

< RATIONALITY AND PHILOSOPHY >

Concepts Don't Work That Way

by **lukeprog** 27th Sep 2011

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Part of the sequence: Rationality and Philosophy

Philosophy in the Flesh, by George Lakoff and Mark Johnson, opens with a bang:

The mind is inherently embodied. Thought is mostly unconscious. Abstract concepts are largely metaphorical.

These are three major findings of cognitive science. More than two millennia of *a priori* philosophical speculation about these aspects of reason are over. Because of these discoveries, philosophy can never be the same again.

When taken together and considered in detail, these three findings... are inconsistent with central parts of... analytic philosophy...

This book asks: What would happen if we started with these empirical discoveries about the nature of mind and constructed philosophy anew?

...A serious appreciation of cognitive science requires us to rethink philosophy from the beginning, in a way that would put it more in touch with the reality of how we think.

So what *would* happen if we dropped all philosophical methods that were developed when we had a Cartesian view of the mind and of reason, and instead invented philosophy anew given what we now know about the physical processes that produce human reasoning?

What emerges is a philosophy close to the bone. A philosophical perspective based on our empirical understanding of the embodiment of mind is a philosophy in the flesh, a philosophy that takes account of what we most basically *are* and *can be*.

Philosophy is a diseased discipline, but good philosophy can (and must) be done. I'd like to explore how one can do good philosophy, in part by taking cognitive science seriously.

Conceptual Analysis

Let me begin with a quick, easy example of how cognitive science can inform our philosophical methodology. The example below shouldn't surprise anyone who has read *A Human's Guide to Words*, but it does illustrate how misguided thousands of philosophical works can be due to an ignorance of cognitive science.

Consider what may be the central method of 20th century analytic philosophy: *conceptual analysis*. In its standard form, conceptual analysis assumes (Ramsey 1992) the "classical view" of concepts, that a "concept *C* has definitional structure in that it is composed of simpler concepts that express necessary and sufficient conditions for falling under *C*." For example, the concept bachelor has the constituents unmarried and man. Something falls under the concept bachelor if and only if it is an unmarried man.

Conceptual analysis, then, is the attempt to examine our intuitive concepts and arrive at definitions (in terms of necessary and sufficient conditions) that capture the meaning of those concepts. De Paul & Ramsey (1999) explain:

Anyone familiar with Plato's dialogues knows how [conceptual analysis] is conducted. We see Socrates encounter someone who claims to have figured out the true essence of some abstract notion... the person puts forward a definition or analysis of the notion in the form of necessary and sufficient conditions that are thought to capture all and only instances of the concept in question. Socrates then refutes his interlocutor's definition of the concept by pointing out various counterexamples...

For example, in Book I of the *Republic*, when Cephalus defines justice in a way that requires the returning of property and total honesty, Socrates responds by pointing out that it would be unjust to return weapons to a person who had gone mad or to tell the whole truth to such a person.... [The] proposed analysis is rejected because it fails to capture our intuitive judgments about the nature of justice.

After a proposed analysis or definition is overturned by an intuitive counterexample, the idea is to revise or replace the analysis with one that is not subject to the

counterexample. Counterexamples to the new analysis are sought, the analysis revised if any counterexamples are found, and so on...

The practice continues even today. Consider the conceptual analysis of *knowledge*. For centuries, knowledge was considered by most to be *justified true belief* (JTB). If Susan believed X but X wasn't true, then Susan couldn't be said to have knowledge of X. Likewise, if X was true but Susan didn't *believe* X, then she didn't have knowledge of X. And if Susan believed X and X was true but Susan had no justification for believing X, then she didn't really have "knowledge," she just had an accidentally true belief. But if Susan had justified true belief of X, then she *did* have knowledge of X.

And then Gettier (1963) offered some famous counterexamples to this analysis of knowledge. Here is a later counterexample, summarized by Zagzebski (1994):

...imagine that you are driving through a region in which, unknown to you, the inhabitants have erected three barn facades for each real barn in an effort to make themselves look more prosperous. Your eyesight is normal and reliable enough in ordinary circumstances to spot a barn from the road. But in this case the fake barns are indistinguishable from the real barns at such a distance. As you look at a real barn you form the belief 'That's a fine barn'. The belief is true and justified, but [intuitively, it isn't knowledge].

As in most counterexamples to the JTB analysis of knowledge, the counterexample to JTB arises due to "accidents" in the scenario:

It is only an accident that visual faculties normally reliable in this sort of situation are not reliable in this particular situation; and it is another accident that you happened to be looking at a real barn and hit on the truth anyway... the [counter-example] arises because an accident of bad luck is cancelled out by an accident of good luck.

A cottage industry sprung up around these "Gettier problems," with philosophers proposing new sets of necessary and sufficient conditions for knowledge, and other philosophers raising counter-examples to them. Weatherson (2003) described this circus as "the analysis of knowledge merry-go-round."

My purpose here is not to examine Gettier problems in particular, but merely to show that the construction of conceptual analyses in terms of necessary and sufficient conditions is *mainstream philosophical practice*, and has been for a long time.

Now, let me explain how cognitive science undermines this mainstream philosophical practice.

Concepts in the Brain

The problem is that the brain doesn't store concepts in terms of necessary and sufficient conditions, so philosophers have been using their intuitions to search for something that isn't there. No wonder philosophers have, for over a century, failed to produce a single, successful, non-trivial conceptual analysis (Fodor 1981; Mills 2008).

How do psychologists know the brain doesn't work this way? Murphy (2002, p. 16) writes:

The groundbreaking work of Eleanor Rosch in the 1970s essentially killed the classical view, so that it is not now the theory of any actual [scientific] researcher...

But before we get to Rosch, let's look at a different experiment:

McCloskey and Glucksberg (1978)... found that when people were asked to make repeated category judgments such as "Is an olive a fruit?" or "Is a dog an animal?" there was a subset of items that individual subjects changed their minds about. That is, if you said that an olive was a fruit on one day, two weeks later you might give the opposite answer. Naturally, subjects did not do this for cases like "Is a dog an animal?" or "Is a rose an animal?" But they did change their minds on borderline cases, such as olive-fruit, and curtains-furniture. In fact, for items that were intermediate between clear members and clear nonmembers, McCloskey and Glucksberg's subjects changed their mind 22% of the time. This may be compared to inconsistent decisions of under 3% for the best examples and clear nonmembers... Thus, the changes in subjects' decisions do not reflect an overall inconsistency or lack of attention, but a bona fide uncertainty about the borderline members. In short, many concepts are not clear-cut. There are some items that... seem to be "kind of" members. (Mills 2002, p. 20)

Category-membership for concepts in the human brain is not a yes/no affair, as the “necessary and sufficient conditions” approach of the classical view assumes. Instead, category membership is *fuzzy*.

Another problem for the classical view is raised by *typicality effects*:

Think of a fish, any fish. Did you think of something like a trout or a shark, or did you think of an eel or a flounder? Most people would admit to thinking of something like the first: a torpedo-shaped object with small fins, bilaterally symmetrical, which swims in the water by moving its tail from side to side. Eels are much longer, and they slither; flounders are also differently shaped, aren't symmetrical, and move by waving their body in the vertical dimension. Although all of these things are technically fish, they do not all seem to be equally good examples of fish. The *typical* category members are the good examples — what you normally think of when you think of the category. The *atypical* objects are ones that are known to be members but that are unusual in some way... The classical view does not have any way of distinguishing typical and atypical category members. Since all the items in the category have met the definition's criteria, all are category members.

...The simplest way to demonstrate this phenomenon is simply to ask people to rate items on how typical they think each item is of a category. So, you could give people a list of fish and ask them to rate how typical each one is of the category fish. Rosch (1975) did this task for 10 categories and looked to see how much subjects agreed with one another. She discovered that the reliability of typicality ratings was an extremely high .97 (where 1.0 would be perfect agreement)... In short, people agree that a trout is a typical fish and an eel is an atypical one. (Mills 2002, p. 22)

So people agree that some items are more typical category members than others, but do these typicality effects manifest in normal cognition and behavior?

Yes, they do.

Rips, Shoben, and Smith (1973) found that the ease with which people judged category membership depended on typicality. For example, people find it very easy to affirm that a robin is a bird but are much slower to affirm that a chicken (a less typical item) is a bird. This finding has also been found with visual stimuli: Identifying a picture of a chicken as a bird takes longer than identifying a pictured robin (Murphy

and Brownell 1985; Smith, Balzano, and Walker 1978). The influence of typicality is not just in identifying items as category members — it also occurs with the production of items from a category. Battig and Montague (1969) performed a very large norming study in which subjects were given category names, like furniture or precious stone and had to produce examples of these categories. These data are still used today in choosing stimuli for experiments (though they are limited, as a number of common categories were not included). Mervis, Catlin and Rosch (1976) showed that the items that were most often produced in response to the category names were the ones rated as typical (by other subjects). In fact, the average correlation of typicality and production frequency across categories was .63, which is quite high given all the other variables that affect production.

When people learn artificial categories, they tend to learn the typical items before the atypical ones (Rosch, Simpson, and Miller 1976). Furthermore, learning is faster if subjects are taught on mostly typical items than if they are taught on atypical items (Mervis and Pani 1980; Posner and Keele 1968). Thus, typicality is not just a feeling that people have about some items (“trout good; eels bad”) — it is important to the initial learning of the category in a number of respects...

Learning is not the end of the influence, however. Typical items are more useful for inferences about category members. For example, imagine that you heard that eagles had caught some disease. How likely do you think it would be to spread to other birds? Now suppose that it turned out to be larks or robins who caught the disease. Rips (1975) found that people were more likely to infer that other birds would catch the disease when a typical bird, like robins, had it than when an atypical one, like eagles, had it... (Murphy 2002, p. 23)

(If you want further evidence of typicality effects on cognition, see Murphy [2002] and Hampton [2008].)

The classical view of concepts, with its binary category membership, cannot explain typicality effects.

So the classical view of concepts must be rejected, along with any version of conceptual analysis that depends upon it. (If you doubt that many philosophers have done work dependent on the classical view of concepts, see here).

To be fair, quite a few philosophers have now given up on the classical view of concepts and the “necessary and sufficient conditions” approach to conceptual analysis. And of course there are other reasons that seeking definitions stipulated as necessary and sufficient conditions can be useful. But I wanted to begin with a clear and “settled” case of how cognitive science can undermine a particular philosophical practice and require that we ask and answer philosophical questions differently.

Philosophy by humans must respect the cognitive science of how humans reason.

Next post: Living Metaphorically

Previous post: When Intuitions Are Useful

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92 comments, sorted by top scoring

Some comments are truncated due to high volume. (⌘F to expand all)

 Change default truncation settings[-] **Scott Alexander** 12y  < 51 >

I always find it a red flag when it seems like an entire group of highly-educated people is doing something ridiculously stupid. If assuming the brain thinks in terms of necessary-and-sufficient would be really stupid, maybe that's not what conceptual analysts are doing.

The idea that our brain's fuzzy type-1 thinking can be translated into precise type-2 thinking is one of the foundations of science and mathematics, not to mention philosophy. I'd been drawing and seeing circles for years as a child before I learned that they were the 2-D set of points equidistant from a center point, but this latter definition accurately captures a necessary and sufficient condition for circles. Anyone who says "your brain doesn't really process circles based on that definition, it's just pattern-matching other circles you've seen" would be missing the point.

And this process sometimes works even with natural categories. Wikipedia defines "birds" as "feathered, winged, bipedal, endothermic (warm-blooded), egg-laying, vertebrate animals", and as far as I can tell, this is necessary and sufficient for birds (some sources say kiwis are wingless, but others say they have sm... (read more)

[-] **lukeprog** 12y  < 10 >

So even if our brains don't naturally think in terms of necessary-and-sufficient, it's not immediately obvious that it's stupid and impossible to try to come up with necessary-and-sufficient conditions for our categories.

I haven't claimed this, and in fact have specifically denied it°. But it is apparently a common reading of my post, so I've added a sentence toward the end to make this clear. Sorry about that.

maybe that's not what conceptual analysts are doing.

I think it is, in many cases. Maybe the clearest argument for this is from Ramsey (1992). I'll quote an extended passage below, though you may want to skip to the part that reads: "At first blush, it might seem a little odd to suppose that conceptual analysis involves any presuppositions about the way our minds work..."

[Discussions of the conflict between conceptual analysis and the psychology of concepts] have been floating around philosophical circles for some time. Perhaps the best known expression of these sentiments is Wittgenstein's discussion of family resemblance concepts in the *Investigations*, though similar ideas can be found in the writings of other philosophers, including Hilary Putnam (1962), P

... (read more)

8 **lukeprog** 12y BTW, Sandin (2006) makes the (correct) reply to Ramsey that seeking (stipulated) nec...

[-] **Mitchell_Porter** 12y  < 21 >

Why can't conceptual analysis be regarded as "Coherent Extrapolated Cognition"? Just because people are vague in their thinking doesn't mean that clarity is a vice.

ETA: I'm going to try to stay away from LW for at least a month, in the hope that this sequence will be finished by the time I revisit. I know I'm going to fundamentally disagree with a lot of it, but better to wait until it's done

rather than quarrel with it piecemeal.

[–] **roystgnr** 12y  < 13 >

I'd much rather see you quarrel with things piecemeal. "This long chain of logic is wrong" is much less satisfying to me than "This step here from lemma 4 to theorem 5 is wrong". The former may make for a better-sounding essay, but it's also harder to distinguish from rationalization and harder for readers to verify.

Also, why think of it as a "quarrel" at all? If lukeprog is making mistakes that are incidental to his main theses, then convincing him of that as soon as possible will give him more time to revise and improve his work. If he's making mistakes that are integral to his main theses, then convincing him of that as soon as possible will avoid wasted time finishing a red-herring sequence. And even if he's not really making mistakes at all, then letting him know what apparent-mistakes are being perceived will help him improve the clarity of his work. You don't seem to have difficulty expressing criticism in a non-antagonistic way, and polite intelligent criticism is a positive thing, even for the (epistemically rational) person whose ideas are being criticized.

5 **Manfred** 12y Because if you take a bunch of human brains and average their conception of "justice," y...

4 **Vaniver** 12y This comparison makes me more pessimistic about CEV.

1 **Solvent** 12y Why?

5 **Vaniver** 12y Because if CEV is the metaethical analog of conceptual analysis, then it seems more lik...

2 **lukeprog** 12y A sequence done in one month? Clearly, you've haven't been paying attention to my oth...

0 **fortyeridania** 12y You're going to skip the whole sequence? As long as your quarrels relate to the sub...

[–] **kilobug** 12y  < 9 >

Yes, nothing much new for LW readers (since it's mostly covered by the "human guide to words" sequence), but still important point to re-harsh, and get people to read even if they are scared by the sequences. It's so painful to argue with someone who thinks words are precisely defined as Aristotle classes, and say things like "I've nothing against gay couples, but gay marriage is just impossible by definition". And yet when asked "what is a mother?" they'll answer "someone who gave birth to a child" and when asked &... (read more)

[–] **Jayson_Virissimo** 12y  < 8 >

"I think good philosophy basically just is cognitive science, plus **math**."

What is mathematics, but the purest form of conceptual analysis?

-1 **dxu** 8y Math is rigorous. Most conceptual analysis is not. EDIT: Also of note is the fact that mathemati...

0 **Jayson_Virissimo** 8y Are you claiming that math is not a kind of conceptual analysis or just that the ...

0 **dxu** 8y The second, as well as observing that as far as the task of describing what philosophers actu...

[–] **Protagoras** 12y  < 8 >

Though philosophers have certainly not always been clear about what they are doing, much of the time they are probably better described as trying to find better concepts (better in respects including being clearer and more

sharply defined) rather than trying to figure out what concepts we currently have. This is certainly true of Plato; the counter-examples in Plato aren't meant to show that, for example, Cephalus isn't accurately describing his own concept of justice, they're meant to show that the concept of justice Cephalus has is problematic and better... (read more)

0 **lukeprog** 12y As I said in my response to Mitchell Porter, I'll get to reflective equilibrium later. This her...

[-] **Bum** 12y < 6 >

I think we can exaggerate the impact of this sort of cognitive science on philosophy. It's very important IF we start from the assumption, as most philosophy has since the 17th century, that we won't figure anything out until we can figure out how the mind thinks and what sorts of things it can think about. That is certainly one way to do philosophy, and still an important branch of philosophy today, but by no means is it any longer considered to be First Philosophy. For example, it's hard to see how much of Lakoff's work will be relevant to contemporary m... (read more)

[-] **CG_Morton** 12y < 6 >

I think this is a little unfair. For example, I know exactly what the category 'fish' contains. It contains eels and it contains flounders, without question. If someone gives me a new creature, there are things that I can do to ascertain whether it is a fish. The only question is how quickly I could do this.

We pattern-match on 'has fins', 'moves via tail', etc. because we can do that fast, and because animals with those traits are likely to share other traits like 'is bilaterally symmetrical' (and perhaps 'disease is more likely to be communicable from similarly shaped creatures'). But that doesn't mean the hard-and-fast 'fish' category is meaningless; there is a reason dolphins aren't fish.

6 **roystgnr** 12y I'm guessing you'd quickly say "yes" for Panderichthys and "no" for Acanthostega... but wh...

6 **lukeprog** 12y Are you talking about the biologist's stipulated definition of "fish"? This is different than ...

-1 **CG_Morton** 12y I see what you're getting at with the intuitive concept (and philosophy matching h...

6 **lukeprog** 12y Sure. But that normative claim is different than the descriptive claim I made about co...

4 **Morendil** 12y But which philosopher(s) are you claiming made the opposite, false descriptive clai...

1 **lukeprog** 12y Tons of 'em. See here.

5 **Morendil** 12y I looked where you asked me to look, and I still don't know who you're referring...

-1 **lukeprog** 12y The link I sent you to contains the argument for why it is that many common f...

8 **Morendil** 12y That doesn't answer my question. I don't want to rush to cry "logical rudenes...

3 **lukeprog** 12y Oh, this is totally different than the objection I thought you were making. So ...

0 **Yossarian** 12y "It's the map and not the territory," right? I may be way off base here, but i...

3 **scav** 12y It may not be a very good reason. To quote Wikipedia: In other words, there are probably fish...

-2 **jmmcd** 12y Good point. The initial experiment couldn't even have been carried out without the biolo...

[-] **Ronny Fernandez** 12y < 5 >

[Sorry about the length; my brain didn't want to stop. I'll break it up into a couple comments if need be.]

What if i interpret the above to show that philosophers should not do psychology? Certainly, figuring out the best way to reason has been as important in philosophy (if not more than) figuring out how we actually reason.

Sometimes philosophers screw it up and confuse a normative claim for a descriptive claim. Perhaps (and I am not committed to this as anything more than a possibility) classical Aristotelian categories are not the way we actually rep... (read more)

[–] **TheOtherDave** 12y   5 

Before going too far down this road, I'd like some attention given to the notion of approximation.

For example, consider two theories of category formation: CFT1: categories have necessary and sufficient conditions for membership, and to answer "Is X a Y?" we evaluate the truth-value of the conjunction of Y.conditions as applied to X.

CFT2: categories have prototypical members, and to answer "Is X a Y?" we evaluate the similarity of X to Y.prototype.

It's pretty easy to show, using more or less the arguments you present here, that CFT2 is... (read more)

[–] **wedrifid** 12y   5 

Philosophy by humans must respect the cognitive science of how humans reason.

But it need not and should not limit itself to muddled human thinking. Because we learned math.

This post (and the trend of lukeprog's posts) seem excessively focused on redefining philosophy to be default_human_thought++. Which basically makes a mockery of the whole "concepts already have their own fuzzy meaning and trying to redefine them arbitrarily is bullshit" idea.

You can make philosophy take into account cognitive science and the the average thinking habits of t... (read more)

[–] **DuncanS** 12y   5 

I do think that discovering that virtually all human concepts don't have cartesian definitions is a valuable step. I also can't think of a good way of discovering it other than what was actually done - lots of people try and try, and fail.

Along the way there were some successes too - maths turned out to work OK, and ideas like gravity and so on. The ones that did have cartesian definitions were so useful that we don't regard them as philosophy any more, which is a bit unfair. Philosophy gets to be the diseased bit - the bit that got left behind because nob... (read more)

0 **DSimon** 12y You're mostly limited to such definitions when it comes to deductive reasoning; inductive...

[–] **MarkusRamikin** 12y   5 

I would never have thought an eagle to be atypical as an example of a bird, am I in a minority about this?

0 **demented** 12y I feel the same way. In my case, I believe it's because I've been more exposed to eagles ...

2 **thomblake** 12y A gray bird with a red breast, referring to different species in different countries.

[-] **christina** 12y < 5 >

Upvoted for being clear, concise, and easy to read.

[-] **cogitoprime** 3y < 4 >

I found myself reading this book today thought I'd remembered someone on Less Wrong posting about it. So here I am.

I think your critique misses some really valid critiques provided by Lakoff of the entire rationalist project.

The sections on Quinne, Kahneman and Taversky(around p. 471) and around pages 15 and 105 are particularly good.

What your critique misses is that when you use the lens of cognitive science to critique Lakoff's philosophy is that the body of work you are drawing on is already saturated with and informed by the assumptions you are c... (read more)

[-] **antigonus** 12y < 4 >

Your crucial, unstated premise is that concepts with fuzzy application conditions can't or usually don't pick out determinate qualities or relations in the world. Because if they actually can pick out such qualities, then those qualities may turn out to be analyzable in terms of others, and conceptual analysts can just take themselves to be analyzing the semantic *reference* of our concepts rather than the confused jumble of neural events in which those concepts are actually stored.

Furthermore, that premise seems highly non-obvious to me. It impinges upon a ... (read more)

[-] **magfrump** 12y < 4 >

I very much think that framing the idea of "cognitive science plus math" as "the embodied mind" and "a challenge to classical western thought" is a good way to attract strong thinkers from previous contrarian fields like feminist studies who have some important insights but have a sharp divide with mainstream philosophy's analytic methods, but may not have the kind of concrete framework for getting back to practical problems.

[-] **Morendil** 12y < 3 >

I wanted to begin with a clear and “settled” case of how cognitive science can undermine a particular philosophical practice.

I'm not convinced you have done that; consider:

The problem is that the brain doesn't process music in terms of musical instruments, but in terms of acoustic spectra, so musicians have been using their intuitions to search for something that isn't there.

There is a disconnect there. If your "true rejection" of conceptual analysis is only based on implementation-level details of how concepts are stored in the brain, the... (read more)

2 **lukeprog** 12y Remember that I don't reject conceptual analysis in general, but only the flavor of analysi...

4 **Morendil** 12y If it is, it doesn't seem to me to be false by virtue of not corresponding to how the bra...

2 **lukeprog** 12y Ah. I can see how you might infer this from my post, but I definitely do not endorse t...

[-] **windmil** 12y   3 

Your link to dualism early on is missing a closing parenthesis. I had to click a whole extra button. Thought I might let you know and save others from this taxing ordeal. Also, in the second block quote, there might be a typo, "philosophy close to the hone," instead of "bone".

1 **lukeprog** 12y Fixed, thanks.

[-] **teageegeepea** 12y   2 

There was a cognitive scientist at Mixing Memory who had a skeptical take of some of Lakoff's views on metaphors and was doing a chapter-by-chapter analysis of one of his books, but then he disappeared off the face of the internet. Still have no idea what happened to him, shame if he died without presumably signing up for cryonics.

8 **Unnamed** 12y It looks like he is alive and well, but he has left the field and academia. Now he has a jo...


0 **teageegeepea** 12y Cool. I tried to do some googling based on first name and possible university but ...

1 **Nisan** 12y At least some of that skepticism is well-deserved. Lakoff and his coauthor Johnson deny the...

[-] **Jack** 12y   2 

Worth noting though that pre-cog sci philosophy didn't just take conceptual analysis for granted- there were plenty of dissenters. Also, as others have pointed out quite a bit of the history of philosophy consists of philosophers criticizing established conceptual analyses rather than trying to invent new ones.

Also worth noting that not all concepts are transparently finicky like 'fish' and 'justice'. Also, quite possibly: species, mass, time, object etc.

[-] **Carinthium** 12y   2 

To be fair, definitions in the conventional philosophical sense do have their uses- they can reduce or eliminate ambiguity when they can be adopted in practice (in law, for example). A theoretical humanity which did use the philosophical version of definitions would probably be more rational.

0 **[anonymous]** 12y That theoretical humanity would be so different as to make the comparison pointle...

[-] **Jim Stone** 3y   

A fairly influential philosopher named "Wittgenstein" made essentially this critique 70 years ago. Many philosophers still do conceptual analysis in terms of necessary and sufficient conditions, but few think the project will ever work perfectly for any natural language terms (though a 99% accurate categorization rate is often completely realistic even with only a few conditions). Even fewer think this is the way the brain learns and stores concepts.

Prototype theory is a much better theory of how we learn concepts, but it doesn't lend itself... (read more)

[-] **lukeprog** 12y   

Recent news on this topic.

[-] **asr** 12y   

I don't see that we can get away from conceptual analysis so easily. There are a whole lot of cases where we make commitments to particular doctrines, beliefs, promises and so forth, as expressed in words.

Law is all about using articulated definitions and natural-language rules to decide disputes. And we find ourselves using terms like "cause" and "knowledge" all the time in law. Such terms also show up in daily life -- if I tell somebody I will do the best I can, it's rather important to me that I understand how they're likely to und... (read more)

0 **billswift** 12y You seem to be confusing definitions and concepts. Definitions are our best verbal descri...

[-] **thomblake** 12y   

For reference, there is a field of study which purports to do this sort of thing, Neurophilosophy. Not to be confused with Neuro-philosophy from the Schrodinger's Cat Trilogy, which is merely the study of philosophy using brains.

0 **lukeprog** 12y Yup. Long-time fan of the Churchlands. Though, there are lots more who do cognitive-sci...

[-] **byrnema** 12y   

In its standard form, **conceptual analysis** assumes the “classical view” of concepts, that a “concept C has definitional structure in that it is composed of simpler concepts that express necessary and sufficient conditions for falling under C.”

I suspect that I am a bit slow on the uptake here, but I'm not sure what's not true. (Something was thought and now we know it isn't so?)

On the one hand, I understand that a set might be defined as a collections of objects satisfying just a handful of necessary and sufficient conditions, and that humans often think ... (read more)

4 **DSimon** 12y But there aren't any rules out there in the universe that define concepts; the concepts ar...

- 0 byrnema 12y The set of 'heaps' is an interesting example of a set. Do you suppose, given our sense o...
- 3 DSimon 12y Hm, that makes sense. For a similar fuzzy-quantity-border problem to what I was thin...
- 0 byrnema 12y Some of these words I have 'concepts' for, others I don't. If I don't have a concept fo...
- 2 DSimon 12y Hm, I see where you're coming from, and I agree with you so far as it goes when m...
- 2 byrnema 12y You've convinced me on the importance of fuzzy sets. I'm sure quick low-level in...
- 5 DSimon 12y Yes, strongly agreed. This idea makes me want to think of adjectives as tugging a ...
- 4 Desrtopa 12y Not that it particularly affects your point, but pterodactyls are not genetic pr...
- 4 DSimon 12y Whoops, didn't know that, thanks.
- 2 byrnema 12y Yeah, good point. I'm entirely convinced. Even for an apparently straight-forwa...
- 1 [anonymous] 12y Is there a concept of beauty? Is there a set containing everything that is beautiful an...
- 5 wedrifid 12y Yes. Next question.
- 1 byrnema 12y I don't think beauty is a 'good' concept in every day usage. Perhaps this is because it do...
- 1 [anonymous] 12y Then, if I'm not mistaken, the point being made here is that our idea of beauty is ...
- 4 Morendil 12y All that may be true - my beef is that we don't get that from cognitive science! Plain...
- 3 byrnema 12y Oh, my point was that (for me) 'beauty' isn't a concept but just a token that gets ba...
- 1 [anonymous] 12y Or it's any of myriad different sets. But yes, trying to standardize our terminol...
- 0 scav 12y I don't think you do have anything in your brain that defines a set, except when you for...
- 0 byrnema 12y In a way, I completely agree with you. I agree with you in the sense that I think yo...
- 1 lessdazed 12y http://lesswrong.com/lw/oi/mind_projection_fallacy/
- 5 DSimon 12y I'm voting this comment down, not because I don't think the link is relevant or useful (...)

[–] **Randolf** 12y [@](#) [←](#) -1 [→](#)

Eagles are lonely hunters who don't spend much time with other birds, are quite rare in numbers and only live in the wilderness. Robins however, are often seen near other birds, basically live everywhere and are also large in numbers. So mayhaps people choose Robin as the better disease spreader simply because Robin probably is the better disease spreader.

There are very many factors that may affect this kind of a test..What do you think about the following?

If you were told that planktons had caught a disease, how likely would you think it would spread amo... (read more)

[–] [anonymous] 12y [@](#) [←](#) -1 [→](#)

~~I find George Berkley philosophy of immaterialism quite interesting to the extent of welcoming an informed approach to the philosophy of mind. He further contended that "objects exist independently of mind is not testable or provable by the scientific method, because all objects we would wish to examine must enter our awareness in order to experiment on them."~~

~~Although I am a firm believer that philosophy is just the tools we use to understand our own limited conditioning and environment (adjusted to a moment in timeframe) tends to lean more tow... (read more)~~

[This comment is no longer endorsed by its author]

[–] **tetsuo55** 12y  < -2 > 

While reading this i got the idea that this article is attacking the current standards for “how to order things in nature”

I have two things to say in response:

1. Direct Instruction and i guess the scientific method in general both claim/prove that you can cut reality at the exact joints required to make only those hypotheses that explain the thing available. (So we can come up with unfalsifiable set of data on what a “red” is).
2. Only real data about a thing should be stored, flat things that say something concrete about the thing. Categorizing the thing in

... (read more)

4 **DSimon** 12y So if I follow: To record a fact like "has lungs" you first have to define "lungs". And then yo...

0 **tetsuo55** 12y Yes i think you understood what i meant. It is a recursive system where you keep defin...

0 **DSimon** 12y But, the fuzziness isn't necessarily a flaw at all; having more and less typical examples o...

Moderation Log