success in long-term reproduction in some appropriately nuanced way.

The second puzzle is metaethical. The "moral mind" is a set of moral emotions, moral norms, and the capacity for open-ended reasoning. These moral emotions and norms *simpliciter* are just emotions and norms. What makes them moral? The answer appears to be, "Norms are culturally transmitted social rules . . . [and] rest on expectations that other people in the group will follow the norms too" (p. 72). Moreover, "Morality in our species has a normative core because of the big impact norms had on the survival and reproduction of individuals and groups" (p. 73). Hence, the moral norms that we have are a function of natural selection, later honed by cultural selection and transmission. For this not to breach the metaethical divide between descriptive ideas and evaluative ideas that Kumar and Campbell accepted earlier—unwisely and unnecessarily, in my view, given the overall thrust of their project—they must, I think, ascribe to some version of antirealism. There are a number of aspects of their treatments of Moral Progress (Chapters 8–10) that make noncognitivism—moral claims are neither true nor false but instead persuasive and indicative of personal approval or approbation—an unlikely version of antirealism. A version of error theory—moral claims aim to be truths but there are, in principle, insufficient materials available to establish that truth—seems unsuitable to a project with a normative core based on survival and reproduction of individuals. Nonobjectivism—the truth of moral claims rests on whether we collectively think they are true—might, with a little shoehorning, serve their purposes; the first quotation in this paragraph supports this possibility. I remain puzzled about their basis for morality.

I circle back to the beginning of this review. This is a significant contribution to the literature on the evolution of morality, via the moral mind. That I labored over the concerns and puzzles set out above attests to its compelling narrative. Hence, notwithstanding my concerns and puzzles, I recommend this volume to philosophers, biologists, and psychologists.

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LEVELS OF ORGANIZATION IN THE BIOLOGICAL SCIENCES. *Vienna Series in Theoretical Biology.*

Edited by Daniel S. Brooks, James DiFrisco, and William C. Wimsatt. Cambridge (Massachusetts): MIT Press. $60.00 (paper). xii + 323 p.; ill.; index. ISBN: 9780262045339. 2021.

As a graduate student I sat knee to knee with Leigh Van Valen in his tiny overstuffed office annex. I mentioned I was interested in levels of selection, and he replied in his way, "Ooh." I had no idea what he meant—did he mean there is no such thing as levels? Did he mean he was also interested in them? Over the years this conversation continued as he passed along his own reprints. Of course, he was interested in levels. All of Van Valen's insights into levels were bound into a domain he termed "the evolutionary half of biology." He defined this on the back page of his journal *Evolutionary Theory* as "that part of biology where the center of interest is on organisms and populations, i.e., on the phenotype and its various interrelations rather than on molecules and cells for their own sake." But the evolutionary half of biology is just that, half. The current volume, *Levels of Organization in the Biological Sciences* takes the full view—organisms, cells, molecules, and all. From this broad perspective the utility of levels is more varied and less clearly useful. This book helps make sense of when levels can help and when they cannot.

In 15 chapters, the authors in this volume cover a lot of territory. At one end of the spectrum, Wimsatt (Chapter 1) demonstrates just how easy it is to study levels by defining his "Waring Blender" criteria for emergence: "take the system, and disrupt it in a Waring Blender. The emergent properties are the ones that disappear" (p. 28). At the other end is Potochnik (Chapter 3, Our World Isn't Organized into Levels) who shows just how few conceptual advances promised by levels thinking have come to be. Potochnik is right: we want more from levels than they have given us. Nevertheless, the biological territory that levels can help us understand ranges from cancer (Chapter 10) to the evolution of development (Chapters 5 and 6) to cultural evolution (Chapter 15). Love (Chapter 7) highlights experimental approaches, beyond the Waring Blender criteria, that embryologists have used to explore the interaction between cellular context, signaling, and fate during development. From this we can see just how useful levels can be as they guide the experimental logic of embryology and developmental biology.

In the end, for levels to be important long-term we need to find systems that we cannot understand without them. Cancers are one example. Cancer cells thrive in a space that occurs between levels where the organism cannot do much to stop it. Nor can cancers do much to change the course of organismal evolution. There are also real organisms, the colonial bryozoans and corals, for example, that live real lives at the interface of levels—how do they do it?

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