

Identity and Modality, by Fraser MacBride (ed.). Oxford: Clarendon Press, 2006. Pp. x + 268. H/b £37.00.

This collection of eleven essays on metaphysics, philosophical logic and philosophy of mathematics grew out of a conference at the University of St Andrews in 2000. The title gives a good indication of its contents. As one would expect given the prominence of the contributors, the overall quality of the essays is high. The essays make important contributions to contemporary debates concerning modality, individuation, mathematical structuralism and personal identity. The collection is thus warmly recommended to anyone interested in these areas.

The collection opens with four essays on modality. Gideon Rosen's 'The Limits of Contingency' argues that 'our discourse about necessity is shot through with ambiguity' (p. 38) because two very different conceptions of necessity fit our best informal characterization of the notion. According to the Standard Conception, P is necessary iff 'it holds in every [...] possible world in which the actual laws of metaphysics also hold' (*ibid.*). According to the Non-Standard Conception—'inspired by some remarks of Kit Fine' (p. 24)—P is necessary iff 'its negation is logically incompatible with the natures of things' (p. 37); or equivalently, P is possible iff 'the natures of things' do not present any obstacle to P's being true. Whereas it is necessary in the Standard sense that sets and mereological sums exists (assuming they do), this is contingent in the Non-Standard sense: for even if it is in the nature of pure sets to exist, when these sets are rejected, there is nothing left whose nature present an obstacle to their non-existence. However, the ambiguity may be less worrisome than Rosen thinks. Say that a situation is weakly possible iff the situation is compatible with the nature of every entity involved in the situation. This is just Rosen's Non-Standard Conception. Say that a situation is strongly possible iff the situation is compatible with the nature of every entity whatsoever. Arguably this gives rise to the Standard Conception. If so, then weak and strong possibility are closely related and not necessarily in competition.

For reasons of space, I will only briefly describe the next three contributions concerned with modality. Scott Sturgeon examines various principles to the effect that intelligibility entails possibility. Such principles are assumed in many philosophical arguments. But Sturgeon argues that no such principle can be more than defeasibly correct. Next, John Divers and Jason Hagen develop a sophisticated (but demanding) objection to modal fictionalism. Building on the extensive literature on the topic, they argue that modal fictionalism cannot respond to both the 'Brock-Rosen object' and 'Hale's dilemma' and still preserve the only extant proof (due to Divers) that possible worlds reasoning is a safe way for modal fictionalists to assess modal consequence. Finally, Philip Percival critically assesses the reasons that have been offered for realism about the modal notion of chance, including Lewis's influential 'best system analysis'. He is sceptical about the prospects of an analysis of chance that supports a realistic interpretation.

Next come five essays concerned with identity and individuation. Stewart Shapiro's 'Structure and Identity' is the most important clarification and revision to date of the ante rem structuralism of his 1997 book, according to which mathematical objects are

positions in abstract structures that exist independently of concrete realizations. Shapiro now concedes that some earlier slogans ‘seem to be incoherent or point to outright falsehoods’ (p. 112). One such slogan says that mathematical objects have no non-structural properties. Shapiro is now inclined to admit that they do. Another slogan says that all cross-structural identities are indeterminate. Such identities are now taken to be false.

A related question concerns structures some of whose positions are structurally indiscernible (such as i and $-i$ in complex analysis). Jukka Keränen has argued that structuralists are forced to identify such positions, which would be mathematically unacceptable. The present volume contains no less than three contributions to the extensive debate that has ensued (especially in *Analysis*): the aforementioned one by Shapiro and one further round of debate. Keränen’s contribution provides a useful clarification of his argument. He requires that all objects be individuated in the sense that there be some non-trivial account of their identity conditions. But as Shapiro’s reply points out, it remains unclear what resources this account is allowed to employ. If individuation must be effected entirely by ‘non-object-invoking’ monadic properties, then Keränen relies on an extremely strong form of identity of indiscernibles, which Shapiro rejects as unmotivated. And the further resources proposed by Keränen allow Shapiro to individuate many indiscernible objects. Perhaps Keränen’s idea would be better put by requiring that the individuation of an object may only draw on objects already individuated, which may then figure as parameters in individuating characterizations of other objects. This would go well with his view that sets are individuated by their elements, while allowing him to reject structurally indiscernible objects as not properly individuated.

Frege’s ‘Caesar problem’ asks whether Julius Caesar is identical with the number 3. The received view is that the problem is internal to Frege’s philosophy of mathematics: although we know that the answer is negative, the Fregean attempt to base arithmetic on Hume’s Principle fails to deliver this verdict. Fraser MacBride’s contribution rejects this received view, arguing instead that the Caesar problem affects metaphysics, epistemology and semantics quite generally (in ways that are very usefully distinguished); in particular, that it threatens Frege’s influential view that there is a tight connection between the notions of object and identity. MacBride questions whether we in fact know that Caesar is distinct from the number 3. The obvious response that the objects are distinct because they have incompatible properties—being respectively concrete and abstract, contingent and necessary, or human and non-human—is dismissed as question begging. Perhaps so. But to defend this claim MacBride has to entertain some controversial possibilities: that some but not all numbers are concrete; that numerals are non-rigid; and that number ascriptions can be true at worlds where the number in question does not exist. Moreover, one wonders whether there remains room for a non-question begging argument against any crazy identity claim. Could for instance Frege be identical with a Roman statue? MacBride responds that both people and statues have mass, which will probably distinguish Frege from the statue. A crank may counter by relativising mass to spatial location (p. 195). But since this would be quite revisionary, MacBride concludes that it would be less attractive to identify Frege with a statue than with a number.

John Campbell's 'Sortals and the Binding Problem' attacks the popular philosophical thesis that conscious attention to an object has to be focused by the use of a sortal concept. Citing evidence from empirical psychology, he argues that our visual system provides this focus—without any help from sortals—by binding together different forms of information as pertaining to a single object. This demonstrates that the 'focussing' required need not involve concepts that are very specific or consciously accessible, thus refuting strict forms of sortalism. However, the 'binding' involved in conscious attention to an apple, a concert and a number will be radically different, which leaves room for the weaker but recognizably sortalist idea that attention has to be focused by some 'form of binding'. Sortals may also enter at a post-perceptual stage, say in distinguishing persons and statues from lumps of meat and of clay.

The collection ends with two essays on personal identity. Keith Hossack's contribution offers an interesting reconstruction of Bernard Williams's 'bafflement argument' against the idea that it may be objectively indeterminate whether I will be identical with some person tomorrow (say after a standard fission case). On Hossack's reconstruction (which becomes clearer in a one-page appendix than in the preceding 18 pages), the argument relies on a Lichtenbergian perspective where experiences are reported but not ascribed to any subject. Hossack claims—quite plausibly—that the argument fails because it ignores the hidden indexicality of the Lichtenbergian claims. But he fails to pinpoint where the clearest version of the reconstruction (in the appendix) goes wrong. (My guess: (7) fails.)

Eric Olson complains in his contribution that he has 'never been able to work out what the bodily criterion [of personal identity] is supposed to be' (p. 242). He rejects various attempts to spell out the criterion, often because they fail to yield the right consequences concerning foetuses and corpses. He concludes with a warning against the Cartesian idea of our bodies as objects that we somehow 'have' or 'own'. It is puzzling that Olson omits what seems like one of the more obvious proposals for a bodily criterion of personal identity, namely the view that a person is a physical body (just as an apple is) and as such is subject to the usual identity and persistence conditions of physical bodies (again just as an apple). This view need not say that persons 'have bodies' any more than it needs to say so of apples.

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