

But are they right? The prospects for empirical conceptology

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This is exciting stuff. Philosophers have long explored the structure of human concepts from the inside, by manipulating their skills as users of those concepts. And since Quine most reasonable philosophers have accepted that the structure is a contingent matter – we or not too different creatures could have thought differently – which in principle can be studied from the outside, empirically. But, except for some important connections with developmental psychology, the prospects for interesting empirical work on important aspects of human conceptual structure have not seemed encouraging. Few followed the pioneering empirical semantics of Arne Naess in the 1950s, reported in Naess [1966], largely because of the lack of sufficiently interesting results. (There are exceptions in the work of Stephen Stich, who has on several occasions published work that can be seen as empirical conceptology. See for example Stich [1998].) And now there is a burst of fresh work giving fresh hope to an obviously attractive strategy. What has made it possible? I would suggest that it is the emergence of the idea of a folk doctrine – folk psychology, folk physics, folk epistemology – that allows us to see the employment of a particular concept as part of a network in accordance with a strategy for understanding a particular class of phenomena or negotiating a particular class of problems. We then have a manageable aim: to discover the structure of the network and the nature of the strategy.

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There is a systematic danger, though, in interpreting the results. It is best given with a parody case. Suppose that American philosopher-psychologists set about studying typical human concepts of "dinosaur" and "human", and suppose they find that their sample of subjects overwhelmingly assert that the first humans lived in the presence of dinosaurs at a time no more than (say) nine thousand years ago. Should we say that, according to the concepts of dinosaur and human possessed by these subjects, humans and dinosaurs coexisted in the relatively recent past? No. Or at least, to say this would be very misleading. That assertion about humans, dinosaurs, and the recent past, is false, *even in terms of the subjects own concepts*. What is true is just that the experimental subjects accept the assertion, that they would agree to it. The fact that it is in accordance with their concepts does not prevent its being mistaken, and correctable by further evidence.

To discriminate between surprising truths and stubborn falsehoods we have to do more work. Some of it is work in philosophers' territory. We have to see what arguments and evidence will shift the assertions. If we do this with real uncorrupted subjects, as opposed to imagining idealized forms of it or carrying out scholarly debates, then we are changing their opinions and evolving their concepts. We are no longer dealing with the folk.

I do not say this in order to undercut what Knobe, Burra, Malle, Nadelhoff, Nichols, Welman and Miller are saying. In particular, the suggestion that core folk psychological concepts, in particular those connected with intentional action, are deeply connected to concepts of right and wrong action, seems to me not only very plausible but to be the kind of important connection that can only be fully established empirically. (As the subtitle, *folk psychology as ethics*, of Morton [2002] suggests, I have argued for similar conclusions myself, though largely using the inconclusive tools of traditional analytical philosophy.) The main aim of this comment is to suggest that we need to press forward rather than retreat. We need to develop experimental means of exploring the ways in which people would respond to arguments and evidence they had not considered before, while minimizing their induction into the community of philosophers and scientists.

The gap between assertion and truth arises because concepts refer to kinds of things in the world, and because the connection is not driven

by the person's opinions alone. Here is an example that illustrates some of the possibilities, and also makes it clear (I hope) that they are of psychological interest. Consider the folk concept of a bug. This label is applied by many people to a variety of small non-mammalian creatures. Some are insects, some are other arthropods, some are one celled animals. (I leave out Volkswagens and glitches in software.) To say that people apply the label to all these is not to say that they apply it truly to all of them. Here are four contrasting possibilities. (a) the term is purely descriptive, and applies to anything that is alive and small, perhaps also requiring that it move in a creepy kind of way. (b) the term refers to all arthropods. (c) the term refers to a particular kind of insect, of the suborder heteroptera. (d) the term is ambiguous, and there are at least three concepts that people possess and express using the same word.

How do we decide which of (a) – (d) is right? The decision is not one of philosophical convenience but of how people's assertions will react when subjected to pressure. But not too much pressure: we are not trying to discover what concepts biologists possess. One appropriate form of pressure might consist in asking very general questions about bugs: are they all the same kind of animal, if one kind of bug has a backbone then does another kind of bug, could there be a bug that was as big as a horse, and so on. Another form of pressure might consist in asking for reactions to imaginary biological discoveries; suppose that under the microscope the organisms that cause cholera turn out to be very small birds, are they still bugs? It is a plausible conjecture that after Socratic intervention of this kind many people's opinions will change. An important datum is *which* questions or possibilities will shift subjects' opinions. Generally speaking, if the beliefs of subjects are sensitive to considerations about biological classification then the term will refer to a kind related in some way to the laws, whatever in fact they are, governing living creatures. And if the beliefs are sensitive to considerations about the appearance of individuals and their relation to human purposes then the term will refer to anything satisfying some vague descriptive criteria. (These are CRUDE: I am trying neither to give a theory of general-term reference nor to invent the experimental discipline whose creation I am calling for. See section one of Shaun Nichols' article in this issue for a discussion of the variety of philosophical accounts of the

reference of general terms embedded in a theory.) One possibility that should not be excluded is that most people's assertions will under this sort of pressure gravitate towards one of some set of possibilities (one of (a) to (d), say) but that different people gravitate towards different ones.

I hope it is clear how in a general way these thoughts apply to the papers in this issue. To be more specific, though, I shall refer to just one of them, the paper by Knobe and Burra. I shall assume that their basic finding is correct. That is, when subjects will more often describe an effect of a chosen action, which was not the agent's primary aim, as an intentional action of the agent, if the effect in question is a bad thing to have brought about. This contrasts with the conclusions of many philosophers, who present analyses which vary in their description of what differentiates intentional from non-intentional action, but which assign no role to the moral character of the action. That, the moral character, is on these accounts assigned by further considerations, with the result that intentionality plays a major and essentially symmetrical role in determining whether the agent is given credit for a right action or blamed for a wrong one. Given that many people whose concepts have not been affected by philosophy or related disciplines will link intentionality to the moral character of an action, the analogous question to those I have been raising above is: are they right? More specifically, are they right in terms of the folk conception of intentional action?

To answer this question we have to pin down the folk conception in ways that give us another hold on it besides the ascriptions people make. (It may turn out that there is no other hold to be had, in which case the ascriptions determine a descriptive content to the concept and most of what people are inclined to say after a small amount of reflection will automatically be true.) We can put pressure on people by asking them unfamiliar questions. A natural unfamiliar question would be the following. Suppose that a gang of utterly ruthless bank robbers has tunneled into a bank and one of their members, Al, is supposed to detonate a powerful charge in the lock of the safe. As Al is about to depress the plunger a bank guard wanders into the vault room. Al doesn't care either way what happens to the guard and sets off the charge, opening the lock and incidentally killing the guard. Will the other robbers approve of what Al has done? Will they say that Al killed the guard intentionally? Will they be right?

Variant story: a gang of utterly ruthless bank robbers has tunneled into a bank and one of their members, Rosie, is supposed to blow a whistle at a moment when the guards are relaxed, so the rest of the gang can rush in and take every penny in every location in the building. Rosie overhears an old couple who are about to withdraw their life savings to contribute to a life-saving operation for their grandchild. Although the coast is clear and although she does not have strong feelings either way about the fate of the old folk or their grandchild, Rosie waits until the old couple have completed their transaction and left the building before blowing the whistle, thus reducing the total take of the gang by a few thousand dollars. Will the other robbers approve of what Rosie has done? Will they say that Rosie intentionally let the old couple keep their money? Will they be right?

The subversive question in both cases is the last “will they be right?” It forces subjects to face the tension between the result of their simulation of the imaginary robbers’ reactions and what they would themselves say. (That is supposing there is such a tension, and we can’t be sure until we’ve done the work.) One imagines a naïve subject faced with this question improvising some version of some philosophical account of intentional action. Would this show that the folk concept really was the philosophical one all along? Surely not: we would have produced our results with much too blunt an instrument, so blunt that we might have squashed the concept we were interested in, into an entirely different shape. We need a more delicate instrument, a way of probing the ways that a folk conception responds to novel evidence and challenging considerations, that does not provoke deep rethinking or defensive dogmatism. This is the next thing empirical conceptology has to develop.

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