

PREFACE

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I don't remember when exactly I met Neil Ormerod. It must have been at one of many conferences on theology or Lonergan or both. What I remember is that I quickly pegged him as someone I needed to talk with as much as possible. Once we began corresponding with each other I took every possible opportunity to pick his brain on whatever I was trying to figure out when I happened to encounter him. Between his scientific knowledge and his thorough grasp of the work of Bernard Lonergan, he was always a few steps ahead of me in putting together cutting-edge ideas.

After a few conversations of this sort over several years, I had occasion to visit Neil in Sydney. My daughter, Carolyn, was in a study-abroad program at the University of New South Wales. While I was visiting her in Sydney, Neil graciously drove me to see the Blue Mountains (which in fact I never saw—fog surrounded us the entire time we were there) and he and his wife, Thea, hosted Carolyn and me at their home in Sydney one evening. Neil also invited me to give a lecture at The Australian Catholic University and video-cast it to other campuses of the ACU around Australia. After my lecture on the ethics of risk, in which I offered many examples from biology and evolution, he asked me, “Why don't we write a book together on these issues?” I was of course flattered and also thrilled at the prospect of ongoing robust conversations with Neil. I had never done such co-authoring before but he assured me that we could each write sections, comment on each other's work, and then have “Skype dates” for further conversation.

This is exactly what we have done and we would both agree that it has been an exciting challenge and a fruitful exchange. Early on, Neil indicated

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that I was not to worry about his ego, and we both got used to lots of “tracked changes” interrupting and coloring up our drafts. He would correct major and minor points I made, both scientific and philosophical. I in turn pressed him to think more deeply about several of his positions. We added examples to illustrate each other’s arguments. Neil’s facility with physics and my long-standing interest in biology meant we each had our teaching moments as well as a wide selection of illustrations to offer one another.

The result of these fruitful interchanges is this current work. We take on big ideas, pushing ourselves to think big thoughts about mostly incomprehensible ideas (like God and the unfolding universe). Incomprehensible does not necessarily mean unintelligible, however, and we have striven to make sense of complex processes and concepts, providing as many examples, illustrations, and stories as possible in order to facilitate insights for readers. However much we have worked to do this and to communicate with clear prose, note that even if you “get it”—whatever the “it” is in any given chapter—your brain is likely to hurt when you are done. This won’t be because we are intentionally trying to be erudite or obscure but because the ideas themselves involve considering things too big and too vast to comprehend in a single act.

So what is the big idea here? Or, as I often ask my students at the end of a class, What’s the take-home message? One is that the presumed polarity between meaning, purpose, and order on the one hand, and chance, chaos, and contingency on the other, is a misconstrued dilemma. Chapter 2 takes on this false dichotomy by examining two ways science makes sense of the world. Classical science deals with the orderly and regularly occurring phenomena while statistical science asks how often various events occur, yielding probabilities. In fact, chance and order interact as the world unfolds, both contributing to the stable routines and the novel realities that emerge. In essence, even though the theory of evolution introduced the notion of “chance” into what was assumed to be a fully determined world trajectory, chance is not nonsense. Creation—everything in space and time—is part of a continually unfolding interaction between regularities and probabilities. Creation unfolds according to what Bernard Lonergan calls “emergent probability.”

A second key idea has to do with how we think about a Creator God. Once we have accepted the role of chance in the unfolding of world process, what do we make of our traditional notions of God as omniscient, omnipotent, and unchangeable? Is God also subject to chance? To the uncertainty of what comes next? In chapter 3 we promote a resounding “no” to these

questions. Instead, we retrieve and endorse the classical theism of the Christian tradition. God is fully transcendent, “outside” space and time, and yet fully involved as the primary cause of all that is. A few key distinctions here, most notably between primary and secondary causality, and two different ways of understanding the “contingency” of the world, as well as a clear presentation on the space-time continuum, reveal that the classical conception of a fully transcendent Creator is not only compatible with modern science but indicated by it.

Having made a case for how the world in fact unfolds and for the compatibility of a fully transcendent God with this process, many further questions need to be addressed. Chapters 4, 5, and 6 deal in depth with the implications of our position. Chapter 4 returns to the question of whether there is any purpose embedded in the way the world unfolds; has the introduction of chance into our view of the world meant the death of “teleology”? Chapter 5 addresses the notion of God’s providence. Chapter 6 explores further implications for how we understand the challenge of human agency.

For the most part, our approach goes against the grain of most recent science-and-religion discourse in the academy. Whereas most in the science-and-religion community assume that the days of alluding to “Being” are long past, to be replaced by categories of “Becoming,” we insist that Being (and such lofty areas such as ontology and metaphysics) are still very much relevant to the questions of our day. We are not in the business of nostalgia, nor of advocating a return to medieval thought and categories. Nor do we endorse any of the new “creationisms” such as intelligent design. Nevertheless, we insist that a transposition of some of the ideas from classical theism, with strong hints from Lonergan’s engagement with modern scientific method, are not only worthy of our efforts but necessary for our times. Further, we assume a critical realism—that is, that we can ground our positions in “the ways things really are”—not as a fruit of naïveté but as a result of what Lonergan would call “generalized empirical method.” Our positions warrant attention because they make a difference in the world as it exists and unfolds.

We have struggled to generate explanatory categories and this has led us to use critical reasoning and discursive language that may seem alien to the lives of religious believers. Nevertheless, our ultimate goal is pragmatic, that is, to shed light on issues that are often confusing for the generally educated reader. Ultimately, we have set our sights on the ordinary person in the pew, not because we expect her to become an academic in order to believe, but

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because the issues we raise have exceedingly strong import for how we understand and live within a religious worldview in tune with the contemporary world. Reading this book might leave your brain hurting but it will be well worth the effort in expanding your faith vision.

We owe a debt of gratitude to many who have contributed directly or indirectly to this project. First and foremost we want to thank the seminary students and staff at the School of Theology of the University of the South, Sewanee, who read and discussed our chapters in draft form. In particular we are indebted to Mollie Roberts, Laura Beck, Julia McArthur, Rachel Bush-Erdman, and Mary Ann Patterson. Their engagement with the issues in light of their own faith experiences raised important questions and contributed directly to revisions of our work. Mollie Roberts also did further work as a research assistant and provided helpful editorial advice. Our institutions have supported our work so we render gratitude to the University of the South, Sewanee, as well as to the Australian Catholic University.

Several institutions supported sabbatical and research work for me. My work on creation and evolution began with a sabbatical from The Catholic University of America. St. Jerome's University in Waterloo, Ontario, hosted me as a visiting scholar for this sabbatical and very graciously continued offering me office space in subsequent summers. Christine Schwendinger, Myroslaw Tataryn, and Cristina Vanin were especially helpful in this regard, as were the Masters of Catholic Thought students who took my course on creation and evolution. Ted Laxton in particular has provided feedback on my work. Finally, the Conant Fund of The Episcopal Church has funded summer research and travel to the Galapagos Islands in support of my work.

Both Neil and I are of course indebted to the significant others who support the whole of our work and careers and have been particularly encouraging of this project, most notably Thea Ormerod and Peter Hunter.

We hope that you will enjoy the challenge of encountering big ideas as much as we have.