hypothesis, the truth of which will be decided on the evidence. And the evidence is, in some respects, confusing.

There is no doubt that the big tree with three branches is what you get using the large ribosomal RNA (the long molecule Woese selected), but in fact each gene has its own history, and trees do not work with the microbial world very well (that is the confusing part). I do not want to give away too much in this review, but Quammen's discussion of gene sharing among organisms is remarkably well done. Along the way he explores the truly "Lamarckian" aspect of the CRISPR system of bacteria and archaea, wherein they purposefully store part of their environment within their genome as part of a highly advanced (not at all primitive) microbial immune system. The final third of the book focuses on this phenomenon of horizontal gene transfer (HGT). It is hard to deny that such processes have contributed a tremendous amount to the human nuclear genomes we adore so much. But does this diminish our humanness? What does it mean to be human? What is a species? These questions are addressed only from a biological perspective in this book, and while some Christian readers may find this a limitation, Quammen appropriately focuses on scientific questions, not theological ones. The final section of the book is "E. Pluribus Human," which readers should realize is speaking simply of our biological origins, not our spiritual natures as described by scripture.

It is noteworthy that Carl Woese apparently believed in the existence of a personal deity at some level, even kidding his long-time atheist assistant that she might be blessed by "the God you don't believe in." As a working biologist, I am continually amazed at the amount of antievolution material produced by the Christian community. I realize that, for many, the term "evolution" equates with atheism, and I have been asked if I am a "Darwinist" multiple times, whereupon a lengthy discussion usually ensues. But much like the term "prokaryote," we really ought to use more precise language to avoid misunderstanding. Can we start to call this natural process what it is: biological evolution? It is science, neither a worldview nor a philosophy. It is genetic change over time. It is complicated, and we can now read the information as never before. The fact that our very cells record a history of how God has used the atoms and molecules (whose very existence we believe he upholds) to accomplish his ultimate ends, somehow with an openness and freedom, is a truly breathtaking realization.

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Science and Religion

CHRIST AND THE CREATED ORDER, Vol. 2 of Perspectives from Theology, Philosophy, and Science by Andrew B. Torrance and Thomas H. McCall, eds. Grand Rapids, MI: Zondervan, 2018. 304 pages. Paperback; $36.99. ISBN: 9780310536086.

Christ and the Created Order is the second volume of "perspectives from theology, philosophy, and science." (The first volume was reviewed in the June 2019 issue of this journal.) As the title indicates, this collection of essays brings together distinctively Christian insights on the subjects of creation and science.

The selection was slightly more wide ranging than the first volume, and the quality and relevance of articles oscillated. Three or four seemed overspecialized and out of place for a broader interdisciplinary theological conversation, while others more directly addressed pertinent issues relating to Christology and the doctrine of creation.

Some of the narrow subtopics addressed, however, effectively enlighten readers to reconsider our understanding of "science," the "natural" world, and the nature of religion in general. For example, Murray Rae discusses one of Chopin's symphonies as a case study for the interpretation of real, meaningful phenomena, even though the "utility" of all the details that gave rise to the piece "cannot be proven" (p. 28). Various fields of knowledge, whether religion or otherwise, are providing an interpretation of a slice of our experience. We can debate meaning, but we cannot debate that there is more going on than we may be able to put to words. What we are "hearing" in the symphony of creation is *something* indeed.

> The sciences contribute their expertise to examine and explain how the world is ordered; poets and visual artists and musicians help us see in a different light the complex interdependence of things; economists, political theorists, and social scientists give insight into the working of human culture and society, while historians provide a further means of contemplating the realms of human action and discerning the consequences of what we do. All these disciplines and more contribute to our understanding of the world. (p. 28)

Part of the distinctively Christian view of the world is that God in Christ is behind it all. All the above disciplines "go about their business under the assumption, repeatedly confirmed by experience, that the world does have an order and a coherence that is intelligible, at least in part, even if its ultimate basis in Christ

is not seen or acknowledged by all enquirers" (p. 29). The claim that Christ is behind everything is rejected by many. "It is rejected by some who, for reasons of their own, simply refuse to entertain the possibility that theological explanation might have something to contribute to our understanding of reality" (p. 32). Such skeptics "do not see in Christ's healing of the sick, in his compassion for the despised, in the forgiveness he extends to sinners, or in his feeding of the hungry, any hint of the way creation itself is ordered" (p. 39). In this way, the hegemony of modern science (and scientism) is rightly questioned as not being as pluralist as it should be.

In an equally thoughtful article, Norman Wirzba masterfully connects the life and work of Christ to the big picture of cosmology and human purpose. As scandalous as it has always been to claim such, "… Jesus expresses in his daily, practical mode of life how life should be for all creation because his embodied life is the exact, material imprint of the divine power that daily creates the world" (p. 40). He later discusses the significance of how we might be able to reconceive the world in terms of a "field of verbs" instead of a "collection of nouns" (pp. 51–53), the latter being an outgrowth of Aristotle's immeasurably influential ontology. "A collection of nouns," Wirzba concludes, "much like a container of objects, stresses distinctions between things. A field of verbs stresses the entanglements of lifeways that in their development continually challenge, shift, and penetrate the 'borders' that keep things apart" (p. 51).

In the third chapter, Brian Brock revisits "sin" in light of modern scientific discourse: "Human sin is thus to be defined as moving back into a state of competitive self-promotion that was once nonmoral but now in the postlapsarian state constitutes a self-induced moral and religious deafness" (p. 72). Brian Curry then looks at the meaning of "the powers" in New Testament and theological discourse: *"So by 'powers' Paul means to name structures of the world that were at least to some extent part of a good creation but threaten to ruin our lives and life of the world more generally"* (p. 86, emphasis original). Why is this topic significant? "Without a robust doctrine of the powers, Christians can all too easily think that it is their responsibility to put forward a flat-footed theodicy, defending the status of the present world as really good even though the New Testament does no such thing" (p. 89). Curry then quotes from David Bentley Hart's *The Doors of the Sea* (a work on theodicy) and controversially concludes that "Evil" is not part of "God's good plan" and exercises no necessity upon the divine purposes in creation. It is "wholly parasitic, wholly unnecessary to the flourishing of all things in fellowship with God" (p. 90).

N. T. Wright then examines the cosmic implications of the incarnation. Similar to cases made by others (I am thinking of Daniel Migliore's *Faith Seeking Understanding*), Wright argues that

> When the New Testament says that "all things were made through him," we don't start with a view of "how God made the world" and insert Jesus into that. We start with Jesus himself, as I have tried to do in this essay, and we therefore reflect on creation itself not as a mechanistic or rationalistic event, process, or "fact," and not as the blind operation of impersonal forces, but as the wise, generous outpouring of the same creative love that we see throughout Jesus's kingdom-work, and supremely on the cross. (p. 109)

The next few chapters comprise some technical and/or (in my opinion) somewhat off-topic articles (i.e., their relation to the book's theme is indirect or obscure). Then, readers are refreshed with Adams's more straightforward, clear, and realist article, "For Better or Worse Solidarity." As with her previous essay in volume one, a quick journey across provocative and interesting topics, from the process of psychological development at the hands of "neurotic adults" (p. 175) to the ethnic cleansing of Rwanda (pp. 175–76), re-centers questions about the basic nature of creation: "What God wants is for material creation to be as godlike as possible while still being itself" (p. 177). James K. A. Smith's article, likewise, zooms out to assess secularism at large (leaning on the work of Charles Taylor) and the real nature of "conflict" between "science and religion."

In a later chapter, Deb and Loren Haarsma turn the reader's attention toward the stars, themselves being in "Christ and the Cosmos." However one conceives of the Christ-stars relationship, it is clear how we engage the dark and dangerous elements:

> Jesus Christ gives us the ultimate example of how we should respond to the wild, destructive aspects of creation when they cause suffering: Jesus calmed the storms and healed the sick. He worked to ease the suffering of others, whatever the cause of their suffering. We are called to do the same. (p. 233)

Greenway and Barrett then discuss the nature of religious belief from a cognitive and evolutionary-psychology perspective, relating Calvin's *sensus divinitatis* to such ideas as agency detection and belief in the supernatural. The book concludes with an article on what it looks like, concretely, for the Christian to practice science.

In my reading, this second volume was not as engaging as the first, and felt as though several contributions were little more than (needless) academic recycling. However, *Christ and the Created Order* does contain thoughtful contributions for the doctrine of

creation and Christology. Readers can expect helpful elaboration on what a first-century Jewish carpenter has to do with the universe, nature, and the meaning of life.

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THE EMERGENCE OF SIN: The Cosmic Tyrant in Romans by Matthew Croasmun. New York: Oxford University Press, 2017. 190 pp. + notes, references, and index. Hardcover; $74.00. ISBN: 9780190277987.

SIN is a person, a being, an entity exercising tyrannical dominion over all human persons since the dawn of humanity's emergence. This is the provocative claim that Matthew Croasmun, Associate Research Scholar, Director of the Life Worth Living Program at the Yale Centre for Faith and Culture, and Lecturer of Divinity and Humanities at Yale University, advances in his book *The Emergence of SIN*. Based on his doctoral dissertation (which won the 2015 Manfred Lautenschläger Award for Theological Promise), Croasmun masterfully weaves together interdisciplinary research from the fields of biblical studies, theology, ancient Greco-Roman culture, and scientific and philosophical contributions to emergence theory. He puts forth a case that is stimulating, enlightening, and, for the most part, clear and convincing, with important implications for theological anthropology, ecclesiology, ethics (social and personal), politics, and the dialogical, mutually enriching relationship between science and Christian faith.

The context giving rise to his thesis is Paul's discussion of sin in Romans 5–8, and more specifically Paul's personification of sin as Sin, a cosmic agent exercising power and control over the human beings it enslaves. His question is whether "Sin as a cosmic agent" has "a basis in fact" for Paul. He then surveys three ways of answering this question in modern theological literature.

The first option, represented by Bultmann and existentialist interpreters, is that personified Sin is a literary device, not to be taken literally but pointing to a deeper truth that confronts the reader with questions about human existence. The claim is not so much that Paul intentionally employs personification in strictly a literary sense, but that modern readers (who know they must separate myth from kerygma) must read Paul this way to read the text responsibly (reasonably). This idea is the result of "Bultmann's assumption that Sin as a cosmic power does not correspond to 'the actual state of affairs'" (p. 8), whether or not it has a "basis in fact" for Paul. Bultmann is suspicious of mythical interpretations not only for epistemological reasons, but also for ethical reasons. He is concerned to preserve the culpability of the sinner (emphasizing the point of decision), which he believes is compromised by accounts that lean toward cosmic determinism. Thus, Bultmann argues that Paul's position is that sin *came into the world by sinning*; it is inherited socially, not biologically or spiritually. "Original sin" is a pre-Pauline gnostic myth that Paul accommodates.

The second option, represented by Käsemann, is that by personifying Sin, Paul is claiming that human beings are under the dominion of real spiritual powers that transcend human beings ontologically. For Käsemann, Paul's mythological language cannot be fully explained away; it is not "just" metaphor. Quoting Käsemann, a person "is in the grip of forces which seize his existence and determine his will and responsibility at least to the extent that he cannot choose freely but can only grasp what is already there" (p. 11). Thus, for Käsemann, Sin "is a very literal demonic power" (p. 12). Croasmun points out that both Bultmann and Käsemann make legitimate points and that the biblical text has room for elements of both views. Paul makes two claims that seem paradoxical to the modern reader: sin is both something that human beings commit (thus, confirming Bultmann) and yet Sin is a transcendent entity, acting upon humans who are thus enslaved (as per Käsemann).

A third option, represented by various liberation theologians, is that personified Sin refers to social and political structures that perpetuate evil and oppression in human societies. For Oscar Romero, such structures "are sin" because they produce the characteristic fruit of sin, namely death. Elsa Tamaz points out, in light of Romans 7, that "sin needs the law to hide its wickedness with legitimacy." As such, Sin is both "a personified and enslaving power" and a structure "constructed by unjust practices of human beings" (p. 16). Similarly, according to José Ignacio González Faus, "When human beings sin, they create structures of sin, which, in their turn, *make human beings sin*" (p. 16, emphasis original). Juan Segundo likens Paul's language of Sin to the demonic in the gospels, specifically in that sin "is a condition that subdues and enslaves me against my own will" (p. 17). Yet, these powers operate through sinful social and political structures. For Bultmann, Sin is a myth pointing existentially to the culpability of the individual and leading the importance of individual decision, and, for Käsemann, Sin is a spiritual entity influencing individual human beings; for liberation theology, Sin points to the fact that individual human