

Re: Aaron Sloman's "The Irrelevance of Turing Machines to AI" article

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Sergio Navega wrote:

[...]

- > *I agree, but there's an important point to be made. The domains where*
- > *children usually refine their discrimination abilities are linked to*
- > *conceptual categories (as opposed to perceptual categories).*
- > *Successive conceptually refined categories (such as "edible stuff",*
- > *and then "food", later "liquid food" and finally "milk") are categories*
- > *that are refined mostly because of top/down processes. The perception of*
- > *stimuli in these cases may be the same for an adult and an infant,*
- > *but the former has developed these categories while the latter hasn't.*
- > *Perceptual categories (or bottom-up categories) are those which seek*
- > *for similarity and clustering based on the raw elements captured by*
- > *the senses. After some time, our brain becomes unable to discriminate*
- > *all the sort of things that an infant appears to be discriminating*
- > *(the example of the japanese children is evidence of such a thing).*
- >
- > *Sergio Navega.*

Again, granted that "categorisation" takes place. But what, exactly, is it? I submit it's behaviour. There is some pre-linguistic categorisation going on, evidenced for example via the peekaboo game, and experiments that are in carefully controlled versions of that game. There seems to be no reason to assume that this stops with adulthood, although it would be harder to detect, since adults have this habit of talking. :-)

But mostly, categorisation is language use. The question is, how do I get you to "understand" a new use of the language? How do I arrive at that new use? The first question is easier to answer than the second – I train you to use the language the same way I do, by, for example, "agreeing with what you say" in response to my speech. **

The second question is harder. Introspection and reports on "how I feel" suggest there are unpleasant feelings attached to certain language uses, and that these feelings may change to pleasant ones when a new use is produced. Euphemisms seems to work this way, for example. (That is, the discriminator in this case is a feeling. That feelings act as

reinforcers should be obvious.)

Metaphor is a little harder, but it seems to be a case of experimenting with different usages until that positive feeling is evoked. The fact that "poetry programs" can produce interesting and striking metaphors by semi-random combinations of words supports this explanation: we, the readers of those random collocations, judge them as interesting/etc. So do reports by poets, who say they "search for" the right phrase/image/etc, ie, they try out different words and phrases until one "sounds right." That's a remarkably behaviorist account, allowing for the non-technical terminology.

** When I was first teaching, a question that vexed me from the beginning was, How do I know that a student has understood a text? The answer is, of course, that the only evidence we have is his or her language about the text. Tests and exams are designed to elicit such language, but the relationship between text/exam answers and understanding a text is obscure, to put it mildly.