as an alternative way of deriving degree interpretations, similar to Castroviejo’s idea, I propose to analyze the degree adverb *{ku/i}lehkey* ‘so’ as a maximality operator. In doing so, I follow Rullmann (1995) in claiming that the maximality operator denotes a function from a set of degrees to the maximal degree in the set, as defined in (38).

(38) Lexical entry for *{ku/i}lehkey*:

$$[[\{ku/i\}lehkey]] = \lambda D \langle d, t \rangle . \text{MAX}(D), \text{ where } \text{MAX}(D) = \text{id}[d \in D \wedge \forall d' \in D [d' \leq d]].$$

The maximality operator plays a key role in yielding maximal degree readings of Korean *what*-exclamatives. To illustrate, consider the compositional derivation in (40) for (39).

- (39) John-un [NP mwe-l kulehkey pissan cha-lul] sa-ss-e!
 John-TOP what-ACC so expensive car-ACC buy-PST-EXCL
 ‘What an expensive car John bought!’



$$\begin{aligned}
[[\textcircled{1}]] &= \lambda x . \text{bought}(x)(J) \\
[[\textcircled{2}]] &= \lambda x . \text{car}(x) \wedge \text{expensive}(d)(x) \\
[[\textcircled{3}]] &= \lambda x . \text{car}(x) \wedge \text{expensive}(d)(x) \wedge \text{bought}(x)(J) \\
&= \rightsquigarrow \exists \text{closure} \exists x[\text{car}(x) \wedge \text{expensive}(d)(x) \wedge \text{bought}(x)(J)] \\
[[\textcircled{4}]] &= \lambda d . \exists x[\text{car}(x) \wedge \text{expensive}(d)(x) \wedge \text{bought}(x)(J)] \\
[[\textcircled{5}]] &= \lambda D_{\langle d, t \rangle} . \text{MAX}(D) \\
[[\textcircled{6}]] &= \text{MAX}(\lambda d . \exists x[\text{car}(x) \wedge \text{expensive}(d)(x) \wedge \text{bought}(x)(J)]) \\
&= \text{id}[d \in \lambda d . \exists x[\text{car}(x) \wedge \text{expensive}(d)(x) \wedge \text{bought}(x)(J)] \wedge \forall d' \\
&\quad \in \lambda d . \exists x[\text{car}(x) \wedge \text{expensive}(d)(x) \wedge \text{bought}(x)(J)][d' \leq d].
\end{aligned}$$

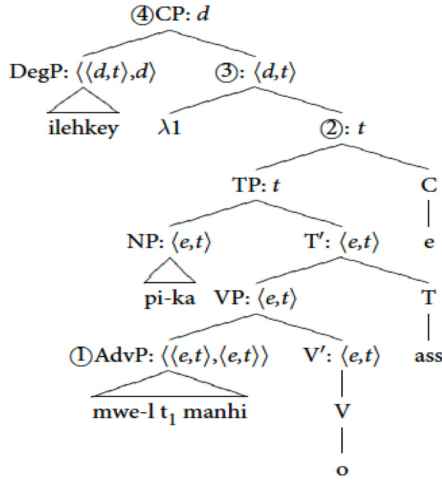
The exclamative NP (type $\langle e, t \rangle$), which functions as the direct object of the verb *sa* ‘buy’ (type $\langle e, \langle e, t \rangle \rangle$), undergoes Quantifier Raising to resolve type mismatch. The exclamative phrase then merges with the CP (type $\langle e, t \rangle$) via Predicate Modification, and the output undergoes existential closure over the individual variable (in the sense of Heim 1982), yielding the propositional denotation (see $[[\textcircled{3}]]$).³ The degree variable in the proposition denotation gets lambda-abstracted over, and then the result that denotes a degree property (type $\langle d, t \rangle$) serves as the argument of the maximality operator *kulehkey* that has undergone LF-raising. As a result, at the end of the derivation, the *mwe-l-kulehkey*-clause denotes a maximal degree d such that John bought a d -expensive car (see $[[\textcircled{6}]]$).

MWE-exclamatives containing either an exclamative AdvP or VP are derived in the same manner as follows:

- (41) pi-ka [_{AdvP} mwe-l ilehkey manhi] o-ass-e!
rain-NOM what-ACC so heavily come-PST-EXCL
‘What heavy rain it was!’

3 I take the complementizer as an identity function.

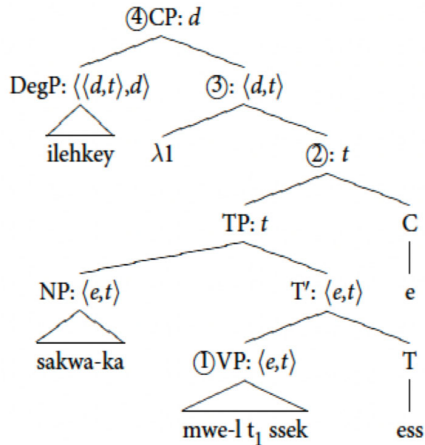
(42)



- [[①]] = $\lambda P_{\langle e, t \rangle} . \lambda x . \text{heavily}(P(x))(d)$
- [[②]] = $\lambda x . \text{rain}(x) \wedge \text{heavily}(\text{come}(x))(d)$
 $= \rightsquigarrow \exists \text{closure } \exists x[\text{rain}(x) \wedge \text{heavily}(\text{come}(x))(d)]$
- [[③]] = $\lambda d . \exists x[\text{rain}(x) \wedge \text{heavily}(\text{come}(x))(d)]$
- [[④]] = $\text{MAX}(\lambda d . \exists x[\text{rain}(x) \wedge \text{heavily}(\text{come}(x))(d)])$
 $= \text{id}[d \in \lambda d . \exists x[\text{rain}(x) \wedge \text{heavily}(\text{come}(x))(d)] \wedge \forall d'$
 $\in \lambda d . \exists x[\text{rain}(x) \wedge \text{heavily}(\text{come}(x))(d)][d' \leq d].$

(43) sakwa-ka [VP mwe-l ilehkey ssek]-ess-e!
 apple-NOM what-ACC so rotten-PST-EXCL
 ‘What a rotten apple it is!’

(44)



$$\begin{aligned}
[[\textcircled{1}]] &= \lambda x . \text{rotten}(x)(d) \\
[[\textcircled{2}]] &= \lambda x . \text{apple}(x) \wedge \text{rotten}(x)(d) \\
&= \rightsquigarrow_{\exists\text{closure}} \exists x[\text{apple}(x) \wedge \text{rotten}(x)(d)] \\
[[\textcircled{3}]] &= \lambda d . \exists x[\text{apple}(x) \wedge \text{rotten}(x)(d)] \\
[[\textcircled{4}]] &= \text{MAX}(\lambda d . \exists x[\text{apple}(x) \wedge \text{rotten}(x)(d)]) \\
&= \text{id}[d \in \lambda d . \exists x[\text{apple}(x) \wedge \text{rotten}(x)(d)] \wedge \forall d' \\
&\quad \in \lambda d . \exists x[\text{apple}(x) \wedge \text{rotten}(x)(d)][d' \leq d].
\end{aligned}$$

The *mwe-l-ilehkey*-clause in (41) yields a maximal degree d such that it rained to the degree d (see $[[\textcircled{4}]]$ in (42)), and that in (43) a maximal degree d such that the apple is rotten to the degree d (see $[[\textcircled{4}]]$ in (44)).

It is worth to point out here that the maximality operator projects an existential presupposition such that there exists a unique maximal degree in a given set of degrees. By way of example, what is presupposed in (39) is that there is a unique maximal degree d such that John bought a d -expensive car. This view would be consistent with Michaelis and Lambrecht's (1996) assumption that *wh*-exclamatives denote a presupposed open proposition with a free degree variable (i.e., John bought a d -expensive car), except that in my analysis the degree in question should be maximal. The view, on the other hand, diverges from Zanuttini and Portner's (2003) one that assumes that exclamatives are factive, that is, every proposition which has been added to the initial domain of quantification through widening is presupposed; the factivity presupposition is triggered by a factive operator *fact* in the CP domain.

The treatment of *{ku/i}lehkey* as a maximality operator gives an account of why another degree adverb *maywu* 'very' cannot be used in Korean degree *what*-exclamatives:

- (45) a. *mwe-l* *{kulehkey/*maywu}* *pissan* *cha-lul* *sa-ss-e!*
 what-ACC *so/very* *expensive* *car-ACC* *bu-PST-EXCL*
 'What an expensive car you bought!'
- b. *pi-ka* *mwe-l* *{ilehkey/*maywu}* *manhi* *o-ass-e!*
 rain-NOM *what-ACC* *so/very* *much* *come-PST-EXCL*
 'What heavy rain it was!'
- c. *sakwa-ka* *mwe-l* *{ilehkey/*maywu}* *ssek-ess-e!*
 apple-NOM *what-ACC* *so/very* *rotten-PST-EXCL*
 'What a rotten apple it is!'

In the semantics developed above, the MWE-clause must be mapped onto a maximal degree. This mapping is effected by the maximality operator $\{ku/i\}lehkey$, which takes a set of degrees and extracts the unique maximal degree in the set. Given this, the deviance of (45) can be said to follow from the semantics of the degree adverb *maywu* as a degree modifier (type $\langle\langle d,t \rangle, \langle d,t \rangle\rangle$); it takes a set of degrees and yields a more restricted set of degrees, not a unique maximal degree in the set of degrees.⁴

The analysis of $\{ku/i\}lehkey$ ‘so’ as a degree operator in Korean degree *what*-exclamatives receives further support from the fact that if a non-degree adverb like *tto* ‘again’ is used in place of $\{ku/i\}lehkey$, as in (46), the given sentence only receives a propositional interpretation, but not a degree interpretation even in the presence of MWE. That is, (46a) cannot be felicitously uttered to express the speaker’s emotional attitude towards the high degree of expensiveness of the car that the addressee bought again.

- (46) a. mwe-l tto pissan cha-lul sa-ss-e!
 what-ACC again expensive car-ACC buy-PST-EXCL
 ‘You bought an expensive car again!’
 b. sakwa-ka mwe-l tto ssek-ess-e!
 apple-NOM what-ACC again rotten-PST-EXCL:
 ‘The apple is rotten again!’

4 The same contrast is observed in sentence exclamations in English and Italian. Consider the following examples taken from Michaelis (2001: (11) and (12)):

- (i) a. ??God, it’s very hot!
 b. God, it’s so hot!
 c. ??I can’t believe it’s very hot!
 d. I can’t believe it’s so hot!
- (ii) a. Non ci posso credere che sia cosi imbecille.
 not it can.1SG believe.INF that is.SBJ.3SG so stupid
 ‘I can’t believe he’s so stupid!’
 b. *Non ci posso credere che sia molto imbecille.
 not it can.1SG believe.INF that is.SBJ.3SG very stupid
 ‘??I can’t believe he’s very stupid!’

Michaelis explains that the use of ‘anaphoric’ degree adverbs like *so* and *cosi* can be understood by assuming that an exclamative presupposes an open proposition with a scalar degree as the variable; she notes that “the use of an anaphoric degree adverb like *so* relies upon the hearer’s ability to recover the relevant scale from the context (p. 79).”

The proposed analysis attributes the unavailability of the degree reading here to the absence of the degree operator *{ku/i}lehkey*. In section 4, we will further discuss Korean *what*-exclamatives in terms of *i*-level vs. *e*-level *wh*-exclamatives proposed by Nouwen and Chernilovskaya (2015).

3.3 Assertive speech acts

As explored in Section 2.5, there is an ongoing debate in the literature about whether *wh*-exclamatives count as assertions or not. Regarding this issue, it is argued that Korean degree *what*-exclamatives express assertive speech acts in that, as we have already seen, their content can be denied/rejected or can be referred to by the propositional anaphor *kulehkey* ‘so’, and they can be used as responses to information-seeking questions. The relevant examples are repeated below in (47).

- (47) A: mwe-l ilehkey pissan senmwul-ul sa-ss-e!
 what-ACC so expensive gift-ACC buy-PST-EXCL
 ‘What an expensive gift you bought!’
 B: ani. pyello an pissa.
 not much not expensive
 ‘No. It’s not that expensive.’
- (48) A: Mimi-ka ecey Lampolukini-lul sa-ss-tay.
 Mimi-NOM yesterday Lamborghini-ACC buy-PST-DECL
 ‘(I heard that) Mimi bought a Lamborghini yesterday.’
 B: wa, mwe-l kulehkey pissan cha-lul sa-ss-e!
 wow what-ACC so expensive car-ACC buy-PST-EXCL
 ‘Wow, what an expensive car she bought!’
 A: na-to kulehkey sayngkakhay!
 I-also so think
 ‘I think so!’
- (49) A: nay senmwul ettay?
 my gift how
 ‘How do you like my gift?’
 B: mwe-l ilehkey yeypun senmwul-ul sa-ss-e! komawe!

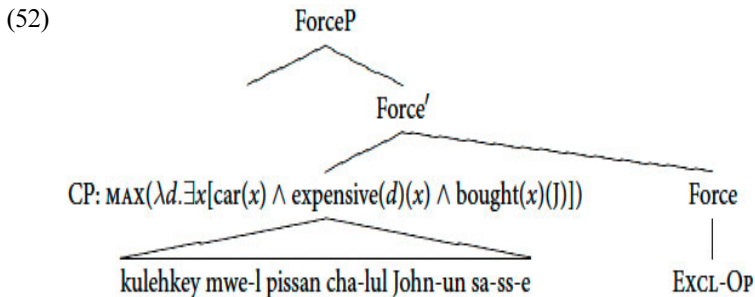
what-ACC so pretty gift-ACC buy-PST-EXCL thank you
 ‘What a pretty gift you bought! Thank you! (≈ The gift is much prettier than I expected! Thank you!’)

In order to capture the assertive force of Korean *what*-exclamatives, I propose that they involve an assertive force operator, Excl-Op, in the Force head that takes the CP as its complement. The operator is defined in (50).

(50) EXCL-Op(*d*) counts as an assertion that $d \geq s$, where *s* refers to a contextually provided standard established by the speaker’s expectation.

The assertive operator takes the maximal degree denoted by the MWE-clause and returns an assertion that the maximal degree is greater than (or equal to) a standard established by the speaker’s expectation. On this view, the *what*-exclamative in (51) with the LF structure in (52) is interpreted as expressing an assertion that the maximal degree *d* such that John bought a *d*-expensive car runs counter to the speaker’s expectation.⁵

(51) John-un mwe-l kulehkey pissan cha-lul sa-ss-e!
 John-TOP what-ACC so expensive car-ACC buy-PST-EXCL
 ‘What an expensive car John bought!’



In (47), with the negative particle *ani* ‘no’, the speaker B negates A’s assertion, asserting that the maximal degree of expensiveness of the gift in question does not exceed

5 The speaker’s expectations could follow common-ground norms or socially-accepted standards, or they could be ones reflecting his/her personal assessment (Gutiérrez-Rexach 2008).

A's expectation, meaning that the gift is not that expensive. In (49), the speaker B's assertion—that the maximal degree of prettiness of the gift in question surpasses her expectations—is taken to mean that the gift is extremely pretty, expressing her gratitude to the speaker A.

As noted before, Korean degree *what*-exclamatives, as with their counterparts in other languages, express a sense of surprise or amazement on the part of the speaker. This emotional attitude can be accounted for by the present analysis. The assertive content ($d \geq s$) yielded by EXCL-Op entails a violation of the speaker's expectation, since the contextually determined standard is consistent with the speaker's expectations. The speaker unexpectedness then naturally gives rise to a sense of surprise, amazement or awe (Zanuttini and Portner 2003).

3.4 The speaker's evaluation of $d \geq s$

Another remarkable property of Korean degree *what*-exclamatives is that depending on the context, the assertive content ($d \geq s$) obtained by EXCL-Op can be evaluated by the speaker as positive/good or negative/bad. To illustrate this, let us consider (53).

- (53) [Context 1: I didn't expect that my parents gave me a very expensive gift for my birthday.]
 [Context 2: I wanted my son to buy a cheap gift, but he bought a very expensive gift.]
 Me: mwe-l ilehkey pissan senmwul-ul sa-ss-e!
 what-ACC so expensive gift-ACC buy-PST-EXCL
 'What an expensive gift you bought!'

The assertive content of the exclamative—that the maximal degree of expensiveness of the gift in question exceeds the standard established by the speaker's expectations—is evaluated as positive in Context 1; the speaker feels very happy to receive the very expensive gift. The same assertive content, on the other hand, is judged negatively by the speaker in Context 2; the speaker thinks that the gift is too expensive; that is, the actual price of the gift should not have surpassed his threshold.

Notice that the speaker's evaluative attitude towards the assertive content ($d \geq s$) may

not arise if the *wh*-expression MWE is absent. Observe the following case:

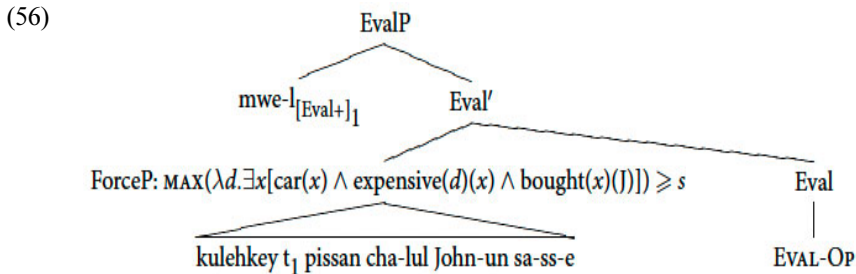
- (54) *kulehkey pissan senmwul-ul sa-ss-e!*
 so expensive gift-ACC buy-PST-EXCL
 ‘You bought such an expensive gift!’

By uttering (54), the speaker just expresses his/her surprise at the high price of the gift, but does not judge whether the price is too expensive or not. As noted before, this would suggest that the non-standard *wh*-phrase MWE may contribute to expressing evaluative attitudes of the speaker, rather than providing a degree argument as a degree operator to the gradable predicate.

In order to account for how such evaluative attitudes are derived, I suggest that Korean degree *what*-exclamatives involve an evaluative operator, EVAL-Op, which maps propositions onto evaluative attitudes on the part of the speaker, as defined (53).

- (55) $\text{EVAL-Op}(p) = \text{The speaker evaluates } p \text{ as } E, \text{ where } E \in \{\text{positive/good, negative/bad}\}.$

As represented in the tree structure in (56), the EVAL-Op is assumed to head the EvalP, configured higher than ForceP.



The assertive content (*p*) expressed by the assertive force operator is fed to the EVAL-Op to yield the speaker’s evaluative attitude about the *p*. As can be seen from the LF structure above, MWE is assumed to be endowed with an evaluative feature [Eval +] and undergo covert movement to Spec-EvalP to activate the evaluative operator by feature

checking.⁶ This assumption gives an account of why exclamation like (54) do not express the speaker's evaluative attitude: since there is no *wh*-expression with [Eval+], the evaluative operator cannot be active.⁷

4. Two types of Korean *what*-exclamatives

Nouwen and Chernilovskaya (2015) basically argue in favor of Rett's (2011) claim that *wh*-exclamatives are inherently scalar. However, their view diverges from Rett's by proposing that *wh*-exclamatives can receive two different scalar interpretations depending on the type of scalarity, namely *i*-level and *e*-level interpretations, described in (57).⁸

- (57) a. ***i*-level interpretation:** an exclamative attitude towards the *wh*-referent. We will call this *i*-level exclamation: the expressive attitude targets the individual singled out by the *wh*-phrase.
- b. ***e*-level interpretation:** an exclamative attitude towards the event the *wh*-referent is said to take part in. We will call this *e*-level exclamation: the expressive attitude targets the event rather than the *wh*-referent.
- (Nouwen and Chernilovskaya 2015: 209)

Based on this semantic distinction, Nouwen and Chernilovskaya propose to classify *wh*-exclamatives into two types, defined in (58) (Nouwen and Chernilovskaya 2015: 212).

6 I assume that the *wh*-expression in Spec-EvalP obligatorily reconstructs to its original position for interpretation.

7 Another discussion on evaluative 'what' has been made by Felser and Britain (2007) for so-called *what with* absolutes like that in (i). Alongside their 'reason' interpretation, they express an evaluation on the part of the speaker. For example, the absolute in (i) is interpreted as being pragmatically negative. According to Felser and Britain's view, such speaker evaluation is constituted by the non-argumental *what* as an evaluative operator occupying in the Spec of EvalP.

(i) When Stephen came to see us, Alan was near breaking-point, what with my drinking and the debts and everything. (Felser and Britain 2007: (12a))

(ii) [EvalP what [Eval Ø [CP [C with [TP ...]]]]]

I refer the reader to Felser and Britain (2007) for detailed discussion on *what with* absolutes from a Minimalist perspective.

8 Nouwen and Chernilovskaya (2015) restrict their interest in only matrix *wh*-exclamatives.

(58) Type 1: *wh*-exclamatives that are scalar in the *i*-level sense

Type 2: *wh*-exclamatives that are scalar in the *e*-level sense

Both *i*-level and *e*-level interpretations are based on the notion of scalarity, but the two differ in terms of the type of scalarity involved. As to *i*-level interpretations, the individual described by an exclamative *wh*-phrase is linked to scalarity: it is placed at an extreme/high point on a scale associated with a gradable predicate. Nouwen and Chernilovskaya note that English employs only Type 1 *wh*-exclamatives that receive *i*-level interpretations. As to *e*-level interpretations, the event in which the *wh*-referent is involved is associated with scalarity: it compares with alternative events on a scale of noteworthiness or surprise on the part of the speaker. They note that languages that allow Type 2 *wh*-exclamatives are those like Dutch, German, Turkish, Russian, and Hungarian. For the sake of illustration, let us consider Dutch, which allows *who*-, *which*-, and *where*-exclamatives with *e*-level exclamation, exemplified in (59) (taken from Nouwen and Chernilovskaya 2015: 203).

- (59) a. Wie ik gisteren tegenkwam!
 Who I yesterday came-across
 (roughly) ‘You wouldn’t believe who I met yesterday!’
- b. Welk boek hij nu aan het lezen is!
 Which book he now on it read is
 (roughly) ‘You wouldn’t believe which book he’s reading now!’
- c. Waar hij op vakantie gaat!
 Where he on holiday goes
 (roughly) ‘You wouldn’t believe where he goes on holiday to!’

The *who*-exclamative in (59a) is felicitously uttered in a scenario in which the speaker is surprised at the unexpected event of his/her encountering the person yesterday, but not in a scenario in which the speaker is surprised at an extreme degree to which the person in question instantiates some gradable predicate (e.g., tall). The same can be said for the *which*- and *where*-exclamatives above.

Building on Nouwen and Chernilovskaya’s ideas, I argue that Korean is another language that employs both *i*-level and *e*-level *wh*-exclamatives: specifically, exclamatives involving *{ku/i}lehkey* ‘so’ involve *i*-level exclamation, while those involving a

non-degree expression like *tto* ‘again’ or *pelsse* ‘already’ involve *e*-level exclamation. To illustrate this, consider the following examples:

- (60) a. *mwe-l kulehkey kin nonmwun-ul se-ss-e!* (*i*-level exclamation)
 what-ACC so long paper-ACC write-PST-EXCL
 ‘What a long paper you wrote!’
- b. *mwe-l {tto/pelsse} kin nonmwun-ul se-ss-e!* (*e*-level exclamation)
 what-ACC again/already long paper-ACC write-PST-EXCL
 ‘You wrote a long paper again/already!’

The *mwe-l-kulehkey*-exclamative in (60a) expresses the exclamative attitude towards the *wh*-referent; it is uttered in a context in which the speaker is surprised at the paper that instantiates length to a degree higher than the standard established by the speaker’s expectation. One thing to note here is that if the expression *{ku/i}lehkey* is interpreted as *like this/that*, the given exclamative can only receive an *e*-level interpretation. That is, the speaker expresses his/her surprise at the unexpected past event of John’s writing a long paper. On the other hand, the *mwe-l-tto*-exclamative in (60b) expresses the exclamative attitude that targets the unexpected event of the addressee’s writing a long paper again. In this sense, I take expressions like *tto* ‘again’, *pelsse* ‘already’, and *{ku/i}lehkey* ‘like that/this’ to signal the speaker’s unexpectedness towards an event or state of affairs expressed by the proposition. The *e*-level exclamation of (60b) is supported by the fact that it can be naturally followed by a clarifying sentence like *I’d guessed that you would not write a long paper again* (non-scalar expectation), but not by a sentence like *I’d guessed that you would write a long paper again, but not this long!* (scalar expectation). The same reasoning also applies to the *mwe-l-pelsse*-exclamative in (60b).

As mentioned in the previous section, in *i*-level MWE-exclamatives the presence of an overt gradable predicate, along with *{ku/i}lehkey* ‘so’, is necessary. For example, (61) cannot have a degree interpretation due to the non-gradable adjective *cenki* ‘electric’.

- (61) *#mwe-l kulehkey cenki cha-lul sa-ss-e!*
 what-ACC so electric car-ACC buy-PST-EXCL
 ‘(Int.) What an electric car you bought!’

This gradability restriction, however, is not imposed on *e*-level MWE-exclamatives:

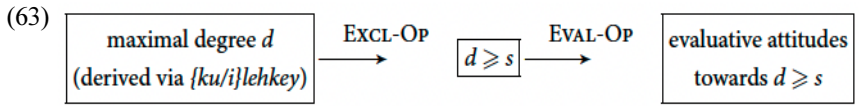
- (62) a. *mwe-l tto cenki cha-ul sa-ss-e!*
 what-ACC again electric car-ACC buy-PST-EXCL
 ‘You bought an electric car again!’
- b. *John-un mwe-l tto/pelsse hankwuk-ey ka-ss-e!*
 John-TOP what-ACC again/already South.Korea-to go-PST-EXCL
 ‘John went to South Korea again/already!’

Both of the exclamatives in (62) are well-formed even though they contain no gradable predicates as their exclamand. The contrast between (61) and (62) further weigh heavily in favor of the view that exclamatives like *mwe-l tto/pelsse*-exclamatives involve *e*-level exclamation: since the exclamative attitude targets the event itself, a certain degree property of the *wh*-referent is not a crucial semantic component in their interpretation.

The observations we have made so far allow us to reasonably assume that *e*-level exclamatives like *mwe-l tto/pelsse*-exclamatives denote propositions rather than maximal degrees. This assumption is reinforced by the fact that they can only be associated with non-scalar expectations, just like English sentence exclamations. A further detailed investigation and appropriate analysis of *e*-level *what*-exclamatives in Korean are needed to achieve a precise characterization of them. I leave them for future research.

5. Conclusion

This study has proposed to treat MWE-*{ku/i}lehkey* clauses as degree *what*-exclamatives in Korean and tried to provide a syntactically and semantically precise characterization of them. In particular, as an attempt to analyze them from a compositional perspective, this study has suggested the step-by-step semantic derivation sketched in (63).



The maximal degree (*d*) denoted by the MWE-clause feeds the assertive force operator (EXCL-Op), resulting in an assertion that the maximal degree is greater than (or equal to) the standard established by the speaker’s expectation. Then, the evaluative operator

(EVAL-Op) takes the assertive content and returns the speaker's evaluative attitude towards it, with the help of evaluative MWE.

If the analysis advocated here is on the right track, it could have some cross-linguistic implications for the analysis of *what*-exclamatives. We have seen that in Korean *what*-exclamatives, the exclamative *wh*-expression MWE, unlike its English counterpart, does not function as a degree operator in deriving their degree interpretations; instead, the degree adverb *{ku/i}lehkey* 'so' does such a job as a maximality operator. From a cross-linguistic perspective, this view is consistent with Castroviejo's (2021) view that in Catalan *quin*-exclamatives, the degree quantifier *tan* 'so', but not the determiner *quin* 'what/which', makes a significant contribution to obtaining their degree properties. Another implication this study suggests is that the brief discussion of the two types of Korean *what*-exclamatives, namely MWE-*{ku/i}lehkey*-exclamatives and MWE-*tto/pelsse*-exclamatives, would have provided cross-linguistic support for Nouwen and Chernilovskaya's (2015) claim that *wh*-exclamatives can be divided into *i*-level and *e*-level *wh*-exclamatives. Needless to say, further detailed discussion is necessary to support and enhance the claim for the two types of *what*-exclamatives in Korean.

I hope that this study has helped to develop our current understanding of cross-linguistic variation in *what*-exclamatives and to fill in a gap in the description of Korean *wh*-exclamatives.

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Okgi Kim

Academic Research Professor
Institute for the Study of Language and Information
Kyung Hee University
26, Kyungheedaero, Dongdaemun-gu,
Seoul, 02447 Korea
E-mail: okgikim@khu.ac.kr

Received: 2023. 12. 13.

Revised: 2024. 02. 15.

Accepted: 2024. 02. 16.