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New Waves in Philosophical Logic, edited by Greg Restall and Gillian Russell

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BOOK REVIEW

Restall, Greg and Russell, Gillian, eds, *New Waves in Philosophical Logic*, New York: Palgrave Macmillan, 2012, pp. ix + 240, US$90/US$32 (hardback/paperback).

A few years ago, Palgrave Macmillan started a series of books attempting to map new developments in various philosophical sub-disciplines. It is always difficult to get a balanced picture of the current state of play of a discipline, for the elapse of time which would equip us with the necessary sense of perspective is missing. Moreover, if the discipline to be mapped is philosophical logic, then this task is doubly difficult, because apart from being in the midst of developments that look somewhat stormy, we are also lacking a consensus about what exactly philosophical logic is. There are authors who equate it with philosophy of logic, there are others who see it rather as philosophy informed by logic, and there are still others who understand it as the investigation of non-classical logical systems.

The strategy of Greg Restall and Gillian Russell, the editors of the present volume, when putting the volume together, was, in their own words, straightforward: 'We approached a group of the top younger scholars and asked them to present their best work in about 8000 words.' Given the unperspicuousness of the terrain, this seems a reasonable strategy. Moreover, the introduction indicates that the editors themselves do have a more specific view of what philosophical logic is: for them, it has to do with building formal models of philosophical problems, models which, though possessing a relatively independent mathematical aspect, are nonetheless primarily only instrumental to the business of philosophy. The results of their project, the book under this current review, is exactly what would therefore be expected: a book containing some useful reports about states of play of particular logical enterprises, some information about new findings and some interesting ideas, but no systematic map of the terrain of current philosophical logic. Perhaps this is the best outcome of such a project that can be reasonably hoped for.

Given the understanding of philosophical logic the editors put forward, the most important section of the discipline is constituted by the logicians who propose, develop, upgrade and fix the formal models. And indeed some of the papers of the volume are conceived as introducing us to the current discussions concerning some of the most important formal frameworks. Thus, W. Schwarz in his contribution 'How Things Are Elsewhere' gives us a guided tour through the most recent developments of the model theory of modal logic, especially concerning the counterpart theory, which was initiated by D. Lewis and is now facing new challenges. (When considering individuals of alternative possible worlds, we can choose between two alternatives: either to accept that the same individual might be present in more than one possible world, or to maintain that a different possible world cannot contain literally the same individual, but merely a kind of proxy, which is called its *counterpart*.) Similarly B. Kooi, in his 'Information Change and First-Order Dynamic Logic', briefly introduces us to the recent developments of dynamic logic, concentrating especially on first-order modal logic viewed from a dynamic perspective. G. Restall and F. Poggiolesi then give us a taste of current ways of developing proof theory, by surveying how it can be applied to modal logic. (In particular, they discuss three

alternative approaches to treating modal logic proof-theoretically: display logic, labelled sequent calculi, and the tree-hypersequent method.)

D. Cohnitz's contribution 'The Logic(s) of Modal Knowledge' has a somewhat deeper non-technical or philosophical dimension—not only presenting some technical considerations concerning modal logic and especially its ur-variant proposed by Carnap, but also discussing the usefulness of this apparatus for explicating the concept of conceivability. The author's point is that the 'logic of conceivability' appears to be such that if the negation of something cannot be established, then it is conceivable, and this renders conceivability as being the same kind of modal as the possibility of Carnap's logic, for in this logic, unlike in all the Kripkean ones, the unprovability of $\neg\varphi$ gives the provability of $\diamond\varphi$. (This also makes Carnap's logic less well-behaved than the Kripkean logics, in particular it makes its class of theorems not closed under substitution.)

Subsequent contributions illustrate the increasing interconnections between some parts of philosophical logic and probability theory. H. Leitgeb's short and technical paper 'From Type-Free Truth to Type-Free Probability' indicates the advantages which a theory of truth can gain from engaging probabilistic methods. In 'Dogmatism, Probability and Logical Uncertainty', B. Weatherson and D. Jehle exemplify the growing field of formal epistemology, attacking traditional epistemological problems in terms of models built by means of logic and probability theory. S. Roush, K. Allen & I. Herbert, in their contribution 'Skepticism about Reasoning', focus on Hume's sceptical worry ('a reflection about our reasoning is itself a piece of reasoning' and hence if each such reflection is uncertain, do these uncertainties not add up to a 'diminution of our original belief to nothing'?) and attempt to reconstruct it by means of logic and probability. They indicate that Hume's sceptical conclusion is not inevitable.

This last mentioned contribution exemplifies one of the possible uses of logical models—they can be used for fresh reconstructions of historical philosophical ideas or disputes. The next paper of the volume, 'Lessons in Philosophy of Logic from Medieval Obligations', by C. Dutilh Novaes, is also of this kind. It concentrates on the medieval formalized praxis of disputation. The author argues that this praxis of disputation ('obligationes') was an interesting precursor of our current dialogic and game-theoretical frameworks. The following contribution, 'How to Rule Out Things with Words: Strong Paraconsistency and the Algebra of Exclusion', is devoted to a controversial offspring of modern logic, namely paraconsistency and dialetheism. These theories reject the principle of contradiction, one of the most traditional pillars of logic. The paper's author, F. Berto, concentrates on the role negation should play within the framework of such theories, and especially on the notion of inconsistency on which the concept is based. G. Russell, in her contribution 'Lessons from the Logic of Demonstratives', discusses the changes wreaked upon logic when its foundations are reconstructed to involve certain forms of context-dependence.

The final contribution, by M. Eklund, 'The Multitude View on Logic', discusses the plurality of logics, and it is the only paper in the volume which I had trouble making sense of. The principle the author defends ('MULTITUDE') is, in his own words, 'better understood as saying something along the following lines: for some different logics, the sorts of utterances and inferences those employing that logic accept and reject are such that there is a possible language such that under the hypothesis that those employing that logic speak that language, their use is correct.' Even after studying the whole paper I did not manage to grasp what kind of correctness is referred to here; nor what kind of possibility is in play. This may be my fault.

In general, the book offers several peepholes into the kitchen of contemporary philosophical logic, letting us see some excellent cooks in action. We do not have a bird's eye view of the kitchen, nor can we quite see the menu for the future, but still we can glimpse a number of interesting things.

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