

Forthcoming in *The International Journal for the Study of Skepticism*

Morality and Mathematics, by Justin Clarke-Doane, Oxford: Oxford University Press, 2020. Pp. ix+208. ISBN: 9780198823667. £47.49 (Hbk.)

This book is devoted to the comparative study of the nature and status of morality and mathematics. Substantially based on an already impactful body of work produced over the last decade, its place in the literature as something of a milestone has been obvious to interested parties for some time. *Morality and Mathematics* is an outstanding achievement and will be a standard point of reference for future work on the topics of which it treats. (The appearance of future editions ought to allow for corrections to a text the copy-editing of which leaves something to be desired.)

During the course of the book, Clarke-Doane argues for the following claims. First, the ways in which morality and mathematics have traditionally been compared are based on misunderstandings that frequently get the similarities and differences between these areas of thought the wrong way round. For example, and contrary to what is often said, our mathematical beliefs have no better claim to be either self-evident or subject to proof than our moral beliefs. Although mathematicians tend to agree on what follows from what given a set of axioms, they frequently differ on their favored axioms (and on their theories of what follows from what). Nor do our mathematical beliefs have a better claim to be empirically justified than our moral beliefs. Although some mathematical

claims are implied by the best scientific explanations of our beliefs, not all of them are. Furthermore, not being causally efficacious, mathematical truths are in principle incapable of making any difference to our mathematical beliefs. And given that mathematical truths don't even purport to supervene on truths about concrete things (as opposed to moral truths that arguably do), our mathematical beliefs are not sensitive to the mathematical truths in the way that beliefs in supervenient moral truths would be. These arguments (and many others like them) are developed in the central chapters of the book, during the course of which moral and mathematical claims are compared with respect to *disagreement* and *self-evidence* (Chapter 2); *explanation* and *indispensability* (Chapter 3); *genealogy* and *debunking* (Chapter 4), and *reliability* and *contingency* (Chapter 5). These chapters make for compulsory reading for anyone with a serious interest in these topics.

Clarke-Doane's second claim is that there is an important difference between *realism* about a given area of thought and *objectivism* about that area of thought, where – contrary to orthodoxy – realism and objectivity are in tension. More specifically, although realism is true of mathematics (there are real mathematical facts, 'independently of human minds and languages' (p. 11 & *passim*)), mathematics is not objective (because mutually inconsistent but internally consistent mathematical systems – such as Euclidian and hyperbolic geometries – each truly correspond to their own part of the mathematical 'pluriverse'). Conversely, although realism is false of morality (there are no moral facts, whether independently of human minds and languages or otherwise), morality is objective, in the sense that moral questions 'only admit of a single answer'

(because the point of moral thought is not to describe some part of a practical 'pluriverse', but to settle on 'the thing to do', in Allan Gibbard's words (p. 8 & *passim*)). In other words, mathematics is factual and allows for extensive pluralism because it is 'theoretical'. In contrast, morality is non-factual and does not allow for extensive pluralism because it is 'practical'. These claims (and many others like them) are developed in Chapters 1 and 6, and in the Conclusion.

Much of what Clarke-Doane says about morality and mathematics is a consequence of how these two areas of thought are individuated (pp. 13-15). Mathematics, on Clarke-Doane's account, is essentially 'pure'. In order to identify the mathematical claims we just need to identify, roughly, 'all interpreted sentences containing *any of and only* the predicates in question' (p. 14). It follows that no 'impure' or 'applied' mathematics, including mathematical sciences like physics or theoretical economics, are part of mathematics proper. Morality, on the other hand, is essentially 'impure'. In order to identify the moral claims we need to identify, roughly, 'all interpreted sentences containing *any* of the predicates in question' (p. 14); that is, both sentences containing only moral predicates (such as 'The good is morally prior to the right') and sentences connecting moral and non-moral predicates (such as 'Capital punishment is wrong').

Two lessons can be drawn from this contrast. First, we are not comparing 'like with like'. Morality 'purely' defined is not what moral thought is really 'about', in Stephen Yablo's words. Clarke-Doane suggests that 'pure' moral claims are

‘typically devoid of interest’ (p. 37) and that the idea of a ‘mathematical’ ethics is ‘patently misconceived’ (p. 175); although I suspect it could make sense of what some people working on deontic logic have thought they were doing. By the same token, mathematics ‘impurely’ defined is not what mathematical thought is really ‘about’; although this can hardly be an anthropological thesis. It would be interesting to know more about the similarities and differences between morality and mathematics if we restricted ourselves to comparing like with like, such as morality ‘impurely’ understood and mathematics ‘impurely’ understood. Although the relevance of ‘*impure* arithmetic beliefs’ to the arguments of chapters 2-5 is noted in passing (e.g. Note 36, pp. 143-4), this topic is not systematically pursued in this book.

Second, the frequency of historical failures to observe that we are not comparing like with like gives rise to two alternative interpretations of the views that Clarke-Doane shows are erroneous when taken at face-value. The first interpretation is that some of these views were not intended to describe morality ‘impurely’ understood with mathematics ‘purely’ understood, but were instead aimed at some different variation of the four-box matrix, in which like is compared with like. The second interpretation is that although these views are erroneous when taken at face value, they have more going for them when recasted in terms of a different variation of the four-box matrix. There is some evidence that Clarke-Doane would agree with this latter claim, for example when he describes the application of mathematics and logic to the counting of concrete objects (pp. 140-2). Either way, it is one of the virtues of this book that it invites

the reader to think harder about what comparisons to draw, and how easy it is to get the wrong end of the stick.

As primarily a student of moral thought, I think I learned more about the nature and status of mathematics from this book than I did about the nature and status of morality. (I would be concerned if the reverse reaction were observed among philosophers of mathematics.) It is in large part by exposing how previous comparisons of morality and mathematics have got the nature and status of mathematics wrong that this book is a milepost in the literature. With respect to morality and the skeptical challenges that form the backdrop of much of the discussion in the book, I'm not sure we're much further than J. L. Mackie's infamous 'argument from queerness', only now described in different theoretical terms.

On Clarke-Doane's view, realist pluralism about morality is intelligible, but mistaken (because 'it fails to do the primary thing it should do – tell us what to do' (p. 171)). It is *intelligible*, insofar as there are internally coherent meta-ethical theories that imply it (pp. 163; 172). It is *mistaken*, insofar as all these theories are vulnerable to a 'radicalized' form of the 'open question' argument (pp. 168-172). This is an *open question* argument, insofar as it applies the Moorean strategy of pointing out that, for any purported moral-like property (such as the descriptive properties that causally regulate our moral beliefs), it is an open question what attitude to take towards that property, or 'what to do about it'. It is a *radicalized* open question argument, insofar as it applies not only to the descriptive properties familiar from the standard naturalist literature, but

also to *any* possible moral-like property, *descriptive* or *evaluative*, with which our moral predicates or some conceivable alternative to them *could be* associated. In other words, because every way of explaining moral truth in terms of the instantiation of moral-like properties falls to the radicalized open question argument, morality can't be factual, and moral realism is false. The same applies to any other form of practical realism.

By contrast, pluralism about morality is not just false but unintelligible. Morality is 'robustly' objective (p. 175), in the sense that moral questions are practical questions that admit of just one right answer. Clarke-Doane writes:

'... we do not use "ought to be done" to express a property at all. We use it to answer what-to-do questions. *And pluralism about what to do does seem to be unintelligible.* But this truism is no thanks to special facts that we cannot even assume to be non-objective. It is thanks to the banal fact that we can only do *one thing*' (p. 171).

This is too quick. Far from being unintelligible, pluralism about practical questions is a common feature of moral disagreement and uncertainty, along with the skeptical hypothesis that there is no right answer to be had. Suppose we are asking whether to 'kill the one to save the five' (Clarke-Doane's example). Early Judy Thomson said 'Yes'; late Judy Thomson said 'No'. Here is one thought you might have about this question: 'Either answer will do, depending on which among some set of reflectively robust theoretical frameworks you choose'. (As Clarke-Doane agrees, objectivity can admit of degrees (p. 32.)) Here is a more

radical thought you might have: 'There is really no right answer. You might as well toss a coin'. Plausible or not, either of these thoughts are intelligible. The discussion of moral disagreement (e.g. on pp. 148-9) suggests that Clarke-Doane would agree.

The appearance that things are otherwise partly derives from the fact that practical questions have a tendency to *present themselves as if they are robustly objective*, precisely for the reason that Clarke-Doane gives; namely that we eventually have to decide on 'the thing to do'. But this does not entail *that there is* any such 'thing' as *the thing to do*. After all, if realist pluralism is false, what could this possibly be? It does not help to point to the existence of some 'elusive resolving [non-cognitive] attitude... in between acting and intending' (p. 173), as if that would settle the issue. True, whenever someone decides on 'the thing to do' they will normally find themselves in such a state, but depending on the content of that state, acting accordingly might *not* be 'the thing to do', as demonstrated by the common phenomena of retrospective doubts and regret. And telling people that they have to make *some decision* in order to enter such a state would normally not be very helpful advice. So what is this 'the thing to do' to which moral thought is necessarily committed? This can easily come to seem a bit 'queer' (in Mackie's words); a 'fugitive thought' (in Philippa Foot's words); or something that can only be 'shown' but not 'said' (in Wittgenstein's words). Yet as Wittgenstein also said, *a nothing is as good as a something about which nothing can be said*. Not so, apparently, in mathematics where, in accordance with Clarke-Doane's suggestion, we are virtually guaranteed to have true beliefs in virtue of the existence of the mathematical 'pluriverse'.

I can see two ways of responding to this objection, each of which would require some revision of Clarke-Doane's view. The first response is to give up on the open question argument in its radical form, for example by allowing that there are evaluative or normative facts the recognition of which would settle 'the thing to do'. The obvious downside of this response is that it threatens to undermine the sharp distinction between realism and objectivity on which Clarke-Doane's view depends. It is also potentially vulnerable to one part of Mackie's argument from queerness, namely the part in which Mackie questions the idea of 'magnetic', or intrinsically motivational, facts.

The second response is to give up on the claim that morality necessarily presents itself as robustly objective; as opposed to there being contingent but defeasible contextual pressures to think and argue 'as though the truth is single' (in Simon Blackburn's words). The obvious downside of this response is that it ruins the elegant symmetry between morality (non-realist; objective) and mathematics (realist; non-objective) on which Clarke-Doane's view depends. Yet being mainly a matter of elegance in presentation, this is arguably the most conservative response of the two.

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