Loose Talk, Scale Presuppositions and QUD

We introduce a new pragmatic account of loose talk, focussing for the most part on the loose use of numbers and measurement expressions. The account captures important data that existing pragmatic accounts get wrong, including Lasersohn's popular theory of 'pragmatic halos' (Lasersohn 1999), and previous relevance-based accounts of loose talk (Sperber and Wilson 1985, Yablo 2014).

Loose Talk under Embeddings If Rob is 6′1.01″ tall, he is taller than six foot one. If he is 6′0.99″, then he is less than six foot one. This seems to show that, taken literally, the claim

(1) Rob is six foot one

entails that Rob's height is in the tiny interval between 6′0.99″ and 6′1.01″. (Arguably, (1) also has a reading that Rob is *at least* 6′1″; ignore such readings for present purposes.) However, the use of statement (1) ordinarily conveys a weaker message: something to the effect that Rob's height is near 6′1″. If the expression "six foot one" had a reading "close to six foot one", the conjunction "Rob is six foot one, but less than six foot and three quarters of an inch" ought to be acceptable. But it sounds flatly contradictory, suggesting that loosening must be explained pragmatically. Analogous examples arise in connection with all quantities and measurements: e.g. "Ellen arrived at 6 o'clock" and "There were 50 000 people at the rally" convey weaker messages than they literally express.

Carter (2016) noticed that the *negations* of such statements convey correspondingly *stronger* messages than they literally express. The literal content of

(2) Rob is not six foot one

is very weak: (2) is true even if Rob's height is just the tiniest bit off the 6′1″ mark. But in asserting (2), one ordinarily commits to something stronger: something to the effect that Rob is not even close to 6′1″. The effective message of (2) is the negation of the weakened message conveyed by (1). In the same way, "Ellen did not arrive at 6 o'clock" and "There weren't 50 000 people at the rally" commit a speaker to something stronger than the literal content of those statements.

Carter's point about negation shows the widely held view of loosening as a form of weakening to be mistaken, and as such it is a counterexample to most extant approaches to loosening. Lasersohn and others view loosening as weakening and accordingly predict, incorrectly, that (2) weakens to triviality. The point extends to downward entailing environments generally:

(3) Everyone who arrives at 1 o'clock gets a free lunch

Lasersohn's account incorrectly predicts a loose reading for (3) that is even weaker than (3)'s literal content. But in fact, the loose reading of (3) is *Everyone who arrives around 1 o'clock gets a free lunch*, which is stronger than its literal content. There is a related issue with conjunction:

(4) Emma and Jack both weigh five stone.

By Lasersohn's lights, (4) should get the loose reading *Emma and Jack both have the same weight, which is close to five stone*. This is false when Emma weighs 71 pounds and Jack 68, but clearly (4) is loosely assertable in that situation. In fact, (4)'s loose meaning is the conjunction of the loose meanings of the conjuncts: *Emma weighs around five stone and so does Jack*.

Strict Comparatives Consideration of strict comparatives is also of interest here:

(5) London is more than 30 miles away from here

Again, Lasersohn predicts (5) should have a weak loose reading like *London is at least 29 miles away from here*, but in fact it does not. On the contrary, it looks like (5) can take a strong loose reading:

(6) A: London is 30 miles away from here.
   B_1: No, it's not. London is more than 30 miles away.
   #B_2: No, it's not. London is at least 30.1 miles away.

In a context where A's remark is interpreted loosely, B_2's reply is infelicitous, presumably because it does not contradict the intended, loose reading of A's remark. But B_1's reply *is* felicitous, suggesting (5) has a loose reading to the effect that *London is well over 30 miles away from here*. This appears to show that strengthening due to loose talk occurs outside embedded contexts as well.

Relevance and Scale Presuppositions On the received view, the loose reading of a statement is a relevant consequence of its literal reading. Yablo 2014 (§5.2) spells it out thus: the loose reading is the strongest proposition that is **(A)** entailed by the literal reading and **(B)** wholly relevant to the question under discussion or QUD. (As is common, QUDs are modelled as partitions of the space of possible

worlds, and a proposition *p* is *wholly relevant* to a question *Q* just in case *p* is a union of *Q*-cells.)

We just saw that loosening need not be weakening, motivating a revision of condition (A). The idea of (B) is that in a typical context where (1) or (2) might be uttered, the question under discussion is something like *What is Rob's height to the nearest inch?*: we are never interested in Rob's height to arbitrary levels of precision. (1) isn't wholly relevant as it is too specific: it specifies Rob's height to a greater level of precision than the QUD requires. (2) isn't wholly relevant because it is not specific enough: it does not rule out any answer to the QUD. Loosening, then, is a fix for lack of relevance.

The present proposal is to preserve that basic insight but to replace (A) with (C):

(C) The loose reading of an assertion is *conditionally equivalent* to the literal reading, given the contextual presuppositions of the speaker.

Loose readings arise whenever there is a unique wholly relevant proposition satisfying (C). (This proposal formally resembles the treatment of plural definites in Križ 2016.)

Speakers make certain contextual presuppositions specifically in order to tie their literally non-relevant utterances to the QUD (as argued in Simons 2002). In (1-5), the operative presuppositions attach to the *measurement scales* used in those propositions. As Krifka 2002 argues, measurement expressions are always used against the background of such a scale, which is a list of measurement expressions that can be more or less fine-grained. For instance, in English-speaking countries, specifications of personal height normally use the feet-and-inches scale, which is to say they are selected from the following list: { … , "4 foot 11", "5 feet", "5 foot 1", "5 foot 2", … }.

Speakers who use this scale are of course aware that there are in fact many possible heights intermediate between the ones on this list. But they ignore those possibilities, and thus there is a sense in which a typical utterance of (1) or (2) presupposes that

(7) Rob is an exact number of inches tall. (Or: Rob's height is on the feet-and-inches scale.)

Now given that the QUD is *What is Rob's height to the nearest inch?* and that (7) is contextually presupposed, the present account predicts the following loose reading for (1):

(8) Rob is six foot one to the nearest inch (that is, he's between 6′½″ and 6′1½″).

For (8) is the unique proposition that is conditionally equivalent to (1) and that is wholly relevant to this QUD. Likewise, the unique wholly relevant proposition conditionally equivalent to (2) is the negation of (8). Thus the loose reading of (2) is correctly predicted to be stronger than its literal reading: *Rob is either less than 6′½″ or taller than 6′1½″*. The right readings for (3) and (4) can be derived in closely analogous ways, using appropriately modified QUDs and scale propositions.

The predictions for (5) are more subtle. If the question whether the distance to London is under or over the exact 30-miles mark is part of the QUD, (5) retains its strict, literal reading (it is already wholly relevant in such a context). But in contexts where this is not so, like (6), (5) is predicted to get a loose reading to the effect that *London is well over 30 miles away*.

We can capture the pattern emerging from (1-4) more generally. Fixing a particular QUD and contextual presupposition, the account just sketched lets us define a partial map "$\circlearrowleft$" taking literal meanings to loose meanings. Now we can show that $\circlearrowleft$ preserves entailment and is transparent to Boolean operators in the following sense: $\circlearrowleft \sim p = \sim \circlearrowleft p$, $\circlearrowleft \bigwedge_i p_i = \bigwedge_i \circlearrowleft p$ and $\circlearrowleft \bigvee_i p_i = \bigvee_i \circlearrowleft p$. That is why the loose reading of a negation is the negation of the loose reading of the original claim, the loose reading of a conjunction is the conjunction of the loose readings of the conjuncts, etc.

Round Numbers In addition, the present treatment neatly explains the contrast between (9) and (10):

(9) This parrot is 22 inches tall
(10) This parrot is 55.88 cm tall

(9) and (10) are truth-conditionally equivalent, but (9) gets a much looser reading than (10). That is because (9) uses the far coarser inches scale, associated with a stronger scale presupposition, and a more coarse-grained QUD; consequently, (9) loosens more than (10).

Other Applications Using appropriately adapted contextual presuppositions and QUDs, the paradigm illustrated here can potentially account for a varied range of linguistic phenomena. One example is the generation of event-related readings: "Four thousand ships passed through the lock" has a reading "It happened 4000 times that some ship passed through the lock" (Krifka 1990). This can be accounted for on the present theory if we take it that the QUD is *How many ship-passings occurred?* and that the speaker contextually presupposes that *No ship passed through the lock more than once*.

References

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