

### a Utility-based Scale in the Semantics of our *even*

**1. Paper Overview:** This paper proposes a revised analysis of Iatridou & Tatevosov's (henceforth I&T) 2016 account of a special instance of *even*, entitled 'our *even*', as in (1). (1) A: *Let's meet at Oleana for dinner. Is that OK?* B: *Where is that even?* (I&T 2016; 7) We discuss two challenges for this account and propose a revised analysis addressing them, where (i) Greenberg's 2015, 2018 gradability-based semantics applies to 'our *even*'. (ii) 'our *even*' operates on a derived scale of 'usefulness towards resolution of the QUD' and (iii) 'our *even*' scopes over a question speech act operator (henceforth: SAO).

**2. Background: I&T's 2016 Semantics for Our *even*:** According to I&T, 'our *even*' focuses an entire question (thus the focus alternatives are questions as well). This analysis is based on the long-standing 'comparative likelihood' analysis of 'garden variety' *even* (e.g. Horn 1969, Karttunen & Peters 1979, Rooth 1985, 1992, Guerzoni 2003, Chierchia 2013), where *even* presupposes that its prejacent,  $p$ , is less likely than all its alternatives,  $q$ , in  $C$ . I&T's suggested semantics for 'our *even*' in (1), is in (2), with the question 'where is Oleana?' inserted, as an example:

(2)  $[[ \textit{even} C ] [ \textit{where} [ 1 ? [ \exists e [ \textit{Oleana is located } t1 ] ] ] ] ] ] ] ]^{w,g}$  is only defined if  $\forall q \in C. \{ p : \exists x [ \textit{location} (x) ] \wedge p = \textit{that there is an } e \textit{ such that } \textit{Oleana is located in } e \wedge e \textit{ is at } x \} <_w q$ .  
When defined it returns:  $p : \exists x [ \textit{location} (x) ] \wedge p = \textit{that there is an } e \textit{ such that } \textit{Oleana is located in } e \wedge e \textit{ is at } x$

i.e. 'our *even*' takes a set of alternative questions  $C$ , e.g. 'where is Oleana?', 'who is their chef?' etc., and a prejacent question,  $p$  (e.g. 'where is Oleana?'), and presupposes that this  $p$  is the least likely question in  $C$ . Importantly, each question in  $C$  denotes a set of possible propositions (answers) (cf. Hamblin 1973). For example, the prejacent question ('where is Oleana?') denotes the set of propositions of the form: *Oleana is in [location x]*, *Oleana is in [location y]* etc.

### 3. Two Challenges for I&T's Semantics, and Proposed Solutions

**Challenge (a): Difficulty in Comparing Questions on a Likelihood Scale:** I&T's 2016 prose states that what is being measured for likelihood are not the questions themselves but the likelihood of asking the prejacent vs. the alternative questions. However, this is not reflected in their semantics in (2) where it is, in fact, the likelihood of the questions, each denoting a set of propositions, which is compared. Besides not reflecting I&T's intuition, which appears to be on the right track, it is not clear how to compare the likelihood of questions. How can one set of propositions be more likely than another?

**Resolving Challenge (a):** To address this issue, one must ensure that, as I&T's prose suggests, what is being measured is asking the prejacent question vs. asking alternative questions (as opposed to measuring the questions themselves). We thus propose to scope *even* above a question SAO (cf. Beck 2016 for focus-sensitive particles scoping over a SAO). The question SAO we propose is marked in the LF in (3), schematically, as 'ASK' (see e.g. Searle 1975, 1976, Krifka 2001, 2014, Sauerland & Yatsushiro 2017). We propose a detailed implementation of this operator in the full paper:

(3) LF:  $[[ \textit{even} C ] \textit{ASK} [ \textit{where} [ 1 ? [ \exists e [ \textit{Oleana is located } t1 ] ] ] ] ] ] ] ] ]^{w,g}$

The SAO, ASK, being part of the prejacent, but, crucially, not being focused, allows for the alternatives to be other propositions, which are always questions. Notice that I&T 2016 consider a similar SAO analysis, but object to it on the grounds that it will cause the alternatives to be other SAOs, such as assertions and imperatives. We, however, propose that this will not occur as long as the SAO is not focused, as above.

**Challenge (b): Comparative Likelihood - Not a Necessary or Sufficient Licensor for 'our even':**

We propose that unlikelihood of asking the prejacent question is not a necessary condition for licensing 'our *even*', as demonstrated by (4):

(4) (A scientist is displaying a newly discovered species to a group of students. It appears to defy definition). Scientist: How do you suggest we call it? Student: *what even is that?*

A very general question such as '*what is that*' (*p*) appears to be very likely to ask where one is presented with an odd new species that little is known about. Other, less likely questions to ask, could be e.g. '*what does it feed on?*'. Here, then, 'our *even*' is felicitous though the prejacent question is very likely to be asked. We follow Elliot et al 2015 in arguing that the prejacent question being least likely to be asked, is also not sufficient in order to license 'our *even*', as in their example, (5):

(5) (A&B are classifying a newly discovered species according to a set of questions) A: *The wug seems to be cold-blooded.* B: (Skipping ahead,) *what does it feed on (#even)?* (Elliot et al 2015;7)

Within a typological discourse as in (5), the progression of asking questions is expected to be gradual from the general to the specific. B's question appears to be too specific at this point of the discourse and is thus unlikely to be asked. Yet despite this, 'our *even*' in (5) is infelicitous. Importantly, if we alter the context of sentence (5) as in (6), below, 'our *even*' becomes felicitous:

(6) (A discusses classifying a newly discovered species with B, the lab's animal feeder, who is aware that he will soon have to feed the wug). A: *The wug seems to be cold-blooded.* B: *what does it feed on even?*

This felicity variation cannot be accounted for by a difference in the (un)likelihood of asking the prejacent question compared to asking alternative questions. '*what does it feed on?*' is not least likely, but rather very likely to be asked by the animal feeder (speaker) and is not least likely to be asked by the addressee (if such a revision to the analysis were to be considered). In addition, because I&T suggest that the 'least likely to be asked question' correlates with the 'most likely to be known answer', we note here that the latter also does not apply to the prejacent question in (6). What the wug (member of a newly discovered species) feeds on, is not most likely to be known to either speaker or addressee.

**Resolving Challenge (b):**

Instead of I&T's suggested likelihood-based semantics, we propose, alternatively, to apply to 'our *even*' Greenberg's (2015, 2018) gradability-based semantics of (garden variety) *even*. According to this analysis, *even* operates on a scale whose dimension is contextually derived. In the case of 'our *even*', we suggest that this dimension is 'usefulness towards resolution of the QUD'.

Greenberg's (2015, 2018) lexical entry for *even*'s scalar presupposition, is in (7), below:

(7) *even* (*C*) (*p*) (*w*) is defined iff  $\forall q \in CAq \neq p \rightarrow \forall w1, w2 [w1Rw \wedge w2Rw \wedge w2 \in p \wedge w1 \in [q \wedge \neg p]] \rightarrow \max(\lambda d2. G(d2)(x)(w2)) > \max(\lambda d1. G(d1)(x)(w1)) \wedge \max(\lambda d1. G(d1)(x)(w1)) \geq \text{stand } G$

Within this semantics, for *even* to be felicitous, the degree of *x* (a non-focused element within the prejacent) is required to be higher on a contextually derived scale, *G*, in the accessible *p*-worlds compared to its degree in the accessible *q-and-not-p* worlds. Moreover, both these degrees are required to be  $\geq$  the standard associated with *G*. Assuming that: (i) *x* (which is non-focused) is the question SAO, standing for 'asking the question', (ii) in the *p* worlds one asks the prejacent question, (iii) in the *q-and-not-p* worlds one asks an alternative question (and not the prejacent question) and (vi) the dimension of the scale is usefulness, where asking questions (requiring the addressee to reply (cf. Krifka 2014, Sauerland & Yatsushiro 2017)) is judged by the usefulness of receiving these replies. Following the LF in (3), this analysis applied to 'our *even*' thus defines

that: in the worlds where one asks the prejacent question, a more useful answer is attained compared to where one asks an alternative question, and moreover in both world sets, the attained answers are [*pos*] useful towards resolving the QUD, i.e. are associated with a degree which is  $\geq$  the standard for usefulness. In the full paper we suggest a formal framework for usefulness, following literature on utility and decision theory (e.g. van Rooij 2003, Benz 2004, 2006).

**Addressing the Triviality Concern:** This analysis may appear to predict that our *even*'s contribution is trivial, since (i) one in any case always asks the question of the highest usefulness and (ii) all questions in *C* are  $\geq$  the standard for usefulness (by virtue of their definition as contextually relevant). However, in the full paper we explain the idea that our *even*'s contribution would be non-trivial and thus licensed exactly in contexts where relativized to the addressee, asking the prejacent question is of low/below-standard usefulness, e.g. since he/she deems the answer to already be in the CG (as in (1) and (4)), or relates to a different QUD (as appears to occur in (6)). Then, by using 'our *even*', the speaker indicates that contra to the addressee's evaluation, asking the prejacent question and receiving its answer is in fact rated above the standard for usefulness and moreover it is the most useful for resolving the QUD.

#### 4. Accounting for the Data

This analysis (to be fully elaborated on in the paper), correctly accounts for the felicity of (1), (4) and (6) in that asking and receiving a response to the prejacent question is [*pos*] useful and is of the highest usefulness (to the speaker) contra the addressee's expectations. Additionally, this latter element appears to account for the observed effect where the prejacent question of 'our *even*' intuitively seems to be 'most helpful despite expectations to the contrary'. Lastly, our account explains the infelicity of (5), where the prejacent question is not the most useful for the specific stage in the discourse.

#### 5. References

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