

On the semantics of multiple wh-exclamatives in Bangla

Kousani Banerjee*

The English and Foreign Languages University, Hyderabad

kousaniphdlandp19@efluniversity.ac.in

banerjee.kousani17@gmail.com

Israel Association for Theoretical Linguistics, Hebrew University of Jerusalem

October 19, 2022

*Thanks to Dr. Utpal Lahiri, Prof. Rajesh Bhatt for their helpful comments and insights. I also extend my thanks to Dr. Arka Banerjee for judgements with Bangla data, discussions and feedback.

Understanding exclamatives

Putting it simply, utterances that express the speaker's surprise are known as exclamatives. The uniqueness of this clause type was first pointed out by Elliott (1974), and soon it became a pursuit among others, such as Grimshaw (1979); Zanuttini & Portner (2003); Miró (2006); Rett (2008a) *etc.*

Elliott's understanding on exclamatives include sentences of the form (1a-c), and identified them as *absolute-exclamations*.

- (1) (Elliott, 1974)
 - a. *She is such an attractive woman!*
 - b. *What an attractive woman she is!*
 - c. *How beautiful these flowers are!*

However, recent studies on exclamatives distinguish structures like (1a) from (1b,c). While the former is termed as *exclamations*, the latter formations that include overt wh-words are classified as *exclamatives* (Rett, 2008a,b, 2011).

The focus of this paper entirely lies on exclamative structures in reference to an understudied IA language, Bangla.

Wh-exclamatives across languages

While English strictly uses wh-words like ‘what’ and ‘how’ in its exclamative structure as in (2a, b), languages like Bangla (Banerjee, To appear), Telugu and Kannada (Balusu, 2019), Turkish, German, Hungarian, Russian, Dutch (Nouwen & Chernilovskaya, 2015) are flexible. These languages use a variety of wh-words such as ‘where’, ‘whom’, ‘how-manner’, ‘who(singular/plural)’ along with ‘what’ and ‘how’ in expressing surprise.

- (2) a. *What a book Misha wrote!*
b. *How tall Misha is!*

Due to this, Bangla and the other languages express a variety in exclamative readings *i.e.*, they exhibit both *gradable* or *degree* (Miró, 2006; Rett, 2008a,b, 2011) and *non-gradable* or *non-degree* readings.

Strictly adhering to the newer classifications in Nouwen & Chernilovskaya (2015), Bangla (and the other languages) qualify for both Type 1 or *degree* and Type 2 or *non-degree* readings.

Degree vs Non-Degree readings of exclamatives

If we follow [Miró \(2006\)](#) and [Rett \(2008a,b, 2011\)](#) in forming exclamative readings, a sentence like (2a) (*What a book Misha wrote!*) will only denote speaker's surprise in a context where Misha wrote a beautiful book.

Hence, analyzing (2a) in [Rett's](#) framework allows us to view exclamatives as having a degree denoting property.

However, cross-linguistic evidence proves that uttering (2a) can also express surprise in a context where the event of Misha writing a book itself is surprising to the speaker.

Both degree and non-degree readings of exclamatives are evident in Bangla.

All the wh-words in Bangla start with a *k*-morpheme, hence we resort to the term k-exclamatives while referring to Bangla wh-exclamatives.

We have the following set of *k*-words that constitute the Bangla exclamative structures (cf. [Guha & Bhattacharya, 2020](#); [Banerjee & Banerjee, 2022](#)):

In Type 1	In Type 1/2
<i>ki</i> ‘what’ <i>koto</i> ‘how’	<i>ki</i> ‘what’ <i>kibhabe</i> ‘how-manner’ <i>kothae</i> ‘where’ <i>kake/ kader</i> ‘whom’ (Singular/ Plural)

Table 1: *k*-words in Bangla matrix exclamatives

Type 1 and Type 2 k-exclamatives

- (3) *Context: The speaker saw a perfume, and is surprised at its price.*

Perfumetar ki/koto dam!
perfume.CL.GEN what/how cost

Int: 'How expensive the perfume is!'

- (4) *Context: The speaker knew Misha has hill sickness and is surprised to know that Misha went for a trek in the Himalayan region.*

Misha kothay gache!
misha where go.PRF.PRS.3
*'Where Misha went!'

Utterances like (3) have a gradable interpretation where the price of the perfume was higher to a degree *d*, and the speaker is surprised at it.

Contrastingly, in (4) the surprise of the speaker lies in the event that Misha went for a trek in the Himalayan region. Therefore, in such context (4) doesn't have a degree or gradable interpretation.

However, (4) may have a degree denotation in a different context where the speaker is adding some attribute to the Himalayan region being beautiful or dangerous *etc.*

Which approach to adopt?

Since Bangla exhibits both degree and non-degree readings, [Rett](#)'s degree-based approach for exclamatives cannot capture the non-degree readings.

The degree-based approach also rejects the idea that a manner reading is possible in exclamatives. Bangla data shows otherwise (5).

- (5) *Context: Misha is walking backwards, and the speaker is surprised at the manner of her walk.*

Misha kibhabe hantche!
misha how.manner walk.PROG.PRS.3
'How*_{manner} Misha is walking!'

As an alternative resort would be to adopt the widening approach ([Zanuttini & Portner, 2003](#)).

Revisiting Zanuttini & Portner (2003)

Zanuttini & Portner (2003) view wh-exclamatives as inherently scalar and their take on the wh-exclamatives includes viewing them as having question-based semantics *i.e.*, wh-exclamatives contain a wh-operator and hence denote a set of alternative propositions (alike wh-questions) and their propositional content is presupposed.

In deriving the basic idea of exclamatives they encode a fundamental concept (based on the pragmatic reasoning of *force*) called WIDENING. It is claimed to be a sentential force for wh-exclamatives. They assert that exclamatives widen the domain of quantification for the wh-operator.

The theory states what follows (Zanuttini & Portner, 2003):

For any clause S containing R_{widening} widen the initial domain of quantification from D_1 to a new domain D_2 such that:

- $\llbracket S \rrbracket_{w, D_2} < - \llbracket S \rrbracket_{w, D_1} < \neq 0$
- $\forall x \forall y [(x \in D_1 \ \& \ y \in (D_2 - D_1)) \rightarrow x < y]$ ($<$ represents ordering relation).

For any clause S containing R_{activity} :

- Every $p \in \llbracket S \rrbracket_{w, D_2} < - \llbracket S \rrbracket_{w, D_1} <$ is presupposed to be true.

Difficulty in applying the Zanuttini & Portner (2003) approach

As pointed out in Balusu (2019) the first problem we run into while adopting the existing widening approach is that, the Zanuttini & Portner account is based on Karttunen's (1977) set of true answers. Due to this, the domain 1 or D_1 cannot undergo widening with respect to data like (6).

- (6) *Context: The speaker is surprised at the event that Rishi married Kavya, as he knew Rishi liked Misha.*

Rishi kake biye koreche!
rishi whom marry do.PRF.PRS.3
‘*Whom Rishi married!’

Suppose the alternatives denoted by *kake* ‘whom’ w.r.t. (6) are {Kavya, Ruhi, Misha} and the true answer is {Kavya} then,

$$\llbracket (6) \rrbracket_{w, D_1} = \{\text{Rishi married Kavya}\} \quad \llbracket (6) \rrbracket_{w, D_2} = ???$$

Since the initial domain already has the true answer widening from D_1 to D_2 collapses.

Difficulty in applying the Zanuttini & Portner (2003) approach

A second problem occurs while we try to formulate an ordering scale for k -words like *kake* ‘whom’, *kothae* ‘where’ that are particularly non-scalar.

For example; in a context where people are talking about hot peppers and Rayan says he eats the spiciest one, uttering *what things Rayan eats!* would give us a set of peppers in increasing order of spiciness for D_1 . Then R_{widening} would expand D_1 to D_2 based on the increasing order of spicy peppers, which will then include the spiciest pepper Rayan has.

However, in a scenario like (6), where we are not adding any degree/scalar attribute to Kavya being tall or short, ugly or beautiful arriving at the initial domain of D_1 gets complicated.

In such situations, the question arises is that based on what scale shall we arrange the alternatives in D_1 ?

Modifications to the existing theory (Balusu, 2019)

To resolve these two problems we lay our claim on Balusu's (2019) modification to the widening approach.

For the first problem he suggested that instead of following Karttunen alternatives (*i.e.*, denotation of a question as set of *true* answers) if we follow Hamblin alternatives (*i.e.*, questions denote set of *possible* answers), the widening account works uniformly for all readings of exclamative clauses.

Working out on the second problem he used the notion of *Expectation Set* (ES) (cf. Rett, 2011; Rett & Murray, 2013) *i.e.*, speaker's expectations are encoded as sets of possible worlds.

Earlier the $\llbracket S \rrbracket_{w, D_2 \prec}$ had set of true propositions of the form let's say 'Rayan eats x ' (for the spiciness example) where the value of x is drawn from the widened domain D_2 and $\llbracket S \rrbracket_{w, D_1 \prec}$ was the corresponding set for the old domain D_1 .

In the modified version, the widening doesn't act upon the set of alternatives generated by the wh-operator rather it widens the entire wh-clause. Now we can do the ordering of the alternatives. For Type 2 readings the alternatives are ordered in a likelihood scale as in, for an example like (6) 'Rishi married Misha' is more likely than 'Rishi married Kavya'. For Type 1 exclamatives the alternatives are ordered in a standard gradability or degree scale.

Reformulating R_{widening} (Balusu, 2019)

With all the new modifications the WIDENING looks like the following (Balusu, 2019):

For any clause S containing exclamative flavor widen the initial domain ES to a new domain D_2 such that:

- $\llbracket S \rrbracket_{w, D_2} \prec_{\text{likelihood/degree}} \llbracket S \rrbracket_{w, D_{ES}} \prec_{\text{likelihood/degree}} \neq 0$
- $\forall x \forall y [(x \in D_{ES} \ \& \ y \in (D_2 - D_{ES})) \rightarrow x \prec_{\text{likelihood/degree}} y]$ and;
- Some $p \in \llbracket S \rrbracket_{w, D_2} \prec_{\text{likelihood/degree}} \llbracket S \rrbracket_{w, D_{ES}} \prec_{\text{likelihood/degree}}$ is presupposed to be true.

We argue in favour of having an exclamative operator that triggers the domain widening. We will eventually build up and explain this operator later in this paper compositionally.

A quick view on $ES_{\text{SPKR}/\text{NORM}}$ (Balusu, 2019)

The concept of $ES_{\text{SPKR}/\text{NORM}}$ suggests that not every exclamative expresses surprise. An expression like the one in (7) represents that the curry is on the higher scale on being hot but does not quite exceed the speaker's expectations (maybe because in a restaurant it is supposed to be served hot). In such cases where the expression is not denoting a surprise the ES is based on a normative set *i.e.*, ES_{NORM} .

(7) *It is not surprising, how very hot the curry is!* (Balusu, 2019)

Similarly, consider the sentence in (8).

(8) *Context: Ruhi is eating wasp crackers, and the speaker is surprised at it.*

Ruhi ki khacche!

ruhi what eat.PROG.PRS.3

'What Ruhi is eating!'

Eating wasp crackers is completely normal in many cultures and countries however, the speaker who is not aware of it may find it surprising. Hence, the *Expectation Set* that purely denotes the speaker's surprise are based on that of the speaker's *i.e.*, ES_{SPKR} .

Multiple k-exclamatives

Entering into the main issue of this paper, the range of k-words used in Bangla exclamative structure allows it to be flexibly merged with each other in forming multiple wh-exclamatives.

Let us consider the following formations:

(9) *kon loke kothae*
which people where
gache!
go.PRF.PRS.3
Lit: 'Who went where!'

(10) *kara kader biye*
who.PL whom.PL marriage
koreche!
do.PRF.PRS.3
Lit: 'Who(pl) married whom(pl)!'

(9) can be uttered to express surprise at an event where a miserly person visited an expensive place. In a context where the speaker expresses surprise at the couples who were never meant to be together, (s)he can utter (10).

From the context and the use of the exclamatives in (9) and (10), it is evident that both convey a type 2 reading of exclamatives.

Multiple k-exclamatives

(11) *koto loke koto*
how many people how much
khawar khacche!
food eat.PROG.PRS.3
Lit: 'How much food how many
people are eating!'

(12) *ki baje ekta bari koto*
what bad one house how much
daam-e bikocche!
price-at sell.PROG.PRS.3
Lit: 'What a bad house is being
sold at how much price!'

(11) can be used to express surprise in a situation where a large number of people have a large quantity of food. And lastly, (12) is uttered in a context where a bad property is being sold at a (relatively) higher price, and hence the speaker is surprised at that.

(11) and (12) here expresses surprise at a degree, hence these are identified as type 1 instances of k-exclamatives.

Analyzing multiple k-exclamatives

It has already been mentioned earlier, that we will adopt question-based semantics for multiple wh-exclamatives in Bangla (Banerjee, To appear) *i.e.*, wh-exclamatives can be thought of as sets of alternative propositions.

As we are adopting Hamblin alternatives instead of Karttunen (1977)'s, we must argue in favour of an answerhood operator that will act on the set of possible answers picking out the true answer(s), and the speaker is surprised at it/them.

I also propose a clause-type operator for exclamatives, which will be liable for the exclamative semantics.

Building up the answerhood operator

Assume that (10) (*kara kader bie koreche!* ‘*Who(pl) married whom(pl)’) is uttered in a context where Ravi-Sima, Rishi-Krishna, and Suman-Kiara are couples, and the speaker is only surprised at Ravi-Sima and Suman-Kiara being a couple, but not at Rishi-Krishna.

Considering a monogamous society, we cannot deal with non-atomic individuals in the line of Dayal (1996, 2016) despite the plural wh-word, *kara* ‘whom(pl)’ being used. Thus We are bound to get only one-one pairings in such a context.

Thus, relative to the set {Ravi, Rishi, Suman, Uma, Sima, Krishna, Maya, Jahnvi, Kiara}, the widened set of answers for example will be like {Ravi married Uma, Rishi Married Krishna, Suman married Jahnvi, **Ravi married Sima, Rishi married Maya, Suman married Kiara**}, where the bold-faced propositions are not in the ES_{SPKR} .

In this case we cannot follow Dayal’s (2016) *cumulativity constraint-1* which states that a list of answers of the form a_1Rb_1, \dots, a_nRb_n to a question Q is acceptable at a world w iff $a_1 + \dots + a_nRb_1 + \dots + b_n = \text{Ans-D/Max}_{\text{inf}}(Q)(w)$.

Building up the answerhood operator

At this point, we will adopt Kotek's (2018) generalized ANS which acts recursively as in what is stated below:

(13) (Kotek, 2018, pp. 38)

A recursive definition for generalized ANS

- a. $\llbracket \text{ANS} \rrbracket (P_{\langle st, t \rangle}) = \lambda w. \text{Max}_{\text{inf}}(P)(w)$
where $\text{Max}_{\text{inf}}(P)(w) = ip \in P$, such that $w \in p$ and
 $\forall q \in P (w \in q \rightarrow p \subseteq q)$
- b. $\llbracket \text{ANS} \rrbracket (K_{\langle \sigma, t \rangle}) = \lambda w. \bigcap P_{\sigma} \in K(\llbracket \text{ANS} \rrbracket (P)(w))$
[i.e., $\lambda w. \lambda w'. \forall P_{\sigma} \in K(\llbracket \text{ANS} \rrbracket (P)(w)(w'))$]
($\sigma \in \{\langle st, t \rangle, \langle \langle st, t \rangle, t \rangle, \dots\}$)

Building up the answerhood operator

To extract the maximally informative true answers, the recursively defined generalized ANS can now act on the pair-list widened set introduced in the case of (10) that can be represented in the following way, in which a bigger set consists of three sets of answers.

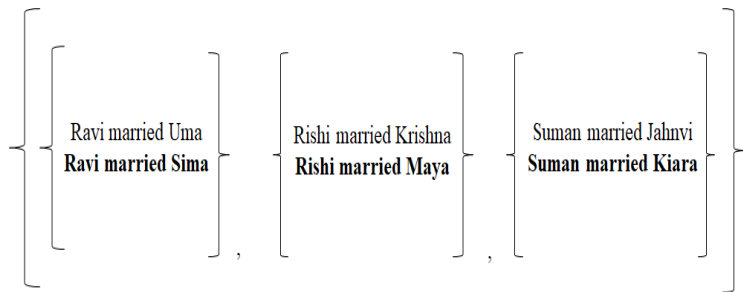


Figure 1: Pair-list answers

Since I am using the pair-list answers like Figure 1, Kotek's **ALTSHIFT (AS)** operator needs to be introduced in the syntax. This **AS** converts the focus value of the set, as in Figure 1, into its ordinary value. It is the type-flexible version of the **Q** operator (see Beck, 2006; Beck & Kim, 2006, for **Q**). The semantics of it is stated below:

(14) (Kotek, 2018, pp. 32)

*The semantics of the **ALTSHIFT (AS)** operator*

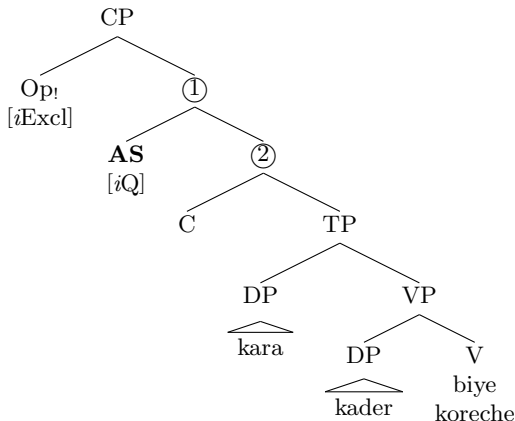
- a. $\llbracket \text{ALTSHIFT } \alpha_\sigma \rrbracket^o = \llbracket \alpha \rrbracket^f$
- b. $\llbracket \text{ALTSHIFT } \alpha_\sigma \rrbracket^f = \{ \llbracket \text{ALTSHIFT } \alpha_\sigma \rrbracket^o \}$ ($\sigma \in \{ \langle \text{st}, \text{t} \rangle, \langle \langle \text{st}, \text{t} \rangle, \text{t} \rangle, \dots \}$)

But, in Kotek's system, **AS** is not the complementizer. Rather, it is the question operator on the clausal spine which is responsible for the interrogative semantics. The complementizer **C** remains semantically vacuous in her system.

Building up the semantics

Keeping these mechanisms at hand, we can now propose the following LF for (10):

(15)



Bangla being a *wh in-situ* language does not need to have *wh*-movements in a Hamblin-semantic framework (à la Shimoyama, 2001; Kratzer & Shimoyama, 2002). The semantic derivations up till node ① will be as in what follows:

- (16)
- a. $\llbracket \text{kader} \rrbracket^f = \{y : \text{person}(y)\}$; $\llbracket \text{kader} \rrbracket^o = \text{undefined}$
 - b. $\llbracket \text{VP} \rrbracket^f = \{\lambda x \lambda w. \text{married}_w(x, y) : \text{person}(y)\}$ (via PFA)
 - c. $\llbracket \text{kara} \rrbracket^f = \{x : \text{person}(x)\}$; $\llbracket \text{kara} \rrbracket^o = \text{undefined}$
 - d. $\llbracket \text{TP} \rrbracket^f = \{\lambda w. \text{married}_w(x, y) : \text{person}(x) \wedge \text{person}(y)\}$ (via PFA)
 - e. $\llbracket \text{AS TP} \rrbracket^o = \llbracket \text{TP} \rrbracket^f$; $\llbracket \text{AS IP} \rrbracket^f = \{\llbracket \text{AS TP} \rrbracket^o\}$
 - f. $\llbracket \text{①} \rrbracket^o = \{\lambda w. \text{married}_w(x, y) : \text{person}(x) \wedge \text{person}(y)\}$

Semantics of exclamatives

Now, it is our turn to propose the semantics of the exclamative operator, $Op!$.

It is clear from our defined context in (10) that the speaker is not surprised at all the true answers, but rather at a subset of all true answers. Thus, introducing the generalized ANS to the semantics of $Op!$ directly cannot help us in this regard because it will over-generalize things.

To restrict the over-generalization of the $Op!$, we must set down some pragmatic constraints. Whatever kind of this pragmatic constraint is, it definitely reminds us of Grice's (1975) maxim of quantity which suggests not contributing more informative things than is needed in a context.

I argue that the over-generating nature of the Max_{inf} operator must be curbed by some restriction on informativity relative to the need of the current discourse topic.

Here we will follow Roberts (2010) in viewing the discourse topic as Question Under Discussion (QUD). QUD is a semantic question corresponding to the current discourse topic (Roberts, 1996/2012; Simons et al., 2010). QUDs can be overt questions or they remain implicit in discourse. A QUD can be addressed by complete or partial answers or by another question which entails the complete or partial answer to it.

I propose that while dealing with exclamative clauses, there will always be an implicit QUD, *i.e.*, QUD_{Excl} which is defined as the following:

(17) QUD_{Excl} : What surpasses the norm or speaker's expectation?

I argue that only that maximally informative true answer will be picked, which is not more informative than is needed for answering the QUD_{Excl} . Hence, a modification is required in Max_{inf} which we propose as the following, coated with the pragmatic solution:

(18) $\text{Max}_{\text{infQUD}_{\text{Excl}}}(\text{Q})(w) =$

$$\left\{ \begin{array}{ll} \{p \mid [p(w) = 1 \wedge p \text{ is not more informative than is needed for answering } \text{QUD}_{\text{Excl}} \wedge \forall q \in \text{Q} [[q(w) = 1 \wedge q \leq_{\text{inf}} p \text{ for answering the } \text{QUD}_{\text{Excl}}] \rightarrow p \subseteq q]] \} & \text{if there is at least one } p \in \text{Q} \text{ informative for answering the } \text{QUD}_{\text{Excl}} \\ w & \text{otherwise} \end{array} \right.$$

Consequently, I also modify the generalized ANS relative to QUD_{Excl} , in the following way:

(19) **Generalized Ans relative to QUD_{Excl} ($\text{Ans}^{\text{QUD}_{\text{Excl}}}$):**

- a. $\llbracket \text{ANS}^{\text{QUD}_{\text{Excl}}} \rrbracket (\text{P}_{\langle \text{st}, \text{t} \rangle}) = \lambda w. \text{Max}_{\text{inf}^{\text{QUD}_{\text{Excl}}}} (\text{P})(w)$
- b. $\llbracket \text{ANS}^{\text{QUD}_{\text{Excl}}} \rrbracket (\text{K}_{\langle \sigma, \text{t} \rangle}) = \lambda w. \bigcap \{p : \forall \text{P}_\sigma \in \text{K}(\llbracket \text{ANS}^{\text{QUD}_{\text{Excl}}} \rrbracket (\text{P})(w)) = p\}$
 $(\sigma \in \{\langle \text{st}, \text{t} \rangle, \langle \langle \text{st}, \text{t} \rangle, \text{t} \rangle, \dots\})$

Now, I can successfully proceed through my task. For the sets inside (from left to right in Figure 1) when $\text{Max}_{\text{inf}^{\text{QUD}_{\text{Excl}}}}$ operates on them, I get the sets of worlds *viz.* $\{w : \text{Ravi married Sima in } w\}$, W , and $\{w : \text{Suman married Kiara in } w\}$, respectively. For the set in the middle, there is no answer which is needed at all for the need of the current discourse. This is why the set of all possible worlds W (trivial; non-informative) is got when $\text{Max}_{\text{inf}^{\text{QUD}_{\text{Excl}}}}$ acts on it. Hence, at the end of the day we end up having the answer:

(20) $\{w : \text{Ravi married Sima and Suman married Kiara in } w\}$ which is maximally needed for the current discourse.

I propose the novel semantics for Op!, as in (21).

$$(21) \quad \llbracket \text{Op!} \rrbracket^w = \lambda Q_{\langle \langle s, t \rangle, t \rangle} : \underbrace{\exists p \in (\llbracket Q \rrbracket_{w, D_2, \prec} - \llbracket Q \rrbracket_{w, D_{\in S_{\text{SPKR/NORM}}}, \prec}) [p(w) = 1]}_{\text{factivity}} . \{p : p = \text{ANS}^{\text{QUD}_{\text{Excl}}}(\llbracket Q \rrbracket_{w, D_2, \prec}) \wedge p \notin \llbracket Q \rrbracket_{w, D_{\in S_{\text{SPKR/NORM}}}, \prec}\}$$

This Op! semantics will now be successful in extracting the most informative true answer relevant to the requirement of the current discourse topic, *viz.* ‘Ravi married Sima and Suman married Kiara’ at which the speaker is surprised.

Extending our analysis for type 1 instances

Type 1 exclamatives like (11) and (12) will be analyzed along the same line as the type 2 multiple k-exclamatives. Let us take (11) as an example. It is uttered in a situation where the speaker expresses surprise at the amount/quantity of people and food. The k-words in (11) can be interpreted in the following way:

(22) $\llbracket \text{koto loke} \rrbracket^f = \{d : d \text{ is the quantity of people}\}; \llbracket \text{koto loke} \rrbracket^o = \text{undefined}$

(23) $\llbracket \text{koto khawar} \rrbracket^f = \{q : q \text{ is the quantity of food}\}; \llbracket \text{koto loke} \rrbracket^o = \text{undefined}$

The ordinary set of propositions on which the Op_i acts will be like below:

(24) $\{\lambda w.d \text{ amount of people are having } q \text{ amount of food in } w\}$

Eventually, this set gets widened and the maximally informative true answer relative to the current discourse topic is picked from the widened set, at which the speaker is surprised.

Conclusion

Bangla multiple wh-exclamatives show both type 1 (or degree) and type 2 (or non-degree) readings. Since Bangla uses a variety of k-words in its exclamative structures, it also shows a combination of k-words in its multiple wh-exclamatives.

Because of this diverse nature, k-exclamatives cannot be analyzed along the lines of [Rett](#)'s degree approach. I, therefore, base my analysis on the question approach and precisely follow the widening account of [Zanuttini & Portner \(2003\)](#). The course of my analysis, however, uses the modifications in the existing widening approach, mentioned in [Balusu \(2019\)](#) for analyzing wh-exclamatives in Telugu and Kannada.

At the level of compositional analysis, I did not attempt any wh-movements because Bangla is a wh *in-situ* language and I have followed a [Hamblin](#)-style semantics. I base my analysis in favor of question-based semantics, sticking to [Kotek \(2016, 2018\)](#) and putting the **AS** (or ALTSHIFT) operator on the clausal spine which is accountable for the question semantics. The **AS** operator converts the focus value of the set of propositional alternatives to its ordinary value, upon which my newly introduced exclamative operator Op_i works. I provided a totally novel semantics for Op_i which assures the exclamative semantics of the clause.

References I

- Balusu, Rahul. 2019. The role of the particle *-oo* in wh-exclamatives in Telugu and Kannada. In *Proceedings of 23rd Sinn und Bedeutung (SuB 23)*, vol. 23, 109–126.
- Banerjee, Kousani. To appear. Wh-exclamatives call for a question semantics: The view from Bangla. In *Proceedings of the 30th edition of the Conference of the Student Organisation of Linguistics in Europe (ConSOLE XXX)*, .
- Banerjee, Kousani & Arka Banerjee. 2022. The role of *-i-na* in Bangla *ki*-exclamatives. In Yash Sinha, Samir Alam & Sadhwi Srinivas (eds.), *Proceedings of 11th (Formal) Approaches to South Asian Linguistics ((F)ASAL 11)*, .
- Beck, Sigrid. 2006. Intervention effects follow from focus interpretation. *Natural Language Semantics* 14–1.
- Beck, Sigrid & Shin-Sook Kim. 2006. Intervention effects in alternative questions. *Journal of Comparative Germanic Linguistics* 9. 165–208.
doi:10.1007/s10828-006-9005-2.
- Dayal, Veneeta. 1996. *Locality in wh quantification*. Kulwer Academic Publishers.
- Dayal, Veneeta. 2016. *Questions*. Oxford University Press.
- Elliott, Dale E. 1974. Toward a Grammar of Exclamations. *Foundations of Language* 11(2). 231–246.

References II

- Grice, Herbert Paul. 1975. Logic and Conversation. In Peter Cole & Jerry L. Morgan (eds.), *Syntax and Semantics*, vol. 3, 41–58. Academic Press.
- Grimshaw, Jane. 1979. Complement Selection and the Lexicon. *Linguistic Inquiry* 10(2). 279–326.
- Guha, Ishani & Tanmoy Bhattacharya. 2020. Mapping Wh-words to Wh-Exclamatives. SALA 36.
- Hamblin, Charles Leonard. 1973. Questions in Montague English. *Foundations of Language* 10(1). 41–53.
- Karttunen, Lauri. 1977. Syntax and semantics of questions. *Linguistics and Philosophy* 1. 3–44.
- Kotek, Hadas. 2016. On the semantics of wh-questions. In *Proceedings of 20th Sinn Und Bedeutung (sub20)*, vol. 20, 430–447.
- Kotek, Hadas. 2018. *Composing Questions*. MIT Press.
- Kratzer, Angelika & Junko Shimoyama. 2002. Indeterminate pronouns: The view from Japanese. In Y. Otsu (ed.), *Proceedings of the third tokyo conference on psycholinguistics (tcp 2002)*, 1–25. Tokyo: Hituzi Syobo.

References III

- Miró, Elena Castroviejo. 2006. *Wh-exclamatives in Catalan*: Departament de Lingüística General, Universitat de Barcelona dissertation.
- Nouwen, Rick & Anna Chernilovskaya. 2015. Two types of wh-exclamatives. *Linguistic Variation* 15. 201–224.
- Rett, Jessica. 2008a. A Degree Account of Exclamatives. In *Proceedings of 18th Semantics and Linguistic Theory (SALT 18)*, Ithaca, NY: CLC Publications.
- Rett, Jessica. 2008b. *Degree Modification in Natural Language*: Graduate School-New Brunswick Rutgers, The State University of New Jersey dissertation.
- Rett, Jessica. 2011. Exclamatives, Degrees and Speech Acts. *Linguistics and Philosophy* 34(5). 411–442.
- Rett, Jessica. & Sarah Murray. 2013. A semantic account of mirative evidentials. In *Proceedings of 23rd Semantics and Linguistic Theory (salt 23)*, 453–472.
- Roberts, Craig. 2010. Topics. In Claudia Maienborn, Klaus von Stechow & Paul Portner (eds.), *Semantics: An International Handbook of Natural Language Meaning*, vol. 33.2, 1908–1934. Mouton de Gruyter.
- Roberts, Craige. 1996/2012. Information structure in discourse: Toward an integrated formal theory of pragmatics. *Semantics & Pragmatics* 5(6). 1–69.

- Shimoyama, Junko. 2001. *Wh-constructions in Japanese*: University of Massachusetts, Amherst dissertation.
- Simons, Mandy, Judith Tonhauser, David Beaver & Craige Roberts. 2010. What projects and why. In *Proceedings of 20th Semantic and Linguistic Theory (SALT 20)*, 309–327.
- Zanuttini, Raffaella & Paul Portner. 2003. Exclamative Clauses: At the Syntax-Semantics Interface. *Language* 79(1). 39–81.

Thank You!