Annotated based on the in-class discussion

On reading Syrett et al. 2009
Chris Potts, Ling 130a/230a: Introduction to semantics and pragmatics, Winter 2018
Jan 18

1 Background and requirements

Syrett et al. (2009) provide experimental evidence for the theory of gradable adjectives developed by Kennedy & McNally (2005) and Kennedy (2007). The paper reports on a number of experiments with both children and adults. The whole paper is worth reading, but we are going to focus just on experiment 1 (section 2, the only required section). This is partly because we are short on time and partly because the paper employs symbols and terminology that we haven’t seen yet. The goal of this handout is to fill in some background details and try to articulate why the researchers undertook this set of experiments.

2 Scale structure: the central hypothesis

Scale structure (Kennedy & McNally 2005)

- totally open: _____ tall, short
- lower closed: ●____ wet, bent
- upper closed: ______ pure, straight
- totally closed: ●______ opaque, open

Scale structure throughout One might be tempted to treat the closed-scale items as simple properties like married or atomic. However, even they have true scale structure: (i) they can be modified by very, and (ii) they can appear in comparatives (Kennedy & McNally 2005:§1; Kennedy 2007:§3.1).

Noteworthy contrast:

For adjectives with totally open scales, we need to set a contextual standard in order to figure out which things the adjective is true or false of. This is a pragmatic challenge because the standard can be set in very different places, depending on the context -- someone says Kim is tall, and you need to know what the standard for tallness is to figure out what they are actually claiming about Kim.

For partially or totally closed scales, we don’t need to set this kind of contextual standard, because we use the endpoint(s). For example, if something has some water on it (meets the minimal standard for wetness), then it’s wet. If something is perfectly straight, then it counts as straight, else it’s not straight.

That pattern for partially or totally closed scales can lead one to think that they aren’t gradable at all. However, phrases like A is wetter than B or A is straighter than B show that the properties are still gradable -- one thing can have more or less of the relevant property than another. (Here, we should get a contrast with adjectives like atomic, which are not gradable, though they can be coaxed into being gradable, so the issue is somewhat complex.)

Possibly true: when adjectives like pregnant or dead are coaxed into gradable uses, they are closed scale. For example, even a little bit dead is dead, but we can still make sense of A is deader than B in some contexts.
Adverbs for distinguishing scales (Kennedy & McNally 2005:§3; Kennedy 2007:§4.2)

- Maximaliy: completely, fully, totally, absolutely, 100%, perfectly, ...
- Proportion: half, mostly, most of the way, two-thirds, three-sevenths, ...
- Minimality: slightly, somewhat, partially, ...

**Acquisition angle on the adverbs**  Syrett & Lidz (2010): 30-month-olds “appear to be aware of such distributional differences and recruit them in word learning” (p. 258).

<table>
<thead>
<tr>
<th>Adverb</th>
<th>Totally open</th>
<th>Totally closed</th>
<th>Upper closed</th>
<th>Lower closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximaliy</td>
<td>*</td>
<td>✓</td>
<td>✓</td>
<td>*</td>
</tr>
<tr>
<td>Proportion</td>
<td>*</td>
<td>✓</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Minimality</td>
<td>*</td>
<td>✓</td>
<td>*</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 1: Summary of adverb patterns. A * means ungrammatical or at least very unusual, and a ✓ means grammatical/normal. The * combinations are ruled out semantically. For example, proportion adverbs require upper and lower ends, so no adjective could allow them but disallow maximality or minimality adjectives. Similarity, no adjective could allow maximality and minimality adverbs without also allowing proportion adverbs.

The totally open pattern:

* completely tall (this would require some maximal notion of tallness, which doesn't exist, so the phrase sounds marked)
* two-thirds all (this sounds especially weird because it requires both a maximal and a minimal notion of tallness, so that we can find the two-thirds point)
?slightly tall (this is a bit marked but perhaps okay, as long as we're willing to say that being near the lower-bound threshold for tall in the context will count)

The totally closed pattern (all the examples sound fine)

completely closed
two-thirds closed
slightly closed

Now, people's examples in class brought out that the above is slightly idealized, in that it assumes that the nature of the scale for each adjective is full determined by the context. In fact, it seems to be context dependent, and this can change intuitions.

For example, suppose I am holding a pipe that is bent like this:
And our agreed-upon goal is to make this pipe straight. Then, since we're definitely not going to bend the pipe any more than it already is, its current state might count as an endpoint, and we'll find that we can sensibly say things like it's now two-thirds bent or it's now two-thirds straight.

Similarly, if we agree, for an object, that it has a maximal saturation point, then wet will start to behave like a fully closed-scale adjective. And, as a speaker, I could signal to you that I take us to be in such a context by saying something like this is now 100% wet.

Another point of context dependence: what counts as satisfying the minimal or maximal standard? Is one water molecule really enough for wetness? It might depend on how strict we need to be. Similarly, nothing we encounter in the world is really and truly straight, but we ignore a lot of that imprecision most of the time.
3 Understanding the experiment

As before, I've formulated some questions aimed at helping to get you focused on what's important for our discussion. You should keep studying section 2 of Syrett et al. 2009 until you can answer all of them.

(1) Make sure that you understand the experimental design well enough to actually try out the crucial conditions on a friend.

(2) What assumptions do Syrett et al. make about the felicity conditions of the definite determiner?

Their assumption is that the ADJ one is defined if and only if there is exactly one object with property ADJ in the tiny little context established by the experimental condition. This is closely linked to our experiment with definite descriptions: the demand isn't that there be one such object in the world, or even in the whole experimental situation, but rather just in the scene established by the two objects.

For open scale adjectives, people are charitable: they set the threshold in such a way that one of the objects has ADJ and the other doesn't. So any difference along the dimension of ADJ is likely to suffice. For adjectives with endpoints, this flexibility doesn't exist -- no threshold needs to be set -- so many more of the requests are perceived as unfulfillable.

(3) What role do the control examples in Table 1 play in the experiment?

(4) How well do the results of our in-class experiment align with those of Syrett et al. for (i) totally-open adjectives, (ii) lower-closed adjectives, and (iii) upper-closed adjectives?

Extremely well, but there has been variation year-to-year, and the experiment as I gave might have some confounds, so it's smart to remain a bit skeptical. My write-up tries to identify some of these areas of uncertainty by comparing with previous years.
References


