**Piotr Łukowski**  *Paradoxes,* tr. Marek Gensler. Dordrecht: Springer 2011. viii + 194 pages \$139.00 (cloth ISBN 978–94–007–1475–5); \$139.00 (ebook ISBN 978– 94–007–1476–2)

Here is a new tour through philosophical paradoxes. Piotr Łukowski introduces his eponymous subject as a "thought construction, which leads to an unexpected contradiction" (1). This is a broad definition—the operative word in it being "unexpected"—and allows Łukowski to take up an enjoyably broad range of topics. For example, standards like the Liar and the Sorites are included, but we also meet with milder 'paradoxes' such as theorems from set theory about infinity, and odd objects from topology like the Klein bottle.

There are four chapters, corresponding to four categories of paradox. Paradoxes of 'wrong intuition' range from Newcomb to naïve set theory, to Hempel's paradox and Fitch's paradox. Paradoxes of ambiguity include the hooded man and God's Stone (so Heavy He Himself cannot lift It). The paradoxes of self-reference are mostly as usual, and what Łukowski calls the ontological paradoxes mostly concern vagueness (sub-classified into solutions "which treat vagueness fairly" versus proposals "which replace vagueness with preciseness" (151)). The division of paradoxes is rather at the author's discretion; he flags the task of classification as a difficult one, and is content to proceed with the idea that "the essence of a paradox [is] the fundament of classification" (2).

Lukowski has an obvious enthusiasm for his subject, and gives patient exposition to each problem. Throughout the focus is on the cognitive aspects of paradoxes—how thought and language seem to tangle up at times, despite our best efforts. The recurring theme is that paradoxes tend to crop up in the failure of language, or thought, to grasp reality. We have some tried-and-tested ways of thinking, but "regrettably, reality is always richer and goes beyond all schemes of thought" (5). Similarly, many paradoxes are due to ambiguity, "because reality transcends the limits of language, [so] we are bound to use the same terms in meanings that can vary" (37). Even ontological paradoxes are stirred up by the confrontation of imperfect thought with the world—noting that the world *itself* is never paradoxical, since Łukowski accepts the Hilbertian thesis that existence and consistency are more or less co-extensive (75, n. 3). Indeed, thought, concepts, and language are so inadequate to the task that paradoxes show that "no ontology, which uses the concepts of set, Euclidean point, rest, property or thing... that are formed under the spell of language has any logical basis" (131).

As a round-the-world journey, this new *Paradoxes* joins a formidable group of relatively recent such books: *Paradoxes* by R. M. Sainsbury, *Paradoxes from* A - Z by Michael Clark, *Paradoxes* by Nicholas Rescher, *A Brief History of the Paradox* by Roy Sorensen, and *This Sentence is False* by Peter Cave, to name just a few from the last decade. One must ask, then: why another?

In various respects, Łukowski's book is different from those just noted. First, it is selfstyled as coming from the "European tradition of philosophical logic," and many of the citations do reflect a different background than similar Anglophone works. (*Paradoxes* is translated from Polish.) It is addressed to serious but general readers from the humanities and sciences and positioned as a fairly demanding and thoroughly academic work. The text is neither fluffy nor overtly entertaining, so the book is not pitched as a popularization of philosophical problems for lay audiences. This is not *This is not a book* (subtitle: "adventures in popular philosophy," by Michael Picard).

Neither is it original research, though, since the author isn't focused on any particular problems, or even on the general existence of paradoxes. No overarching thesis emerges or is seriously defended, save that paradoxes are "alarm signals resulting in some error in our thinking" (1). Łukowski does offer solutions to, and diagnoses of, various paradoxes, but no explicit methodology is announced. The book remains in the 'guided tour for non-initiates' genre, albeit non-initiates with a taste for mathematical symbolism.

The various solutions to paradoxes that the author proposes are not always clear. This is a common pitfall for paradox enthusiasts, but still it is a pitfall. In many cases Łukowski seems to believe that he has caught a would-be paradox maker in a simple error. But these diagnoses often rest on Łukowski having focused on only one horn of the dilemma, and then dismissing the other without thinking it through.

For instance, the surprise exam paradox has a simple fix. The teacher promises that there will be an exam next week, but the students cannot know which day it will be on. The usual reasoning confirms, indeed, that for any day a student tries to guess the exam will be on, it will not be so. Łukowski takes this as showing that "*the examination can be organized on any day*. The teacher can do it any time she wishes. This means it was wrong to assume her promise was false" (124, emphasis in the original).

Let me note a few other examples. Newcomb's paradox, which I assume the reader is familiar with, "can hardly be regarded as one of the most important problems of our thinking," we are told (7), because the solution is *obviously* to take only one box. Therefore "there is nothing interesting in Newcomb's paradox from the point of view of rational decision making"; it instead points to "human frailties: greed, underestimating other people, tendency to cheat, etc." (11). Łukowski does not note the vast literature on how serious a problem this might be: papers by David Lewis, Huw Price, and others going back to 1979 touch not only on decision theory but issues in the philosophy of time such as reverse causation.

Fitch's Paradox is presented as a problem for realism, and is 'solved', I think, by denying that existential quantifier elimination is legitimate. Łukowski sees that a contradiction results from the supposition that

## *p*, but *p* is not known

So he recommends that we not focus on that, but rather the unproblematic

 $\exists p(p, but p is not known)$ 

and the similarly unproblematic

It is known that  $\exists p(p, but p \text{ is not known})$ .

"We shall deduce no contradiction from such a natural assumption" (34). Łukowski seems unaware that he has quoted rules for the knowledge operator on the previous page that, at least prima facie, make trouble for such natural assumptions. Modal considerations (about what is and is not necessarily unknowable) do not enter the discussion, nor are the more usual implications for strong verificationist anti-realism considered or cited.

Finally, the liar paradox: after quite a few pages of summarizing and critiquing other approaches, drawing distinctions about context, sentences, and their logical content, Łukowski's ultimate salve (99) is that the liar sentence is false. Of course, this is what the sentence itself says, so its negation is true. But for some reason, that is neither a contradiction nor a problem. A good deal of text and mathematical symbolism accompanies this claim, the idea having something to do with being more careful about the names we are giving liar sentences.

Paradoxes are *hard*. Trying to propose a solution to them is even harder. There are many authors who present, at book length, highly surprising responses to paradoxes (on the liar, for example, we have *at a minimum* monographs by McGee, Maudlin, Field, and Priest, all of whom bite very large bullets at times). Here, however, everything is presented so piecemeal and without any theoretical frame of reference or methodology that the cumulative effect is rather tiring. Much seems assumed (perhaps as common sense?) without being stated. Why does existential quantifier elimination fail? What does that mean for other, non-paradoxical contexts? *Why* does our reasoning break down where it does? The fast and simple solutions offered seem at odds with Łukowski's own introductory remarks, which implore us to take paradoxes seriously.

If Łukowski's monograph were the only book to collect together most of the well-known paradoxes, then there would be much to recommend it.

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