in devaluing the material (thus sometimes coexisting with Romanticism and individualism). The Innocence Cuckoo, also influenced by Romanticism, looks back to a state of precivilizational bliss (in fact, ancient cultures were often violent and did not live in harmony with their environment); we are all basically good and can trust our feelings. The Information Cuckoo values narrow and practical education only, devaluing wisdom. Provan insists that good education has a strong social component and, therefore, should never be virtual.

Closer to home, the Worship Cuckoo distorts church liturgies. There is minimal scriptural content in sermons and songs, and singing is more of a concert than a communal activity: "one finds oneself singing, more than once, a composition that did not have very much to say to begin with" (p.196). The Justice Cuckoo, sometimes emphasizing individual rights, sometimes nature, sometimes utilitarianism, flounders because it has no grounding. Similarly, the Revolution Cuckoo overvalues social justice and group identity, and neglects individual responsibility.

Provan is creative and overall concurs with much broadly conservative thinking on contemporary disagreements. At times he is a bit dogmatic and too general; I would prefer a more nuanced approach with further detail and illustrations. For example, what does "unbiblical" mean? What happens when individual rights to life are in conflict? Should children obey abusive parents? I was also disappointed that a biblical scholar seldom addressed the complexities of interpretation. Provan also paid little attention to spiritual experience, common to contemplative and charismatic streams of Christianity. To be fair, he acknowledges the downside of short chapters; however, I wonder if he simply tried to include too much, sacrificing depth for breadth.

Nevertheless, *Cuckoos in Our Nest* offers an excellent introduction and overview of important questions that all Christians need to contemplate. I recommend it to those unfamiliar with or overwhelmed by contemporary cultural problems; it is also a good resource for students and Bible-study groups.

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THE PROBLEM OF ANIMAL PAIN by Victoria Campbell, Elements in the Problems of God Series, Michael L. Peterson, ed. Cambridge University Press, 2023. 77 pages including bibliography. Paperback; $20.00. ISBN: 9781009270670.

In an era when the pet population surpasses the number of human children in some major cities, a renewed interest has been sparked in the relationship between the pain and suffering faced by animals and Christian theology. In the latest of the Cambridge "Elements in the Problems of God" series, Victoria Campbell, with doctorates in chemistry and theology and ordained by the Global Methodist Church, tackles the issue of animal pain through theological and scientific lenses. Recent years have seen excellent book-length treatments from philosophers and theologians, but few science-focused works. This very short contribution (only 63 pages) provides brief, often bullet-pointed, summaries of the problem of animal pain and of some responses, as well as providing her novel thesis, one based on the neurophysiology and ethology of natural pain mitigation.

As most philosophers and theologians who engage animal pain and suffering do, Campbell opens with William Rowe's classic argument from 1979 "against the existence of an omnipotent, omniscient, wholly good God" (p. 2) based on the idea of profound suffering in nature over billions of years of evolutionary history. If God exists and can prevent widespread and unnecessary suffering among created beings that are not themselves moral agents, why does he not do it?

Nearly all the major theistic responses to this question are summarized and evaluated, quite succinctly and (mostly) effectively. Campbell outright rejects the Neo-Cartesian premise that animals cannot feel pain; there is too much scientific proof that they can. She finds other arguments have their merits but are still insufficient, including "corruption of creation theodicies" (p. 15), in which pre-human, demonic forces caused primordial chaos, and those theodicies addressing animal afterlife or "saint-making theodicies" (p. 20), in which suffering is redeemed in an animal afterlife. Additionally, the author's treatment of chaos theory and kenosis is somewhat limited compared to recent scholarship, but her take on the strengths and weaknesses of arguments based on these ideas seems reasonable, at least as she frames them.

The crux of Campbell's theodicy seeks to affirm that animal pain exists, that an omnipotent and omniscient God also exists and is responsible for its presence, and that God is concerned for animals and cares lovingly for all creatures. Much of her argument is predicated on our knowledge of pain perception, particularly in vertebrates, the value of pain for survival and healthy longevity, and how natural means of pain mitigation reflect a loving, benevolent God. Campbell refutes arguments posed by Richard Dawkins and others that untold pain has plagued evolutionary history with incalculable cruelty, with her contention that about 99.5% of all species "will never experience the emotional distress associated with suffering" and "lack the physiological capacity to perceive pain" (p. 38).

Additionally, the author finds predation to be a means in nature to provide healthy ecosystems and to mitigate chronic pain or illness in animals. It is often the weak, injured, and infirm that are hunted, and the relatively quick death of prey species is mitigated by release of catecholamines and opioids that provide a sort of natural

anesthetic. Other troublesome issues, such as predatory behaviors of "killer" orcas and avian siblicide, are also addressed, with similar ideas that the benevolence of a creator God is expressed when a deeper scientific understanding of these processes is engaged.

In terms of critiques, the assertion that species apart from mammals and birds cannot feel pain will certainly be disputed by some; the difference between pain and suffering is never addressed, in that the terms seem to be used interchangeably throughout the book; and suffering is never explicitly defined. Though it adds valuable information to the discussion, this book is certainly not a comprehensive treatise on animal pain and suffering. Not all natural suffering experienced by animals is addressed. As a veterinarian who must contend with pain, disease and suffering in my patients, and who often serves a quasi-pastoral role in the corresponding anguish and doubts it creates in their human companions, I find that too many unanswered questions remain in this book. Excellent though the scientific answers are, a fully developed theodicy it is not; theological challenges remain that bring readers to face some of the same mysteries that Job ultimately embraced.

Nevertheless, this book is a worthwhile contribution to the literature on the problem of animal pain and is particularly useful to scientists who seek to make apologetic arguments based on empirical evidence. It expresses the power, wisdom, and goodness of God through revelations in biological science. Academics and lay readers alike will find the text highly engaging, and its brevity refreshing. *The Problem of Animal Pain* is highly recommended as an excellent, if partial, addition to what will continue to be a more robust conversation. A terrific bibliography offers many opportunities to explore the topic further. While not entirely sufficient as a stand-alone theodicy for animal pain and suffering, it is a buttress to a wider theistic response, and one that provides a much-needed, scientifically and biblically solid, voice.

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ASTROBIOLOGY AND CHRISTIAN DOCTRINE: Exploring the Implications of Life in the Universe by Andrew Davison. Cambridge University Press, 2023. 406 pages. Paperback; $27.99. ISBN: 9781009303163.

From my experience in speaking to groups on science and Christianity, whenever I suggest that Christian faith needs to allow for the possibility that intelligent, agape-capable beings could possibly emerge not just on Earth but elsewhere in the universe, the conversation inevitably produces several related questions, such as whether Jesus's atoning work on Earth would apply to such beings elsewhere in the universe, or whether God would become incarnate elsewhere in the cosmos. Often participants convey a tone that such questions are hopelessly big for us, that the topic may be momentarily interesting but ultimately overwhelming and futile. There are also those who offer confident commentary denying that any such life could possibly exist elsewhere other than Earth.

It is into precisely these sorts of expansive questions that Andrew Davison—recently appointed Regius Professor of Divinity at Oxford—takes us with this marvelous volume. While the person in the pew may feel theologically at sea with such questions, Davison models the professional theologian taking on a challenging question, to offer the church a set of constructive responses that cohere with both current science and historic Christian faith (or, more precisely, doctrine).

With a hundred billion stars in just the Milky Way alone, the universe possesses "an astonishing number of potential cradles for life, and that, to my mind, changes everything" (p. 5)—a potential that includes not just biotic life but also *intelligent* life. Yet even without our current knowledge of cosmology, theologians have been writing about the possibility of "other worlds" (beyond Earth) since the thirteenth century and writing about "the theological implications of biological life beyond Earth" since the mid-fifteenth century (p. 7). Other worlds and intelligent life beyond Earth have not been central topics of theology over the centuries; however, Davison does a superb job of unearthing the many theological discussions that have taken place, both past and recent.

Davison's interest, though, is not merely historical but also constructive. "One motivation for a book such as this is to help the human community (and specifically, the Christian community) to be more ready to receive, process, and respond to any future signs of life elsewhere. Detection might come in a decade, centuries hence, or perhaps never, but if it does, it will be useful to have thought through the implications in advance" (p. 11). He holds a second motive: "after a journey—physical or intellectual—in unfamiliar territory, one can return home with fresh eyes … [O]ur theology can find useful provocation, even invigoration, by having life beyond our planet in mind … [A]spects of Christian faith shine in new ways once placed in a different light" (pp. 11–12).

Davison's method is to discuss the implications of life elsewhere in the universe for a range of Christian doctrines. For instance, do we have theological reason to believe there might be life elsewhere? Certainly, for "The cosmos is for life … the cosmos is for the communication and display of divine excellences (among which life is particularly significant). That, in turn, is seen to entail (or at least suggest) multiplicity and diversity, and therefore to undergird an expectation that life would be widespread and, perhaps, diversely realized" (p. 82). For Thomas Aquinas, multiplicity, or "the numerical plurality of things," is second only to