Starr Sandoval, Marcin Morzycki, Anne Bertrand University of British Columbia

Polar questions and degree answers in Ktunaxa

Polar questions canonically receive polar answers, but under various circumstances other answer types are felicitous. In Ktunaxa, a language isolate spoken in Interior British Columbia and the northern United States, the only way to elicit a degree answer is to ask what appears to be a polar question. That's surprising because this apparent lack of a degree *wh*-word (Bertrand 2021, Reisinger 2018) is what one might expect in a degreeless language, but Ktunaxa otherwise qualifies as a language with degree abstraction (in the typology of Beck et al 2009 and others). We show that apparent polar questions in Ktunaxa—and perhaps in English too—can convey degree question meanings due to a previously unnoticed homophony in both languages between question and assertion variants of 'very'. Polar questions that indirectly invite degree answers have, we suggest, been semanticized into dedicated degree questions that wear their historical heritage as polar questions on their sleeve. Their covert degree question structure is nevertheless detectable in the absence of degree readings in island contexts.

Ktunaxa polar questions are marked with the complementizer *k*, as in (1) (Morgan 1991). When a gradable predicate modified by *ʔisiɬ* 'very' occurs in this environment, the question can be interpreted to ask for a degree, what we will call a polar degree question (PDQ). The question in (2) asks for La·t's height, even if there is no expectation he is 'very tall'.

(1) K   wuq̓aɬiɬq̓ak La·t?
     COMP tall   La·t
     'Is La·t tall?'

(2) K-ʔisiɬ   wuq̓aɬiɬq̓ak La·t?
     COMP-very tall   La·t
     'How tall is La·t?' (Lit: 'Is La·t very tall?')

One might suppose that the degree interpretation arises in these cases as a Gricean implicature. But if this were a purely pragmatic effect, it would be surprising to discover that the degree reading becomes impossible in exactly those syntactic environments that forbid extraction. Yet that's the case. When *ʔisiɬ* is embedded inside a complex NP island, it loses its degree reading:

(3) *Context 1: Your friend tells you that ʔamlu is very tall. You ask if La·t believes her.*
     #*Context 2: You're curious about how tall ʔamlu is. You ask what height La·t thinks he is.*

     K   qanikitȼiʔt ni-s   qakyami-s k-ʔisiɬ   wuq̓aɬiɬq̓ak-s ʔamlu-s   La·t?
     COMP believe   DEM-OBV story-OBV COMP-very tall-OBV   ʔamlu-OBV La·t
     'Does La·t believe the story that ʔamlu is very tall?'

Without the complex NP island, the degree reading is possible in this context:

(4) K   qanikitȼiʔt k-ʔisiɬ   wuq̓aɬiɬq̓ak-s ʔamlu-s   La·t?
     COMP believe   COMP-very tall-OBV   ʔamlu-OBV La·t
     'How tall does La·t believe ʔamlu is?' (Lit: 'Does La·t believe ʔamlu is very tall?')

Ktunaxa also observes negative islands (Bertrand 2021), and the degree reading of *ʔisiɬ* is absent under negation:

(5) K   qa   ʔisiɬ wuq̓aɬiɬq̓ak Lu·s?
     COMP NEG very tall   Lu·s
     'Is Lu·s not very tall?' / #'How tall isn't Lu·s?'

The degree reading is also impossible in other islands, including the coordinate structure island. Deriving degree readings as implicatures would not predict these island effects. Such an analysis would also predict that words synonymous with *ʔisiɬ* would similarly admit degree readings, but they do not. The intensifiers *ȼmakiɬ* and *wiɬiɬ* lack degree readings:

(6) K-ȼmakiɬ   wuq̓aɬiɬq̓ak Maɬi?
     COMP-very tall   Maɬi
     'Is Maɬi very tall?' / #'How tall is Maɬi?'

(7) K-wiɬiɬ   wuq̓aɬiɬq̓ak Maɬi?
     COMP-very tall   Maɬi
     'Is Maɬi very tall?' / #'How tall is Maɬi?'

Recognizing that *ʔisił* has become a *wh* expression also resolves a typological mystery. Ktunaxa is a language with degree abstraction—it has subcomparatives, measure phrases, and negative islands (Bertrand 2021)—so it is expected to have a degree *wh* word in Beck et al.'s framework. We propose that it does, though that's obscured by homophony with polar questions.

Importantly, the interpretation of PDQs is not identical to ordinary degree questions. Like some evidentials, they are infelicitous in direct perception contexts:

(8) *Context: You see La·t, and he's grown to be very tall. You ask him (exactly) how tall he is.*
   #Xina! K-hin   ʔis-ił wuḱałiłḱak?
   EXCL COMP-2.SUBJ very tall
   Infelicitous as either 'Wow! Are you very tall?' or 'How tall are you?'

The effect, we suggest, is a side-effect of the vagueness that PDQs inherit from their polar cousins. In the context in (8), a question of the form 'are you very tall?' is infelicitous in Ktunaxa, as indeed it is English. It asks an approximate height question whose answer in direct perception contexts is self-evident. One can see people's approximate height and needn't ask for it.

Polar questions with degree answers have been noted before. Svenonius & Kennedy 2006 analyze Northern Norwegian degree questions that appear to be polar as involving a null degree morpheme rather than deriving the effect in purely pragmatic terms. The Ktunaxa facts align with this vision straightforwardly, except that the crucial degree element is not null but a word that in other contexts means 'very'. Our analysis is in a similar spirit.

We distinguish the *ʔisił* that surfaces in PDQs as from its intensifier counterpart in assertions. PDQs with *ʔisił* denote a set of propositions, a degree question meaning. Building on Abrusán & Spector (2011)'s theory of degree questions, we assume as in (9) that *ʔisił* denotes a function from sets of degrees to a set of propositions like 'La·t's maximal height is *approximately d*':

(9) $[\![\textit{ʔisił}]\!] = \lambda D_{\langle d, t \rangle} . \{p : \exists d[p = {}^{\wedge}\mathbf{max}(D) \approx d]\}$

To be interpreted, *ʔisił* must raise covertly to bind its trace position:

(10) $[\![\textit{ʔisił}]\!]([\![\lambda d \ \textit{La·t} \ d \ \textit{wuḱałiłḱak}]\!])$
   $= \{p : \exists d'[p = {}^{\wedge}\mathbf{max}([\![\lambda d \ \textit{La·t} \ d \ \textit{wuḱałiłḱak}]\!]) \approx d']\}$
   $= \{p : \exists d'[p = {}^{\wedge}\mathbf{max}(\lambda d . \text{La·t is } d \text{ tall}) \approx d']\}$

Because this asks for an approximate answer, it's correctly predicted to be infelicitous when that answer is apparent. Because it requires covertly extracting *ʔisił*, it is predicted to be impossible inside islands, leaving in place only the homophonous pure polar question interpretation.

This is not to say, of course, pragmatics alone can't sometimes derive degree interpretations of polar questions. Rather, Ktunaxa demonstrates that polar questions can sometimes mirror *wh* questions or indeed covertly express them. Similar effects are found in English, including island sensitivity (#*Does Eloise believe the claim that Ty is very tall?*; #*Is Ty not very tall?*).

We suggest that the effects of PDQs in both English and Ktunaxa stem from the basic semantics of polar questions coupled with a direction of diachronic shift that's predictable on Gricean grounds. There is a potential analytical middle ground, though, between the pragmatic and the semantic road. One might imagine an analysis framed in terms of QUDs, wherein no movement takes place in the syntax but the sensitivity to islands is a consequence of island-violating QUDs.

References   **Abrusán, M. & B. Spector. 2011.** A semantics for degree questions based on intervals. *Journal of Semantics*. | **Beck, S. et al. 2009.** Crosslinguistic variation in comparative constructions. *Linguistic Variation Yearbook*. | **Bertrand, A. 2021.** Investigating comparatives in Ktunaxa. *UBC Colloquium*. | **Morgan, L. 1991.** *A description of the Kutenai language.* | **Reisinger, D. 2018.** Wh questions in Ktunaxa. *UBC Working Papers in Linguistics*. | **Svenonius, P. & C. Kennedy. 2006.** Northern Norwegian degree questions and the syntax of measurement. *Phases of Interpretation*.