This page delves a bit more into the philosophical issues associated with mental categories, and their apparent lack of obvious "truth" value, and what the implications of this might be.

**IMPORTANT DISCLAIMER:** this will probably be an interesting topic for various folks and certainly a lot has been written on this topic in the philosophical literature. At this point, however, the views represented here are those of the first author and perhaps a few other co-authors. Looking forward to building this up in the future. Also, this is not yet really written so at this point, there is just the key take-home message.

- As we noted in the main chapter, it seems that mental categories are shaped by learning, and social interaction via language etc, and that there is likely some kind of underlying regularity that drives our ability to form stable internal category representations, but really, they are not "grounded" in any solid kind of "reality".
- This accords with many facts about human cognition: it is highly fallible, people believe all manner of completely wrong things all the time (and often hold these beliefs extremely dearly..), etc.
- But it is somewhat unsettling to embrace this view, as it seems to put one square in the full "cultural relativism" camp, with no hope of ever having any sense "universal truth". This makes objectivists puke, and is generally not great for scientists, who seek to discover the "true nature of the world".
- However, there is a very good solution to this problem, even though it is in no way "absolute" and certainly takes a lot of time and patience (and cooperation among individuals). It also happens to be the bedrock of science. This solution is to develop an ever-broader self-consistent set of mental categories, based on replicable experiences that can be shared across individuals. In short, any given mental category you might happen to develop has a good chance of being wrong, but if you and a group of other people can all agree on a very reliable set of basic experiences and ways of categorizing those that is self-consistent over time and across the whole set of such categories, then it seems quite likely that these are "true".
- In scientific terms, the "experiences" are experiments that can be replicated across different labs. And the mental categories are scientific theories which have to be consistent not only with a given set of experiments, but also with each other, and all the other experiments that support other such theories.
- At this point in time, there is a collective understanding in science that encompasses a great deal of phenomena in the natural world, e.g., the "standard model" in physics, and all of chemistry, biology, molecular genetics, etc. Higher-level more complex phenomena such as human cognition and neuroscience have a lot more unresolved issues, but progress is being made and people would probably be surprised about how many important things for which there really is a strong overall consensus. But of course, no one individual knows all this stuff. But anyway, it is there for the knowing, and seems to constitute the closest approximation to the truth that we're going to get.
- Short answer: if you want to find the truth, become a scientist! If not, be content to just make stuff up. The brain is very good at it, and it might serve you just fine. If you don't want to go all the way to being a scientist, you can also try to just think about your different mental categories (beliefs) and see which ones seem consistent with each other and which ones don't. Then, try to resolve the inconsistencies, in a way that best matches your actual physical experiences in the real world. In so doing, you will likely improve the quality of your mental categories, making them closer approximations to some kind of underlying truth!
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