Vagueness and context dependence

Chris Potts, Ling 130a/230a: Introduction to semantics and pragmatics, Winter 2025

Mar 4

1 Ithkuil

From 'Utopian for beginners' by Joshua Foer:[1]

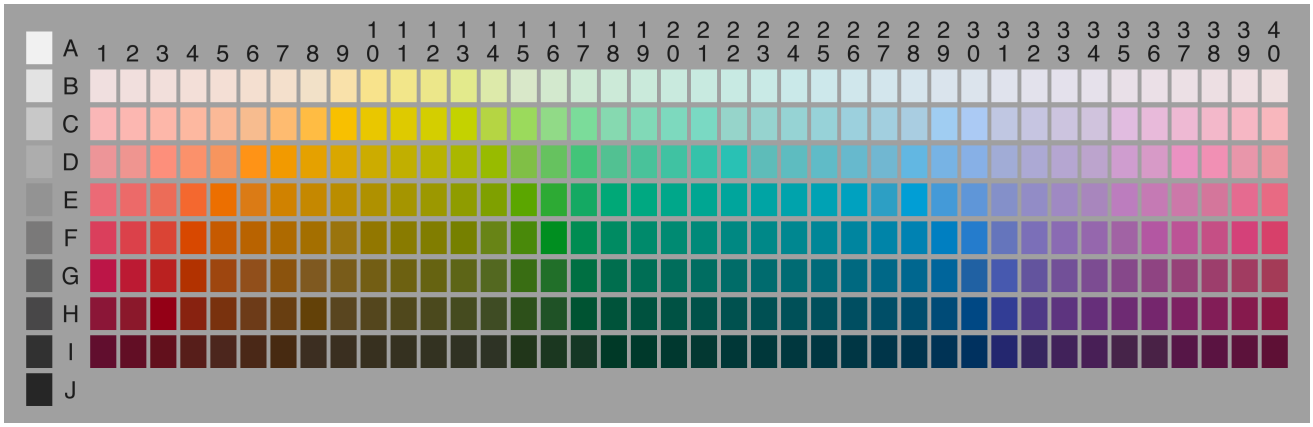
> Languages are something of a mess. They evolve over centuries through an unplanned, democratic process that leaves them teeming with irregularities, quirks, and words like "knight."
>
> [...]
>
> In his preface, Quijada wrote that his "greater goal" was "to attempt the creation of what human beings, left to their own devices, would never create naturally, but rather only by conscious intellectual effort: an idealized language whose aim is the highest possible degree of logic, efficiency, detail, and accuracy in cognitive expression via spoken human language, while minimizing the ambiguity, vagueness, illogic, redundancy, polysemy (multiple meanings) and overall arbitrariness that is seemingly ubiquitous in natural human language."
>
> [People love the idea; he gains a huge following]
>
> If you imagine all the possible notions, ideas, beliefs, and statements that a human mind could ever express, Ithkuil provides a precise set of coördinates for pinpointing any of those thoughts. The final version of Ithkuil, which Quijada published in 2011, has twenty-two grammatical categories for verbs, compared with the six – tense, aspect, person, number, mood, and voice – that exist in English. Eighteen hundred distinct suffixes further refine a speaker's intent. Through a process of laborious conjugation that would befuddle even the most competent Latin grammarian, Ithkuil requires a speaker to home in on the exact idea he means to express, and attempts to remove any possibility for vagueness.
>
> Human interactions are governed by a set of implicit codes that can sometimes seem frustratingly opaque, and whose misreading can quickly put you on the outside looking in. Irony, metaphor, ambiguity: these are the ingenious instruments that allow us to mean more than we say. But in Ithkuil ambiguity is quashed in the interest of making all that is implicit explicit. An ironic statement is tagged with the verbal affix 'kçç. Hyperbolic statements are inflected by the letter 'm.

Partee (1995:336):

> it is also worth noting that as one studies how vagueness works in more detail, one quickly overcomes the common prejudice that vagueness is always a bad thing, that it is some kind of "defect" of natural language.

[1] http://www.newyorker.com/reporting/2012/12/24/121224fa_fact_foer?currentPage=all

2 Vagueness as a response to a complex world



World color survey: `https://www1.icsi.berkeley.edu/wcs/`

(Labov 1973)

`https://xkcd.com/1070/`

Is vagueness epistemic (a reflection of our partial knowledge of what are actually crisp concepts) or metaphysical? It's very difficult to tease these apart.

3 Context dependence

(1) a. George the tortoise is fast.
b. Usain Bolt is fast.

(2) a. My 2-year-old son built a really tall snowman yesterday. (Partee 1995:331)
b. The D.U. fraternity brothers built a really tall snowman last weekend.

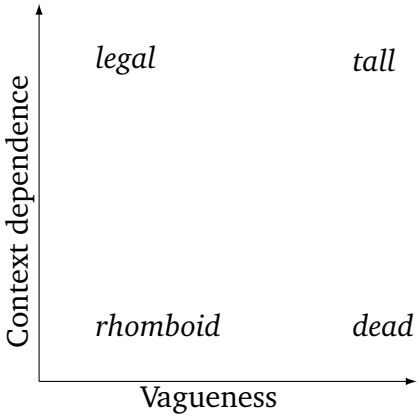
The *comparison class* is the set of things used to make judgments like these. The standards will be set relative to the comparison class. The comparison class is often partly indicated linguistically but generally needs to be inferred from context. Consider the different senses of *expensive BMW* as 'expensive for a BMW' and 'expensive for a car' (Kennedy 2007).

(3) a. $[\![\textit{few}]\!] = \lambda X\Big(\lambda Y\big(\mathsf{T} \text{ if } |X \cap Y| < j, \text{ else } \mathsf{F}\big)\Big)$

b. $[\![\textit{many}]\!] = \lambda X\Big(\lambda Y\big(\mathsf{T} \text{ if } |X \cap Y| > k, \text{ else } \mathsf{F}\big)\Big)$

c. $[\![\textit{approximately 10}]\!] = \lambda X\Big(\lambda Y\big(\mathsf{T} \text{ if } |X \cap Y| \approx 10, \text{ else } \mathsf{F}\big)\Big)$

d. $[\![\textit{almost no}]\!] = \lambda X\Big(\lambda Y\big(\mathsf{T} \text{ if } |X \cap Y| \approx 0, \text{ else } \mathsf{F}\big)\Big)$



"Even the line between vague and nonvague predicates is vague; a concept may count as sharp for most purposes but vague relative to the demands of scientific or legal or philosophical argument. Probably almost every predicate is both vague and context-dependent to some degree." (Partee 1995:332)

4 Vagueness vs. generality

Vagueness, in our technical sense, is not merely speaking in general terms. For example, *some numbers are prime* is not vague; rather, it is merely a very general claim. By contrast, *George is fast for a tortoise of his species* is a pretty specific claim, but one that is very vague.

There is, of course, a usage of *vague* outside of linguistics that means something like 'speaking in very general terms", but we won't use *vague* in this way in our discussions.

5 Vagueness vs. prototypicality

A *prototype* is a canonical instance of a class, in some sense. Prototypes are sometimes called *exemplars* of their classes. For example, a bluebird may be considered a prototypical bird, at least in North America. By contrast, a penguin is not a prototypical bird. However, a penguin is still unambiguously a bird, and thus it is not a vague instance. Compare this with, for example, the cups/mugs on the previous page. Item 10 seems like a prototpical mug, whereas Item 17 is a vague case – there is likely doubt about whether it is a mug at all.

6 Vagueness vs. ambiguity

Ambiguities are discrete choices between options. For example, *crane* is ambiguous between a 'bird' sense and a 'machine' sense. There is not really a gray area between these two senses. They are just different senses.

Similarly, *tall* is ambiguous between an adjective that means 'demanding' (*tall order*) and an adjective that describes height. Both senses are vague and take on different vague standards depending on context, but there isn't gray area between the two distinct senses.

Lakoff (1970) uses ellipsis to help distinguish the two:

(4) Chris saw a crane, and Kathryn did too.

a. *Possible*: Chris saw a bird and Kathryn saw a bird

b. *Possible*: Chris saw a machine and Kathryn saw a machine

c. *Impossible*: Chris saw a bird and Kathryn saw a machine

d. *Impossible*: Chris saw a machine and Kathryn saw a bird

(5) Usain Bolt is fast, and George the tortoise is too.

Possible: Both are fast relative to their very different comparison classes

Where it is hard to tell what to make of these examples, it is often because it's hard to tell whether we are dealing with ambiguity or vagueness:

(6) a. The beer was flat, and Chris's singing was too.

b. "You held your breath, and the door for me." (Alanis Morissette, 'Head over feet')

7 Vagueness and the Sorites Paradox

The gray area for vague predicates can be exploited to construct paradoxical arguments:

(7) a. 12:01 is noonish.

b. For any time t, if t is noonish, then t plus 1 minute is noonish.

c. Therefore, 11:59 pm is noonish.

(8) a. A $9 cup of coffee is expensive (for a cup of coffee).

b. Any cup of coffee that costs 1 cent less than an expensive cup of coffee is expensive (for a cup of coffee).

c. Therefore, any free cup of coffee is expensive. (Kennedy 2007)

(9) "one hair on his head counts as bald", "10,000 grains of sand is a heap", ...

Lassiter (2011): People will assign probabilities to the Sorites statements in ways that reflect increased uncertainty that eventually turns into certainty that the statements are false.

References

Kennedy, Christopher. 2007. Vagueness and grammar: The semantics of relative and absolute gradable adjective. *Linguistics and Philosophy* 30(1). 1–45.

Labov, William. 1973. The boundaries of words and their meanings. In C.-J. Bailey & Roger W. Shuy (eds.), *New ways of analyzing variation in English*, 340–373. Georgetown University Press.

Lakoff, George. 1970. Global rules. *Language* 46. 627–639.

Lassiter, Daniel. 2011. Vagueness as probabilistic linguistic knowledge. In Rick Nouwen, Hans-Christian Schmitz, Robert van Rooij & Uli Sauerland (eds.), *Vagueness in communication*, Berlin: Springer.

Partee, Barbara H. 1995. Lexical semantics and compositionality. In Lila R. Gleitman & Mark Liberman (eds.), *Invitation to cognitive science*, vol. 1, 311–360. Cambridge, MA: MIT Press.