

Edouard Machery

Doing without Concepts.

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The title is apt to mislead. This book does not provide an argument for thinking that we live in a world without concepts. At least, it provides no direct argument for believing any such thing. Rather it argues for the elimination of concepts from psychological theorizing on the grounds that concepts are not natural kinds, where natural kinds are understood as classes of things with many properties in common and the source of many successful scientific generalizations. Machery labels this the causal notion of natural kinds. Arguing that concepts are not natural kinds, in the causal sense, the book concludes that positing concepts is unhelpful in the sciences of the mind – viz. doing so is likely to impede psychological theorizing.

Suppose, for a moment, that all of this is conceded. It would be an enormous inferential leap to conclude that we can do without concepts, across the board, from acceptance that concepts should be eliminated from scientific psychology. Justifying that inference would require buying into the idea that science, and *only* science, tells us what's what and what there is. Only then would Machery's conclusion constitute anything like an argument for the elimination of concepts in general. There are hints that Machery is inclined to accept such exclusive scientific realism, given the pride of place he gives to science and the limited role he earmarks for philosophy. Thus the book's preface briefly mentions his vision of the proper work of philosophy as playing the part of a Lockean underlabourer. Philosophy's job – perhaps, its only job – is to clear conceptual rubble so as to enable better science and to allow a better understanding of scientific findings.

Yet, whatever Machery's leanings, readers are neither provided with an argument for accepting exclusive scientific realism nor this restrictive vision of philosophy's true work. Establishing the less ambitious claim that concepts should be eliminated from psychology is the true focus of the book. Its first two chapters set the stage for this, clarifying the important differences between philosophical and psychological theories about concepts.

The first chapter articulates what psychologists have thought and discovered about the nature of concepts. Achieving this is not straightforward since, going by their official statements, many psychologists have only a vague sense of what concepts are. Still, after analysis of their explanatory ambitions, Machery concludes that we can be confident that most psychologists, in fact, subscribe to characterization C. According to characterization C concepts are items exhibiting the following list of features: (1) 'bodies of knowledge'; (2) 'stored in long-term memory'; and (3) 'used by default' in processes 'underlying' competences that result in judgments about the references of concepts (pp. 4, 7, 12). Taking characterization C for granted, the major psychological theories of concepts strive to say: 1) What kind of knowledge is in play (causal, theoretical, exemplar, prototypical)? 2) What kinds of formats or vehicles are used (images, amodal symbols)? 3) How are concepts used

and by what processes? 4) How are concepts acquired? 5) Where are they to be found in the brain?

Chapter two argues that these sorts of questions are not the focus of philosophical inquiries into the nature of concepts. Indeed, it reminds the reader that philosophers and psychologists have utterly different conceptions of what concepts are, and utterly different ambitions in studying them. Although inadequate as a full dress review of philosophical thinking about the nature of concepts, the second chapter succeeds – for the most part – in establishing that the goals of psychological theorizing about concepts are self-contained, autonomous and distinct from those of philosophy. As such psychological theories of concepts must be evaluated by scientific considerations alone. Psychological theories are in no way answerable to the needs or desires of philosophers.

Having established psychology's characterization C as its hard target, the central chapters of the book, three to seven, are devoted to establishing the truth of the heterogeneity hypothesis. The heterogeneity hypothesis holds that coreferential concepts have very few properties in common – hence the term concept does not pick out a singular natural kind but heterogeneous kinds. These kinds include prototypes, exemplars, and theories. He holds that characterization C “is not empty” (7): there are empirically discoverable things in nature that answer to it. Too many: there's the rub.

The received view in psychology is that concepts define a well-defined class of things with common properties – it is this assumption that makes sense of there being several competing, rival theories about what concepts really are. Going against the mainstream, Machery claims that on close inspection it is demonstrable that psychological theories of concepts do not, in fact compete. Rather attending to their proposals reveals that there is nothing in common about the structures and processes that lie behind judgments about concepts. If so, “the class of concepts divides into kinds that have little in common” (5). The central chapters of the book discuss extensive empirical evidence in support of the heterogeneity hypothesis and seek to rule that variation in the underlying processes feed into or underwrite a single cognitive competence. From this analysis Machery concludes that “an individual typically has several concepts, ... several bodies of knowledge that are by default retrieved from long-term memory and used when he or she categorizes, reasons inductively or deductively, or makes analogies” (52).

The argument for scientific eliminativism is meant to be fairly straightforward once the heterogeneity hypothesis is accepted. For scientific eliminativism, unlike classical eliminativism, does not argue on the basis that characterization C fails to refer, only that it fails to refer to a natural kind, understood in the causal sense.

Does Machery's argument succeed in the end? The case for the heterogeneity hypothesis is well made. But one might seek to resist the final argument by insisting that heterogeneity need not encourage elimination. Even if concepts are not natural kinds in Machery's sense, why not accept that concepts are many-splendored things? Surely, it is possible to accept a pluralist understanding of the psychological notion of concept as opposed to insisting that theorizing about concepts should be retired altogether? Here is a recipe for motivating this

line of thought. First, accept that the sorts of things described by different psychological theories of concepts have few properties in common, but stress that they have at least one thing in common – they are all properly characterized by job description C. Second, establish that positing concepts as characterized by C (and not any lower level of description) allows for unique kinds of causal generalizations. Third, argue that the notion of concept has explanatory worth and should be retained. Of course, pursuing this line of argument will no doubt lead to disputes about the true pragmatic and explanatory needs of psychology.

In the end, there is another, stronger way to motivate eliminativism about concepts – by appeal to anti-representationalism. This is an avenue of argument to which Machery gives short shrift in chapter eight, and without due justification. Anti-representationalism presents a threat because all theories of concepts understand concepts in terms of ‘bodies of knowledge’. Machery tells us that “By ‘knowledge’, psychologists mean any contentful state that can be used in cognitive processes” (8). So concepts require the existence of sub-personal contentful states. Moreover, given this – with a whiff of circularity – Machery also tells us that “in the psychological literature, “concept” is sometimes used interchangeably with “mental representation” [and a variety of cognate terms – e.g. “knowledge structure” and “conceptual structure”] ... C explains what is meant by these terms” (14).

Yet there are serious questions being raised in cognitive science about the explanatory value, and indeed the very tenability, of positing the existence of sub-personal contentful attitudes – viz. those that are “scientific analogues for beliefs, desires, ideas, thoughts, and similar representational posits of folk psychology” (William M. Ramsey, *Representation Reconsidered*, Cambridge University Press 2007, 38). The folk psychological conception of contentful attitudes has a secure home in the linguistically competent ways that adult humans make sense of one another. But there are excellent reasons to doubt that such attitudes provide a serviceable model for understanding sub-personal states of the kind that psychological theories of concepts assume exist. For a detailed argument on this score see Daniel D. Hutto and Erik Myin, *Radicalizing Enactivism* (MIT Press 2013). Machery puts his finger on the problem when he notes that ascription of the latter sort of attitude “piggybacks on the way people ascribe familiar propositional attitudes, such as beliefs and desires” (42).

If it turns out that we cannot supply a workable account of the content of such imagined sub-personal attitudes without reliance on analogies with folk psychological practice then this would provide the basis for a classically eliminativist argument for doing without concepts in scientific psychology. Machery considers this anti-representationalist eliminativist line of argument and rejects it, mainly, on the grounds that “Grush has argued that physical actions are often guided by representation of feedback ... so even simple actions cannot be explained without positing representations” (222). But invoking Grush’s emulation theory in this context is surely ineffectual. For even assuming that Grush-style representations exist, it is not clear that they are genuinely contentful in the relevant sense. Do they ‘stand for’ something or do they only ‘stand in for’ something? Worse still, if they represent at all they do not represent features of the external world. At most, they represent features of the body (see Anthony Chemero, *Radical Embodied Cognitive Science*, MIT Press 2009, 63). So even if they have content of some kind they would not be capable of accounting for the kinds of

content required by psychological theories of concepts. So it seems that Machery has underrated the possibilities for mounting a credible classical eliminativist argument.

Despite reservations about its misleading title and limited strategic vision, *Doing without Concepts* is a fine, worthwhile book. It has much to teach its readers about the current state of play in psychological theorizing and offer an interesting argument that deserves discussion. It is not a book one should do without.

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