



SCIENCE AND RELIGION

MERE SCIENCE AND CHRISTIAN FAITH: Bridging the Divide with Emerging Adults by Greg Cootsona. Downers Grove, IL: InterVarsity Press, 2018. 184 pages. Paperback; \$17.00. ISBN: 9780830838141.

Mere Science and Christian Faith: Bridging the Divide with Emerging Adults is a call by author Greg Cootsona to the importance of basic science literacy if one hopes to do ministry with young adults (aged 18–30). Cootsona is Lecturer in Religious Studies and Humanities at California State University at Chico and directs Science and Theology for Emerging Adult Ministries, a three-year, \$2 million grant project, funded by the John Templeton Foundation and housed at Fuller Theological Seminary. From 2002–2016, he served as associate pastor for adult discipleship at Bidwell Presbyterian Church in Chico, and from 1996–2002 at Fifth Avenue Presbyterian Church in New York City. His experience makes him highly qualified to speak to the issues addressed in this book. Cootsona’s popular appeal is evidenced by his writings in major newspapers, as well as by his interviews by national television networks. He is also a member of the American Scientific Affiliation.

Mere Science and Christian Faith has eight chapters, as well as a list of books for further reading. The chapters are short, pithy, provocative, and sprinkled with a plethora of interesting quotes. The book is well referenced. Cootsona discusses both the positives and negatives of technology, and then considers several topics that seem more like hot topics of interest to young adults than science topics critical to Christian faith. Some of these topics include the New Atheism, cognitive science, cosmic fine tuning, intelligent design, sexuality, and global climate change. This review will begin by highlighting three strengths, and then describe three weaknesses of *Mere Science and Christian Faith*.

First, this book is written for people who are ministering to 18- to 30-year-olds. Cootsona’s working hypothesis is spot on. He argues effectively that the younger generation takes science and technology for granted. The impact of technology is an essential element of the world in which they live, as seen in advanced medical care, the internet, space travel, and environmental protection. The church today needs to take science and technology into account in order for its message to gain a hearing. So while the ministry of the gospel need not pander to popular trends, neither can it ignore them.

Second, the author has a good sense of humor, and uses it effectively. However, in some cases his approach is a bit too relaxed and compromises the intellectual tone of the book. For example, “Google, the source of all information,” may be humorous to young adults, but considering that Google is the primary source of information for many university students, it may not be a joke at all.

Third, the author has made a start on his stated goal of creating a theology of culture, with science as a key component of that culture. For the Christian message today to have more impact, it must engage science. The author has a good grasp of the problem of science avoidance in church, and effectively alerts the reader to this problem.

Areas where the book could be improved include the following. First, *Mere Science and Christian Faith* popularizes and simplifies science enough to leave practitioners of science wanting more. And while the book’s call to incorporate concepts from science and technology in ministry to young adults is well defended, it is not successful at telling the reader how to do so. The author seems to assume that talking about hot topics in science will pique the interest of young people and keep them engaged with the gospel. This leads to a second weakness.

Cootsona argues that science and technology are what young people want to hear and discuss, so that is what they should be given. That this is universally the preferred spiritual appetite for young Christians is debatable. Furthermore, spiritual growth is not always best served by giving people what they perceive themselves to need. According to many young people, what they want is that the church allow people trained in science to have a voice, and neither muzzle the true scientists, nor give the pulpit to people who are not qualified to speak adequately about science. The goal should be to normalize science and technology within the church, so that the topic is discussed responsibly and with faithfulness to scripture. Young people want science that makes a difference. The author acknowledges that young people want to see technology used in service to the poor and underprivileged, but seems to also consider titillating topics such as transhumanism to be important in engaging young people. But while generating fun conversations, such topics are probably less important to young adults than being able to observe spiritually mature, scientifically literate mentors living lives of integrity. These characteristics are probably more important to young people’s spiritual formation than whether one is able to discuss the prospect of every human possessing a digital

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version of their brain on file in case they develop Alzheimer's disease.

Third, the author plays around with technology like playing around with an apple in one's hands, not sure whether to eat it or not. It would have been helpful if the author had done more to explain the circumstances in which science and technology serve good purposes and those in which they do not. Although Jacques Ellul died in 1994, his *Technological Bluff* remains a prophetic word with implications more profound with every passing year. Interaction with some of the classic works on the ethics of technology would have strengthened the book's argument.

This book is an enjoyable read, and could be used as a springboard for conversations about the ways science and technology interact with Christian faith. People who minister to the age group which is the focus of this book will find it enlightening. However, a classic ASA member might find this book lacking in scientific rigor, and with an inadequate delineation of science and technology. But, to find out, buy the book, share it with your young adult friends, and have a conversation about it. Cootsona's experience in increasing the confidence of young people, by showing that the gospel is not made irrelevant by science, is impressive. This book is another contribution to that end.

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CITIZEN SCIENTIST: Searching for Heroes and Hope in an Age of Extinction by Mary Ellen Hannibal. New York: The Experiment, 2016. 423 pages including notes, references and index. Hardcover; \$25.95. ISBN: 9781615192434.

[G]eology, biology, and human history may be investigated by us as separate chapters but, in fact, they make up one book. And the time has come for us to learn to "read" that book. (p. 6)

Mary Ellen Hannibal is a prolific environmental journalist. Her previous works include *Evidence of Evolution*, commemorating the 150th anniversary of *On The Origin of Species*; and *The Spine of the Continent*, describing the most ambitious conservation effort yet attempted. She is an appropriate author for this rich and lengthy volume about the legitimacy of citizen science research. She takes it much further than mere legitimacy, however. This book amplifies her claim that data produced and reported on a variety of subjects (migratory birds, bees, redwoods, and tide pool creatures are a few specifically described) by interested members of the general public is crucial for the preservation of endangered species and ecosystems.

Essentially, scientists simply cannot do it all. They need to enlist all the help they can get, and passionate volunteers make worthy contributors.

Hannibal has a particular gift for connecting the scientific community to the public. This is evident in this book, and indeed, it could almost be considered the theme of it, because this connection is the core of citizen science. Perhaps a clarification of the term "citizen science" is needed here. Citizen science is simply scientific work that is done by interested citizens rather than by professional scientists. *Citizen Science* describes a number of projects that are underway and functioning because of the efforts of countless nonscientists who document the honey bees they observe, or count the migrating hawks that pass over a particular point each fall, or note the dates that local plants first bloom in the spring. They typically record their data electronically and submit it to scientists who use it in various ways, such as establishing population baselines so that changes can be documented, or the reverse—comparing reported numbers with baselines established in past decades.

The book includes several citizen-science-related scenarios in eleven, sometimes lengthy, chapters. The author lives in Northern California, and many of the ecosystems and associated projects and people she details occur there. These include California's original habitats and how they have been altered in the last two hundred or so years, citizen science and Silicon Valley technology, the redwood forest, Pacific tide pools, the founding of the California Academy of Sciences (by citizen scientists, not professionals!), and Mt. Tamalpais ecosystems.

My favorite account was the story in chapter 9 of a champion citizen scientist, Ed Ricketts, and his friends Joseph Campbell and John Steinbeck. Hannibal's picture of Monterey, California, in the 1930s and the development of the classic natural history books *Between Pacific Tides* and *The Log from the Sea of Cortez* are fascinating. The intriguing and enduring relationships among these brilliant characters are also explored. Campbell is the author of *The Hero with a Thousand Faces* (1949) and the originator of the phrase "follow your bliss"; Steinbeck received a Pulitzer Prize for *The Grapes of Wrath* (1939) and authored many other outstanding books. Ricketts's holistic approach to science in general and ecology in particular comes together in *The Log from the Sea of Cortez* (co-created with Steinbeck), which can be rightfully considered a manifesto of citizen science if not even a bible. Darwin is to evolution what Ricketts is to the integration of science with its sister humanities. Hannibal carries this sense of integration throughout her book, quite intentionally. "I'm trying