

# Loose Talk, Scale Presuppositions and QUD\*

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## Abstract

I present a new pragmatic theory of loose talk, focussing on the loose use of numbers and measurement expressions. The account explains loose readings as arising from a pragmatic mechanism aimed at restoring relevance to the question under discussion (QUD), appealing to Krifka's notion of a measurement scale [7]. The core motivating observation is that the loose reading of a claim need not be weaker than its literal content, as almost all pragmatic treatments of loose talk have assumed (e.g. Lasersohn [10]). The loosening mechanism described here can be applied to a range of other linguistic phenomena as well.

## 1 Introduction

We often use precise measurements where only approximate quantities are intended. One can say “Ellen arrived at a quarter past six” without being dishonest or mistaken, even if Ellen in fact arrived just before 6.15. The reply “No you're wrong! She actually arrived at 6.14” is not just needlessly pedantic – it betrays a positive misunderstanding of the speaker's communicative intent. The same thing happens with numbers and measurements of every kind: in a typical context, “There were fifty thousand people at the rally”, “Billy's parrot is twenty inches tall”, and “The Earth is five billion years old” should be understood as *loose talk*, stating only the rough size of the crowd, height of the parrot, and age of the planet.

On the received view, speakers are not committed full, literal truth of their loose assertions, claiming only that the proposition they expressed is, in some sense, *close* to the truth. Below I build on observations by Sam Carter [2] that, I think, render this view untenable. I articulate a new, formal pragmatic account of loose talk, and show how it captures Carter's observation as well as a range of other tricky data points. While the loose use of numbers and measurements will be my primary focus here, the basic pragmatic mechanism described potentially has much wider application, and in §5 I briefly explore how it may be applied to other phenomena.

## 2 Loosening without Weakening

There is fairly wide agreement that loose talk is a pragmatic phenomenon [1][2][5][8][10][14][15] (but cf. [11]). There are a number of good reasons for that consensus, but the most important one is probably Lasersohn's observation of the following contrast [10]:

- (1) a. We popped the champagne around two o'clock, but after 2.02pm.
- b. # We popped the champagne at two o'clock, but after 2.02pm.

If the phrase “at two o'clock” literally *meant* ‘in the time interval around 2pm,’ then (1b) would have an unproblematic, consistent reading, just like (1a) does. But that is not what we find.

The entailment data also support a pragmatic approach. If Rob is 6'1.01", it follows that he is *over* 6'1". If Rob is 6'0.99", it follows that he is *under* 6'1". So taken literally, the claim

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(2) Rob is six foot one.

apparently entails that Rob is in the tiny interval between 6'0.99" and 6'1.01".<sup>1</sup> But of course, a typical use of statement (2) conveys a weaker message, to the effect that *Rob's height is in the neighbourhood of the 6'1" mark*.

Most of the pragmatic accounts of loose talk just cited follow Lasersohn's classic treatment in assuming that the loose reading of a statement is always weaker than its literal content. While this assumption seems eminently plausible in light of simple examples like (1) and (2), it breaks down when we consider complex sentences.

## 2.1 Loose Talk under Embeddings

To begin with, Carter [2] noticed that the *negations* of such statements convey *stronger* messages than they literally express. The literal content of

(3) Rob is not six foot one

is very weak: (3) is true even if Rob's height is just the tiniest bit taller or shorter than 6'1". But in asserting (3), one ordinarily commits to something stronger, to the effect that *Rob is not even close to 6'1"*. The effective message of (3) is the negation of the weakened message conveyed by (2). Likewise, "Ellen did not arrive at 6.15" would ordinarily commit a speaker to something stronger than the literal content of that statement.

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 (3) weakens to triviality. The point extends to downward entailing environments generally:

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

Again, any account on which loosening is a form of weakening predicts a loose reading for (4) that is even weaker than (4)'s literal content. But in fact, the loose reading of (4) is *Everyone who arrives around 1 o'clock gets a free lunch*, which is stronger than its literal content.

Relatedly, Lasersohn's particular theory also has trouble with conjunctions:

(5) Emma and Jack both weigh five stone.

On Lasersohn's account, the loose reading of (5) should be *Emma and Jack both have the same weight, which is close to five stone*. That is false if Emma weighs 71 pounds and Jack 68. But clearly (5) is loosely assertable in that situation. In fact, (5)'s loose meaning is the conjunction of the loose meanings of the conjuncts: *Emma weighs around five stone and so does Jack*.

## 2.2 Strict Comparatives

Strict comparatives are another example of strengthening through loosening.

(6) London is more than 30 miles away from here.

Again, Lasersohn and others predict (6) should have a weak loose reading. Something to the effect, say, that *London is at least 28 miles away from here*. But in fact it does not: (6) is true in no context if the distance to London is under 30 miles.

As observed by Solt [13], (6) can sometimes take a completely strict, literal reading, according to which it is true even if the distance to London is just slightly over 30 miles. But in addition, (6) can also take a strong loose reading. To see this, observe the following contrast:

<sup>1</sup>(2) also has a reading that *Rob is at least 6'1"*. Ignore such readings for present purposes.

- (7) A: London is 30 miles away from here.  
 B<sub>1</sub>: No, it's not. London is more than 30 miles away.  
 # B<sub>2</sub>: No, it's not. London is at least 30.1 miles away.

If A's remark is interpreted loosely, B<sub>2</sub>'s reply is infelicitous, presumably because it does not contradict the loose content of A's remark. But since B<sub>1</sub>'s reply is fine, it must have a loose reading that *does* contradict A, to the effect that *London is well over 30 miles away from here*.

### 3 Relevance and Scale Presuppositions

On the theory I want to propose, loosening always aims to restore *relevance*. It is a natural successor to the view that the loose reading of a statement is a relevant consequence of its literal reading [5][14][15]. On Stephen Yablo's articulation of that view [15], the loose reading of an assertion is basically the strongest proposition that (A) is entailed by its literal content and (B) is wholly relevant to the *question under discussion* (henceforth *QUD*).

As is common, I will model questions under discussion as partitions:

- (8) A *question*  $Q$  is a partition of the space  $\mathcal{W}$  of possible worlds. We may write  $w \sim_Q v$  to mean that  $Q$  groups the worlds  $w$  and  $v$  in the same partition cell.  
 (9) A proposition  $p \subseteq \mathcal{W}$  is *wholly relevant* to a question  $Q$  if and only if no partition cell of  $Q$  contains worlds where  $p$  is false and also worlds where  $p$  is true.

In other words, a proposition is wholly about a question just in case the truth value of that proposition is always settled by a complete answer to the question.

As we just saw, loosening need not be weakening, so we will revise condition (A). But I want to preserve the core idea behind (B). That idea is that, in a typical context where (2) or (3) is uttered, we are not interested in Rob's height to arbitrary levels of precision, so that the QUD is something like *What is Rob's height to the nearest inch?*. Consequently, (2) isn't wholly relevant because it is too specific: it specifies Rob's height to a greater level of precision than the QUD requires. And (3) isn't wholly relevant because it is not specific enough: it does not rule out any answer to the QUD. Loosening, then, is a pragmatic fix for irrelevance.

The gist of the present proposal is to keep (B), while replacing (A) with (C):

- (C) The loose reading of a claim involving measurements is *conditionally equivalent* to its literal reading, given the presupposition induced by the measurement scale.

(This formally resembles to Križ's treatment of plural indefinites; see [9], §3.A.) To flesh out this proposal, let me say a bit about scales and the presuppositions that attach to them.

#### 3.1 Scale Presuppositions

The proposed new condition (C) builds on Mandy Simons' idea that speakers sometimes make *contextual presuppositions* specifically in order to tie their literally non-relevant utterances to the QUD [12], and on Manfred Krifka's observation that measurement expressions are always used against the background of a *scale* [7][8]. A measurement scale is a 'menu' of conventionally associated measurement expressions. For instance, in English-speaking countries, specifications of personal height are typically selected from the feet-and-inches scale:

$$\{ \dots \text{"5 foot 11"}, \text{"6 feet"}, \text{"6 foot 1"}, \text{"6 foot 2"} \dots \}$$

How do measurement scales like this one induce presuppositions?

Well, note there are in fact many possible heights intermediate between the ones on the list: most likely, your height is missing, as is mine. After all, almost no-one is an exact number of inches tall: one is always a little over or under. When we use the feet-and-inches-scale, we nonetheless ignore the intermediate possibilities. So when we describe Rob's height using this scale, as (2) and (3) do, there is a good sense in which we (falsely) presuppose that

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

When we describe Rob's height using the feet-and-inches scale, the QUD is naturally taken to be *What is Rob's height to the nearest inch?*, which corresponds to this partition:

$$H = \{ \{ w : \text{at } w, \text{ Rob's height in inches is in the interval } [n - \frac{1}{2}, n + \frac{1}{2}) \} : n \in \mathbb{N} \}$$

As I'll explain in §3.2, there is a unique proposition that is wholly relevant to  $H$  (condition (B)) and also conditionally equivalent to (2) given the scale presupposition (10) (condition (C)). And that is the following proposition:

- (11) Rob is six foot one to the nearest inch (that is, he's between  $6' \frac{1}{2}''$  and  $6' 1 \frac{1}{2}''$ ).

Thus the present account of loose talk predicts that (11) is the loose reading of (2).

The unique wholly relevant proposition conditionally equivalent to (3) is (11)'s negation:

- (12) Rob is not six foot one to the nearest inch (that is, he's closer to  $6'$  or to  $6' 2''$ ).

And thus the loose reading of (3) is correctly predicted to be stronger than its literal reading. The desired readings for (4) and (5) can be derived in closely analogous ways, using appropriately modified QUDs and scale propositions. In §3.3 below, I show how the present account captures the general pattern that emerges from these embedded instances of loose talk.

On strict comparatives, the predictions are more subtle. If the question whether the distance to London is under or over the 30-miles mark is part of the QUD, (6) retains its strict, literal reading (it is already wholly relevant in such a context). But in a context where this is not so, like (7), (6) gets a strong loose reading to the effect that *London is well over 30 miles away (being closer to the next item on the scale)*.

### 3.2 Subject Matter Completion

So far we have stated the present account of loose talk as follows: the loose content of an utterance is the unique wholly relevant proposition that satisfies condition (C) (if there is such a proposition). This subsection offers a more elegant and suggestive reformulation of this view.

According to (C), the assertion a loose speaker makes is equivalent to the message they intend to communicate, but only conditional on the scale presupposition they employ. One way to understand this is that speakers (and hearers) attend only to the *incremental content* of the assertion over that scale presupposition, where this is understood as a partial proposition restricted to worlds where the scale presupposition is true:

- (13) A **partial proposition** is represented by an ordered pair  $\langle t, f \rangle$  of disjoint sets of possible worlds.  $\langle t, f \rangle$  is *true* at the worlds  $w \in t$  and *false* at the worlds  $w \in f$ . It has no defined truth-value at worlds outside of  $t \cup f$ . (In particular, the pair  $\langle p, \neg p \rangle$  should be taken to represent the full proposition  $p \subseteq \mathcal{W}$ , where  $z\neg p =_{\text{df}} \mathcal{W} \setminus p$ .)
- (14) The **incremental content** of a full proposition  $p$  over the full proposition  $s$ , or the **restriction** of  $p$  by  $s$ , written  $p \upharpoonright s$ , is the partial proposition  $\langle p \cap s, \neg p \cap s \rangle$ .

Loose utterances fit the following pattern. Let  $p$  be the full literal content of the speaker's utterance,  $s$  the operative scale presupposition, and  $p \upharpoonright s$  the incremental content of  $p$  over  $s$ . Then, while there are cells of the QUD that intersect both  $p$  and  $\neg p$ , no cells intersect both  $p \cap s$  and  $\neg p \cap s$ . So the incremental content  $p \upharpoonright s$  of a loose assertion is *wholly relevant* to the QUD, in the sense defined above, even if its full semantic content  $p$  is not.

This is illustrated with three examples in the diagram below. In particular, the leftmost column shows that the literal content of (2), *Rob is 6'1"*, is not wholly relevant to  $H$ : that is, (2) "colours outside the lines" of  $H$ , so to speak. But if we restrict (2)'s content by the scale presupposition (10), the resulting partial proposition (2)∣(10) is wholly relevant to  $H$  – it no longer colours outside the lines. In this way, the idea that listeners attend to the incremental content of the speaker's assertion, rather than the full literal content, is a first step towards explaining how we are able to interpret the assertion as wholly relevant.

But the incremental content (2)∣(10) is not itself the communicated content of (2). Like most people, Rob is almost certainly not an exact number of inches tall: we're all a little over or a little under. So (2)∣(10) is probably not truth-evaluable at the actual world, whereas the loose message of (2) is: (2) should still count as loosely true if Rob's height is only close to 6'1". So to get at the communicated content, we need to "fill out" the incremental content somehow.

Here we use the QUD as our guide: to maintain relevance, the target message must take on a uniform truth value within each  $H$ -cell, and it should match the incremental content (2)∣(10) wherever the latter is defined. The fact that (2)∣(10) is wholly relevant to  $H$  guarantees that these constraints can be jointly satisfied, since the incremental content is never both true and false within the same  $H$ -cell. In fact, they pin down a unique full proposition, because every  $H$ -cell contains some worlds where (2)∣(10) has a truth-value.

In general, when the incremental content  $p \upharpoonright s$  is wholly relevant to the QUD  $Q$  (that is, no  $Q$ -cell intersects both  $p \cap s$  and  $\neg p \cap s$ ), we can consider its *completion* by that QUD.

- (15) Suppose a partial proposition  $\langle t, f \rangle$  is wholly relevant to a question  $Q$ . Then the *completion* of  $\langle t, f \rangle$  by  $Q$ , written  $Q(\langle t, f \rangle)$ , is defined as follows:

$$Q(\langle t, f \rangle) =_{\text{df}} \{ \{w : \text{for some } v \in t, w \sim_Q v\}, \{w : \text{for some } v \in f, w \sim_Q v\} \}$$

And provided  $s$  intersects every  $Q$ -cell,  $Q(p \upharpoonright s)$  is guaranteed to be a full proposition.

With this formalism in hand, we can restate the present account of loose talk in an attractively succinct way: when a speaker makes an utterance with semantic content  $p$  in a context where  $s$  is the scale presupposition and  $Q$  is the QUD, a loose reading  $Q(p \upharpoonright s)$  of the speaker's utterance is available, provided  $Q(p \upharpoonright s)$  is well-defined.

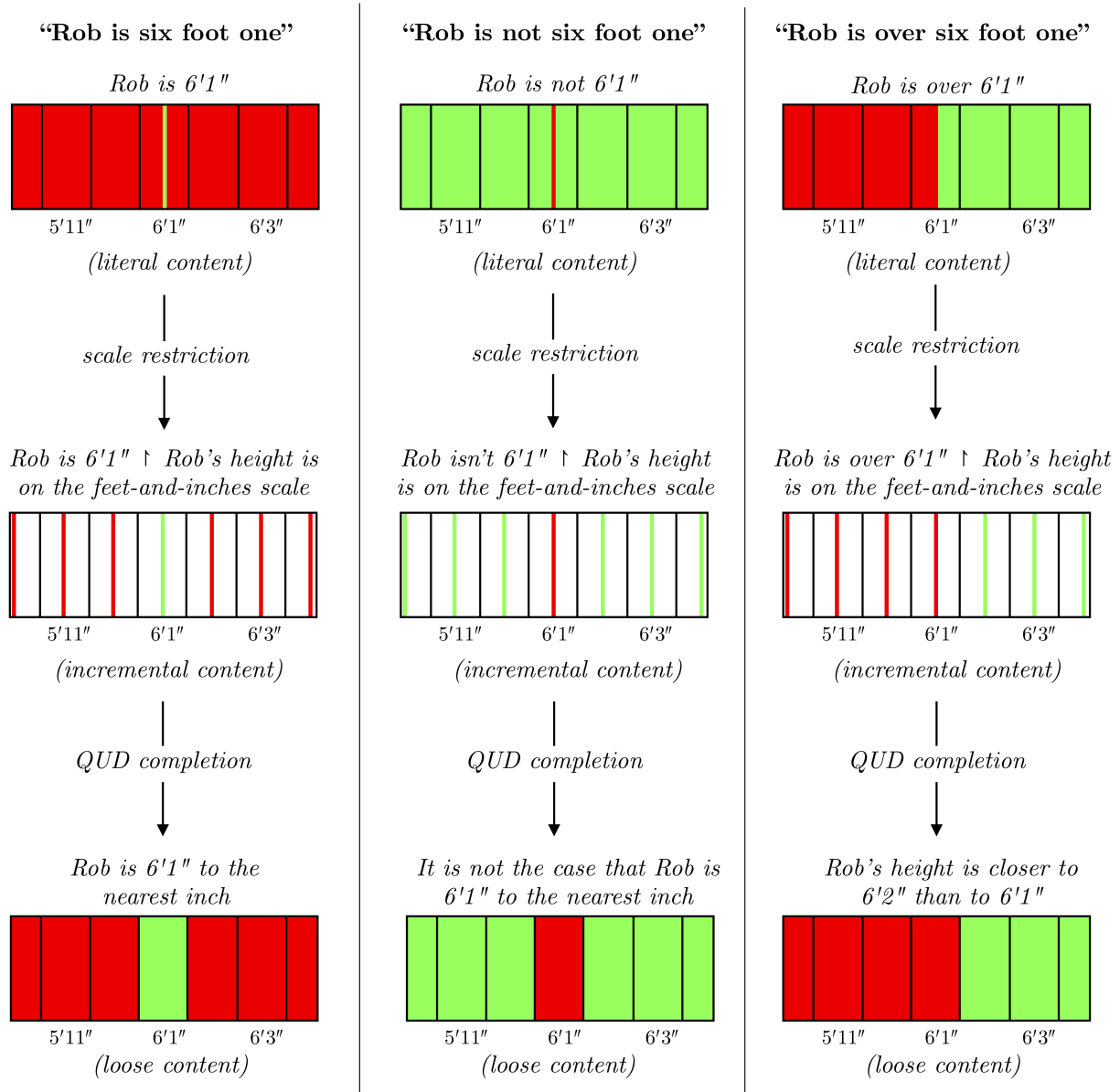
### 3.3 Boolean Transparency

Fixing a particular QUD  $Q$  and scale presupposition  $s$ , we can define a loosening operator " $\circ$ " as follows:  $p \mapsto Q(p \upharpoonright s)$ . This partial map takes suitable literal contents  $p$  to the corresponding loose content  $\circ p$ . This notation lets us compactly express two formal results that jointly capture all the patterns that emerge from the observations in §2:

- (16) **Boolean Transparency:**<sup>2</sup> Provided  $\circ p$  and  $\circ p'$  are both well-defined,  $\circ \neg p = \neg \circ p$ ,  $\circ (p \wedge p') = (\circ p \wedge \circ p')$ , and  $\circ (p \vee p') = (\circ p \vee \circ p')$

<sup>2</sup> *Proof:* Recall that  $\circ$  is the map  $Q(\cdot \upharpoonright s)$ . Now let  $r = \circ p$  and  $r' = \circ p'$ . First note that since  $r$  and  $r'$  are wholly relevant to  $Q$ , it is easy to see that  $Q(r \upharpoonright s) = r$  and  $Q(r' \upharpoonright s) = r'$ . Hence we have  $Q(r \upharpoonright s) = Q(p \upharpoonright s)$  whence  $r \upharpoonright s = p \upharpoonright s$ . Likewise,  $r' \upharpoonright s = p' \upharpoonright s$ .

Now it is easy to show that  $\circ \neg p = \neg \circ p$ . Since  $\neg r$  is wholly about  $Q$ ,  $Q(\neg r \upharpoonright s) = \neg r$ . And it follows from the fact that  $r \upharpoonright s = p \upharpoonright s$  that  $\neg r \upharpoonright s = \neg p \upharpoonright s$ . So completing both sides by  $Q$ , we have that  $\neg r = Q(\neg p \upharpoonright s) = \circ \neg p$ .



This diagram illustrates how, for three example sentences, the present account derives their loose reading from their literal contents. First we restrict the literal content to worlds in which the operative scale presupposition holds, in this case *Rob's height is on the feet-and-inches scale*. Then we complete that partial proposition in the only way possible to stay within the lines of the partition set by *H*, the QUD (*What is Rob's height to the nearest inch*).

Each of the nine subdiagrams represents the (partial) proposition in the caption above it. In each case, the large rectangle stands for the space of all possible worlds, and the smaller rectangles for cells of the QUD. The worlds are arranged from left to right according to Rob's height, as indicated by the ruler marks. **Green** marks the regions where the represented proposition is true. **Red** marks the regions where the represented proposition is false.

This result (16) captures the transparency observed in examples (3-5): 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. Now (16) can in turn be viewed as a consequence of (17), which captures a still wider pattern:

- (17) **Entailment Preservation:**<sup>3</sup> Provided  $\circlearrowleft p_i$  and  $\circlearrowleft c$  are well-defined, if  $p_1, p_2, \dots \models c$ , then also  $\circlearrowleft p_1, \circlearrowleft p_2, \dots \models \circlearrowleft c$

A direct consequence of (17) is the preservation of inconsistency under loosening observed in (1). In addition, (17) also explains the strengthening of strict comparatives. To see this, note that the literal content of “Rob is over six foot one” is inconsistent with (2). In order to preserve that inconsistency when both claims are read loosely, the comparative needs to have a strong loose reading to make up for the weak loose reading of (2). Or viewing it differently, “Rob is over six foot one” entails (3). To preserve that entailment after loosening, the content of the comparative must strengthen in order to entail the strengthened content of (3).

## 4 Further Observations

### 4.1 Round Numbers

As Krifka [7] emphasised, rounder numbers receive looser readings. The present treatment has a neat explanation for this phenomenon. Consider for instance (18a) and (18b):

- (18) a. This parrot is 22 inches tall.  
b. This parrot is 55.88 cm tall.

The semantic contents of (18a) and (18b) are truth-conditionally equivalent (by definition, an inch is equal to 2.54 cm). Nevertheless there is a clear contrast between them: (18a) gets a far looser reading than (18b). The reason is that while (18b) employs the extremely fine 100<sup>th</sup>-of-a-centimeter scale, the sentence (18a) uses the coarse inches scale, which is associated with a much stronger scale presupposition, and a more coarse-grained QUD; consequently, (18a) is correctly predicted to loosen more than (18b).

### 4.2 Scale Ambiguity and Slack Regulators

Another characteristic of round numbers is that they occur on multiple scales. For instance, the expression “700 miles” occurs on the 100-mile-scale, the 50-mile-scale, the 10-mile-scale, the 5-mile-scale and the 1-mile scale. This can lead to ambiguity:

- (19) Addis Ababa is 700 miles away from Mogadishu.

Depending on which scale one takes it to employ, the present account predicts looser or stricter readings for (19). And that ambiguity is indeed attested: is easy to construct stricter and looser

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Likewise, since  $r \wedge r'$  is wholly about  $Q$ ,  $Q(r \wedge r' \uparrow s) = r \wedge r'$ . And we get from  $r \uparrow s = p \uparrow s$  and  $r' \uparrow s = p' \uparrow s$  that  $(r \wedge r') \uparrow s = (p \wedge p') \uparrow s$ . Completing both sides by  $Q$ , we have  $(r \wedge r') = Q((p \wedge p') \uparrow s) = \circlearrowleft (p \wedge p')$ .

Finally, using the previous two results,  $\circlearrowleft p \vee \circlearrowleft p' = \neg(\neg \circlearrowleft p \wedge \neg \circlearrowleft p') = \circlearrowleft \neg(\neg p \wedge \neg p') = \circlearrowleft (p \vee p')$ . ■

<sup>3</sup> *Proof:* Let  $r_i = \circlearrowleft p_i$  and  $d = \circlearrowleft c$ . Suppose  $p_1, p_2, \dots \models c$ , which is to say that  $\bigcap_i p_i \subseteq c$ . Now let  $w$  be any world where all the loosened premises  $\circlearrowleft p_i$  are true. We need to prove that  $d$  is also true at  $w$ . Since, for instance,  $\circlearrowleft p_1$  is true at  $w$ , there must be some world  $v \in s$  such that  $w \sim_Q v$ . Now all the  $\circlearrowleft p_i$  must have the same truth value at  $w$  and  $v$ ; so they are all true at  $v$  as well. Hence  $v \in \bigcap_i (p_i \cap s) \subseteq c \cap s$ . Consequently,  $d$  is true at  $w$ . And since  $d$  must also take the same truth-value at  $v$  and  $w$ ,  $d$  is true at  $w$ . ■

contexts in which the various readings are witnessed. If the context is ambiguous, the looser interpretations attached to coarser scales tend to be strongly preferred [1][8].

*Slack regulators* are operators like “exactly,” “precisely,” “roughly,” and “about,” which control the looseness with which claims are interpreted. On the present account, the natural treatment of slack regulators is to take them to be scale disambiguators: in case of ambiguity, “exactly” and “precisely” can be used to indicate the use of a fine scale, while “roughly” and “about” indicate the use of a coarse scale. One advantage of this treatment is that it explains why sentences like (20) are infelicitous:

(20) # There were about 27 476 people at the rally.

In (20), the word “about” purports to indicate the use of a coarse scale. But the number to which it attaches, “27 476,” only occurs on a maximally fine-grained integer scale.

### 4.3 Alternative Rounding Conventions

So far, I have assumed that loose talkers round off to the closest item on the scale, but this is not always the case. For instance, in a context where it is important that we do not underestimate Rob’s height, we might round upwards instead. In such a context, the question we are seeking to settle is not *What is Rob’s height to the nearest inch* but rather *What is the least height in inches that exceeds Rob’s*. That is to say, instead of  $H$ , the QUD is the partition  $H^*$ :

$$H^* = \{ \{ w : \text{at } w, \text{ Rob's height in inches is in the interval } (n, n + 1] \} : n \in \mathbb{N} \}$$

The scale presupposition, meanwhile, is still the same, so that the loose reading of (2) in such special contexts will be  $H^*((2) \uparrow (10))$ , *Rob’s height is between 6’ and 6’1”*. Downward and intermediate rounding conventions can be handled analogously.

A more complex example is *age*. Typically, the convention is round off someone’s age downward to the nearest year. Except beginning at midnight on the day of their birthday, when we round upwards. This can be captured with a QUD of the following form:

$$A = \left\{ \left\{ w : \begin{array}{l} \text{at } w, \text{ Abby is fewer than } n + 1 \text{ years old, and her} \\ \text{age will exceed } n \text{ years some time today.} \end{array} \right\} : n \in \mathbb{N} \right\}$$

(Just because the present account *can* give a pragmatic account of the rounding convention for age does not mean that this *should* be captured pragmatically – arguably it is preferable in this case to just build it into the semantics of “age”.)

### 4.4 Looseness vs. Vagueness

It is sometimes assumed that looseness is always accompanied by vagueness [10][11]. I think that this is a mistake: looseness and vagueness are entirely separate phenomena, and loose readings often have perfectly sharp truth conditions. Consider for instance this claim:

(21) The molar mass of water is 18.015 grams.

In a scientific context, (21) is understood to convey a very precise and determinate piece of information, namely that *the molar mass of  $H_2O$  is at least 18.0145 and less than 18.0155 grams*. But this is still loose talk: a completely strict reading would be *the molar mass of  $H_2O$  is (exactly) 18.015000... grams*.

But I also think ordinary sentences like (2) have fairly determinate loose truth conditions, even outside of scientific contexts. That determinacy can be brought out by investigating what it takes to *contradict* the loose content of (2):



- (22) A: Rob is six foot one.  
 B<sub>1</sub>: No, he is closer to six foot two.  
 # B<sub>2</sub>: No, he is closer to six foot one and three quarters.

Here, B<sub>2</sub>'s response betrays precisely the kind of infelicity that is characteristic of rejections that contradict the literal but not the loose content of the original assertion. But B<sub>1</sub>'s response is perfectly felicitous. In general, for the response “No, he is closer to  $X$ ” to be felicitous,  $X$  must either be at least 6'2" or at most 6'. The reason for this, I suggest, is that only those responses contradict the loose content of A's assertion. It follows that loose content must really be *Rob is between 6'  $\frac{1}{2}$ " and 6'  $1\frac{1}{2}$ "*, just as the present account predicts.

## 4.5 Beyond Numbers

Some conventional scales are not quantitative. Colour scales for instance:

- (23) This carpet is burgundy.

In a well-stocked carpet shop, (23) may convey an extremely specific message about the carpet's colour. But describing the contents of my living room, (23) is naturally read more loosely. In ordinary conversation, we employ a relatively coarse colour scale, with a limited range of canonical, well-known colour names. In such a context, (23) gets the loose content *This carpet is closer to burgundy than to any other shade on the coarse scale*. But in carpet-shops, a more specialised, fine-grained colour vocabulary is employed, yielding a stricter reading for (23).

Another interesting application is to absolute adjectives:

- (24) The road is flat.

Arguably, the literal content of (24) is that *the road has no bumps whatsoever*. But (24) conveys something weaker. The smoothness of the road is described using a scale {“flat”, “bumpy”}, where “bumpy” means *containing a lot of bumps*. On these assumptions, the predicted loose content of (24) is *the road is closer to being flat than to being bumpy*.

## 5 Loose Talk as Conversational Exculpation

In paradigmatic cases of conversational implicature, a speaker is implicated in an additional commitment going beyond the literal content of their assertion. It is natural to wonder whether the reverse of this could also happen. Perhaps speakers are sometimes let off the hook for some of their literal commitments, for pragmatic reasons. One could call that conversational *exculpation* (to exculpate literally means ‘to release from blame’) [4].

The pragmatic mechanism described in §3 above yields a way to implement this idea. Speakers make a claim  $p$  that is based on a scale presupposition  $s$ , without thereby incurring any serious commitment to  $s$ . We have so far assumed that the ‘subtracted’ propositions are always a scale presupposition, but there is no reason other kinds of presuppositions could not be subtracted through the very same pragmatic loosening mechanism.

In fact, there is eminently good reason to think that this *is* possible. For scales and scale presuppositions sometimes appear “in the wild,” so to speak, in the absence of any conventional scale, numerical or otherwise. And that suggests that there is no sharp distinction between scale presuppositions and other kinds of contextual presupposition.

Here is an example to illustrate this (from Philippe Schlenker, p.c.). Imagine a wall with a vertical line of red pegs at different heights: a physically realised scale. The pegs need

not be evenly spaced. Some pegs have names attached to them, belonging to people who are approximately as tall as the peg indicates. I have been given a note labelled “Rob” and tasked to affix it to the appropriate peg. To help me out, you point to one of the pegs and say:

(25) This is the peg at Rob’s height.

The definite description in (25) induces the presupposition that *one of the pegs is at Rob’s height*. But I would not infer from this that you really believed this, any more than I would conclude from (2) that the speaker really thinks Rob is an exact number of inches tall. Instead (25) gets a loose reading that *this peg is closer to Rob’s height than the others*.

The phenomena here are precisely analogous to the numerical cases. The amount of loosening for (25) is dependent on the fineness of the scale: the sparser the pegs, the looser the talk. (25) also shows the same embedding behaviour as (2). In particular, (25)’s negation is has a strong loose reading, namely *some other peg is closer to Rob’s height than this one*.

This strongly suggests that presuppositions which are not associated with a conventional scale can be conversationally ‘exculpated’ using this same mechanism. And if that is granted, we have a very general pragmatic mechanism here, with the potential to explain a wide range of linguistic phenomena. To illustrate, I’ll briefly float two applications here (see also [4]).

First, there is application to ‘event-related’ readings: “Four thousand ships passed through the lock” has a reading *It happened 4000 times that some ship passed through the lock* [6]. This can be explained as the result of exculpating the contextual presupposition *No ship passed through the lock more than once*, with the QUD *How many ship-passings occurred?*

Second, rigidification of definite descriptions. “The man with the martini is a spy” can take a reading like *That man is a spy*, which may be true even if the man in question is holding a different drink [3]. This can be accounted for as the result of exculpating the presupposition *That man is the only guy in the room with a martini*, with the QUD *Who here is a spy?*

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