

## On Precisifiers

We defend a novel semantics for words like *exactly* and *precisely*. A speaker who predicates a point on a scale of an object is often interpreted as speaking loosely. If Anthony asserts (1), he might be understood as communicating (2).

1. That whale is 3 meters long.
2. That whale is between 2.5 and 3.5 meters long.

Words like *exactly* and *precisely* counteract this dynamic by restricting the size of the interval communicated. In our toy context, (3), which is like (1) but with *exactly* added, might be interpreted as communicating (4).

3. That whale is exactly 3 meters long.
4. That whale is between 2.99 and 3.01 meters long.

*Exactly* and *precisely* are *slack regulators* (Lasersohn 1999) – a class which also includes words like *absolutely* and *approximately*. However, *exactly* and *precisely* are distinctive.

First, unlike *absolutely*, *exactly* and *precisely* happily combine with midpoints on a scale (Sauerland and Stateva 2011); whereas *absolutely* must combine with an endpoint on a scale (eg. *absolutely full/empty*). Consider *5 feet tall*, a midpoint on the scale of height. *Absolutely* cannot combine with *5 feet tall*, while *exactly* and *precisely* can.

Additionally, unlike *approximately*, both *exactly* and *precisely* signal greater precision.

Exactly and precisely are thus *mid-range precisifiers*. Mid-range precisifiers eliminate at-least readings (Lasersohn 1999). If Simon asserts he has 3 chairs, he thereby communicates he has *at least* 3 chairs. Meanwhile, the assertion that he has *exactly* 3 chairs communicates that he has 3 chairs and no more.

Other theories (Lasersohn 1999, Sauerland and Stateva 2011, Klecha 2018) do a good job of explaining how mid-range precisifiers communicate precision. However, they don't adequately explain why mid-range precisifiers eliminate at-least readings. Additionally, other theories do not consider the question of whether the precision introduced by the use of a mid-range precisifier is permanent and if so to

what extent. Suppose Simon asserts (5) and And his conversation partner Anthony replies with (6).

5. My train arrives at exactly five.
6. Mine arrives at five, too.

Does Anthony thereby inherit the greater precision introduced through Simon's use of *exactly*?

Our theory of mid-range precisifiers addresses these two lacunae. First, we model loose speech in terms of a precision function, which maps points on a scale to intervals (Krifka 2007, Sauerland and Stateva 2011). So, for example, a context's precision function PF might map the utterance *5 meters* to the interval 5 meters  $\pm$  10 centimeters (9). And, more generally, it might map each input Nm to Nm  $\pm$  10cm (10).

7.  $PF(5m) = (4.9m, 5.1m)$
8.  $PF(Nm) = (Nm-.1m, Nm+.1m)$

Next, we say that mid-range precisifiers conventionally implicate an interest in precision that modifies a context's precision function as follows. Suppose a mid-range precisifier composes with a point on a scale x. This in turn modifies the entry in the precision function PF for x such that the interval is restricted further. The output of the new function PF\*(x) is an interval whose members are practically indistinguishable from x.

Suppose there is a conversation with a precision function PF as in (8). When a speaker says *exactly 5 meters*, they communicate a desire to adopt a new precision function PF\* (9). If their interlocutor wishes to be cooperative, they must adopt PF\*, too.

9.  $PF^*(Nm) = (4.99m, 5.01m)$ , if  $N = 5$ . *Otherwise:*  $PF^*(Nm) = PF(Nm)$ .

This helps explain the extent to which mid-range precisifiers introduce precision. Our proposal's prediction, which we contend is borne out by the data, is that a speaker who says *exactly 5pm* forces others to be more precise when speaking about *5pm* but not more precise when speaking about *6pm*.

Finally, we explain how mid-range precisifiers eliminate at-least readings by positing that they may be roughly paraphrased as meaning *no more and no less than*.

## References

- Klecha, Peter (2018). On unidirectionality in precisification. *Linguistics and Philosophy* 41 (1):87-124.
- Krifka, Manfred (2007). 'Approximate interpretation of number words: A case for strategic communication', in G. Bouma, I. Krämer, and J. Zwarts (eds.), *Cognitive Foundations of Communication*, 111–126. Koninklijke Nederlandse Akademie van Wetenschappen.
- Laserson, Peter (1999). 'Pragmatic halos', *Language* 75, 522–551.
- Sauerland, U., & Stateva, P. (2011). Two types of vagueness. In P. Égré, & N. Klinedinst (Eds.), *Vagueness and language use*, Chapter 6, pp. 121–145. London: Palgrave.