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Composition as Identity. Edited by A. J. COTNOIR and DONALD L. M. BAXTER (Oxford: OUP, 2014. Pp. ix + 259. Price £40.00.)

This book is a collection of essays that concern the hypothesis that wholes are identical with their parts. This hypothesis is called ‘composition as identity’ (or CAI). It is motivated by and meant to capture the intuitions of the following examples. Example 1: a farmer intends to sell his property, but before he puts it on the market he subdivides it into six lots. If the farmer sells his six lots, common sense tells us he has sold his farm. Example 2: I hope to purchase a six-pack of beer at the supermarket. Common sense tells us I am entitled to line up in the ‘six-items or less’ lane. The shop keeper would not say I have seven items. The six-pack is the six beers, just like the farm is the six lots. In general, a whole just *is* its parts. There are three major variants of CAI under examination in this book:

Strong-CAI: a whole is numerically identical with its parts collectively.

Weak-CAI: the relation between a whole and its parts taken together is analogous to numerical identity.

Strange-CAI: a whole is numerically identical with its parts collectively *and* individually.

David Lewis famously endorsed weak-CAI to expound his mereology (and not, incidentally, to convert his opponents). Donald L. M. Baxter first defended strange-CAI in the late 1980s. Strong-CAI, on the other hand, has been more readily dismissed. The contributions in this book that investigate the prospects of strong-CAI fill an important gap in the literature.

The book has five parts. Part I contains a useful introduction by A. J. Cotnoir, and a history of CAI from Boethius to Hobbes by Calvin G. Normore and Deborah J. Brown, which is most appropriate given that metaphysicians should be sensitive to their past.

In part II (Ontological Commitments of CAI) Achille C. Varzi and Katherine Hawley explain how mereology, along with CAI, does not entail that we are ontologically committed to a whole if we are ontologically committed to its parts. Varzi assumes weak-CAI within a ‘Quinean approach’ to ontology and proposes that: ‘commitment in one’s ontological theory to *the truths about* the fusion amounts to the same as commitment to *the truths about* those things, individually and collectively’ (p. 63, his italics). Hawley thinks ontological innocence is best understood as the thesis that commitment to the whole does not affect the cost of the theory with respect to parsimony (p. 86).

Ross P. Cameron argues that strong-CAI cannot explain why mereological facts supervene on non-mereological facts and proposes an alternative that does. He says composition is not an internal relation. Rather, it is a *superinternal* relation. A relation

is superinternal iff necessarily the existence of one relatum grounds the existence of the relation and the existence of the other relatum and the fact that the relation holds between both relata. So the parts ground the whole as well as the composition relation holding between the parts and the whole. We can then say mereological facts supervene on non-mereological facts because the former are grounded in the latter (p. 102).

In part III (Metaphysical Commitments of CAI) Meg Wallace defends strong-CAI against the objection that it entails that wholes have their parts essentially. Her response involves an ontology according to which objects are spread out across worlds just as much as they are spread out across space and time. Qualitative difference of world-bound-parts of trans-world objects accounts for the fact that ordinary objects can gain and lose parts (p. 118).

Kris McDaniel argues that defenders of CAI are not entitled to presuppose one fundamental, most natural, or definitionally basic relation of parthood because Examples 1 and 2 do not motivate us to embrace such a presupposition. Examples 1 and 2 merely motivate us to introduce some version of CAI and are thus silent on the ‘unitary or non-disjunctive nature’ of parthood per se (p. 142). He also demonstrates the many ways CAI is compatible with the view that there is more than one fundamental, most natural, or definitionally basic relation of parthood.

Einar Duenger Bohn defends the following version of strong-CAI: these x s compose y =df. these x s are identical with y . He argues that this definition entails unrestricted composition. The deduction hinges on an inference from $xx = xx$ to $\exists y(xx = y)$. You might object that this inference is invalid: the existence of a self-identical plurality does not imply that there is some one thing identical with the plurality. Bohn thinks this worry stems from a thick notion of something, but he uses a thin notion of something and a thin notion of object. An ‘object’ in the thin sense is ‘something we can singularly quantify over, however unnatural a sort of thing it is’ (p. 151). It is not clear what the rationale is for grouping these chapters exclusively under the heading ‘Metaphysical Commitments’ of CAI. Indeed, Cameron’s essay could have easily been inserted in this part.

In part IV (Logical Commitments of CAI) Byeong-uk Yi uses a semantical theory of plurals to argue that it is logically impossible for a single object to be one thing and many. In a plural language, a plural term like ‘A and B’ cannot refer to some one thing. On his view, it is logically false that some things that are many are identical with some one thing (p. 179). Paul Hovda constructs a Normal Plural Logic and argues that Yi’s objection is wrong: we need only replace the relevant axiom schemes with weakened alternatives that do not contain the ‘is one of’ predicate (p. 208). Theodore Sider, in his contribution, states that strong-CAI entails Collapse: ‘something is one of the X s iff it is part of the fusion of the X s’ (p. 211). As a result, ‘there are fewer pluralities than one normally expects’ (p. 213). ‘There don’t, for example, exist things such that something is one of them iff it is human. “The humans” is an empty plural term’ (p. 216). Sider uses this result to reject an argument against CAI offered by McDaniel elsewhere in the literature.

In part V (Indiscernibility and CAI) Jason Turner regiment strange-CAI into a formal language against the backdrop of Baxter's metaphysics of aspects and counts. Turner explains that on Baxter's view we can count the six-pack as one thing or we can count each beer as one thing. In fact, the whole does not exist in the same count as its parts. Strange-CAI identifies a whole as a part with that part. This is cross-count identity. 'Each of my arms is cross-count identical to an aspect of me, and those aspects are intra-count identical' (p. 236). Turner raises worries for strange-CAI but postpones decisive evaluation.

Baxter argues that we should preserve the common sense intuitions of Examples 1 and 2 by saying that the whole and its parts are the same thing counted in different ways. He then presents his theory and argues that CAI must explain (1) that a whole is a single thing, (2) that its parts are several things, (3) that if some thing is one, it is not many, and (4) that if something is many, it is not one. Strange-CAI is the only variant that explains these facts (p. 252). Part V would have read better if these essays were switched around.

This book is evidence that discussion of CAI has reached critical mass. It is a timely contribution and advances debates in meta-ontology, fundamentality, mereology, and plural logic. It is most suitable for a (post)graduate seminar on metaphysics and should be of keen interest to metaphysicians, philosophical logicians, and philosophers of language who study plurals. It is a book in a specialized area of metaphysics, but this does not imply that its impact will be localized.

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