
by Joel W Martin
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Reviewed by Matt Young

I love the rainbow, not only because of its beauty but also because it has so many fascinating physical features — supernumerary arcs, secondary rainbow, bright sky inside the primary rainbow and outside the secondary rainbow, and dark sky between them. I can explain all these features on the basis of physical or geometrical optics. Joel Martin, the author of *The Prism and the Rainbow*, loves the rainbow not only because of its beauty but also because it reminds him of God.

Martin, an evolutionary biologist and an ordained Presbyterian elder, cleverly uses the rainbow and the prism as analogies for religious and scientific explanations. The religious explanation, which Martin would freely admit is not an empirical explanation, for the existence of the rainbow is that God put it there as a symbol of his covenant with humanity. For Martin, the Biblical story of the rainbow is a good yarn, and he argues that even “people today who fully understand the physics behind rainbows [can easily] think of the hand of God behind such a wondrous spectacle. In fact, it is hard for many people (and I am one of them) to conceive of a world that does not have God in it when confronted with such unbridled glory” (p 16).

The prism, by contrast, represents science; Newton used the prism to demonstrate that white light is composed of all the colors of the rainbow and thereby explained the visible spectrum.

Martin thus sets us up for what amounts to a viewpoint similar to Stephen Jay Gould’s nonoverlapping magisteria: that there are two explanations does not necessarily mean that one of them is wrong. In short, he sees no reason why a natural phenomenon cannot on the one hand be explained by science and on the other hand be a sign from God. The Biblical story of the rainbow “has to do with God’s forgiveness, grace, and promise”; it is not diminished because we understand the physics of the rainbow. The same, says Martin, is true of the theory of evolution: his appreciation of the deity is not diminished by his understanding of natural selection.

Although it does not say so anywhere, the book appears to be written for young adults, that is, in high school or college. Martin begins with an anecdote about two students who belonged to his church but were completely unaware that the church’s official position accepted the theory of evolution. Indeed, Martin estimates that most Christians in the United
States belong to churches that consider evolution compatible with their beliefs; unfortunately, not all members of those churches share their churches’ official positions.

In early chapters, Martin describes the nature of science and the meaning of the word “theory” in science. His defense of science is good, but I cannot agree that science does not address “such important human issues as our sense of morality or the value of beauty” (p 34). Indeed, I am mildly surprised that an evolutionary biologist does not even consider the possibility that our sense of morality is an evolved trait; we have observed cooperation and reciprocal altruism in the animal kingdom, and our sense of morality may well be similarly evolved and therefore addressable by science. Likewise, although Martin obviously rejects religious beliefs that conflict with known scientific fact, he inconsistently argues that science cannot address matters of faith. The chapter on the meaning of “theory” is likewise a little muddled and may not be clear to people who do not already have some appreciation of the terms he defines.

Subsequent chapters describe evolution, creationism, and “intelligent design” (ID) creationism. I wish that the chapter on evolution had been a bit longer and provided clearer evidence in favor of evolution, rather than just stating that the evidence is overwhelming. The chapter on creation science was clear, but the chapters on ID creationism were marred somewhat because the author has conflated ID creationism with old-earth creationism. Specifically, many old-earth creationists reject macroevolution and claim that there has been only variation within “kinds”. While ID creationism is officially neutral about macroevolution, its most prominent scientific advocates, Michael Behe and William Dembski, accept macroevolution but do not think it could happen unaided, at least in certain cases. Contrary to Martin, ID creationism does not necessarily restrict evolution to microevolution within kinds.

Martin explains clearly that there is no affirmative evidence for ID creationism, that disagreement in science is to be expected, and that evidence against one theory is not necessarily evidence in favor of another. He also describes “the fear that evolution somehow removes God from the picture ... It is mostly the ‘randomness’ of mutations that seems to concern creationists here, since this [randomness] would seem to imply pure chance over the hand of a designer” (p 71). He goes on to explain that randomness simply means unpredictability and, unarguably, that much of life is unpredictable.

After a couple of chapters on religion and the Bible, Martin concludes by asking what Christians are to believe. He states flatly that the Bible was written at different times and by different people; it is not a textbook but rather “enduring messages passed down from generation to generation.” He advises wise readers of the Bible not to “get caught up in the details and lose the important message.” Second, he does not think that any finding of science should make them question their faith. Third, he advises them to study evolutionary theory and biology. Finally, and to my mind the most important, he urges them not to “fear knowledge”; science, which he sees “as a gift from God, is the most direct way we have of learning about the natural world. ... [S]cience itself is not remotely anti-Christian or anti-religious. ... [W]e have nothing to fear from learning about the world around us” (p 101). In an unfortunate epilogue, however, Martin simply begs the question about how we know God is with us today and unconvincingly holds up evolution as evidence “that God’s work is still being done.”
Finally, three quibbles. The book has far too many detailed notes. If the material in the notes was worth reading, it should have been incorporated into the text; if it was not worth reading, it should have been eliminated. Second, the short glossary contains terms that appear nowhere in the book. And, finally, the author’s description of the formation of the rainbow is inaccurate; although the color in the rainbow depends on dispersion (the variation of index of refraction with wavelength or color), the formation of the rainbow is not at all like the formation of a spectrum by a prism.

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