

## BIOETHICS

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**AT THE MARGINS: A Life in Biomedical Science, Faith, and Ethical Dilemmas** by D. Gareth Jones. Eugene, OR: Resource Publications, 2022. 168 pages. Paperback; \$22.30. ISBN: 9781666744712.

Picture this: a close friend tells you they are deeply struggling with a medical issue—for example, the use of *in vitro* fertilization, pre-implantation genetic diagnosis (PGD), vaccination, or medical treatments that may be based on using embryonic stem cells. They ask *your* advice and insight on the topic, specifically because you are a Christian. Should they use this treatment? Is it acceptable as a Christian to use it? How, then, do you respond? Would you be able to help them understand the benefits, challenges, and questions of these procedures? Would you be able to help them process the dilemma they face, both spiritually and medically?

*At the Margins* is a humble walk with a Christian who is also a scientist, who has served on ethical advisory committees, and who has walked through these biomedical discussions with fellow Christians. These discussions have involved and affected him personally, spiritually, and professionally. It is this integration that makes the book and its dialogue so valuable. Jones's life provides an example of how we can integrate spiritual direction and scientific knowledge as we navigate the ethical decisions within our own lives.

Jones begins his discussion by giving his testimony and faith journey. He grew up in England in a church-attending family, but his spiritual awakening occurred in college, over several years of searching. He learned early to engage in dialogue with those who think and believe very differently than he does, a skill which has become invaluable in his journey with biomedical ethics. As a young person, his spiritual journey developed alongside his fascination with science and the ability to ask questions. Two Bible verses have guided him spiritually. One is Luke 18:17: "Anyone who does not receive the kingdom of God as a little child will never enter it." For Jones, this verse encourages the pursuit of "openness, honesty, truthfulness, and uncomplicated inquisitiveness" (p. 8), which are also important traits for a scientist. The second verse is 1 Cor. 13:12: "For now we see in a mirror, dimly, but then we will see face-to-face. Now I know only in part; then I will know fully, even as I have been fully known." This verse encourages humility, because anything we know now, both scientifically and theologically, is limited in its scope—only eventually will we have a more full and complete explanation.

The author's journey in ethics began within his own profession of anatomy. Early in his career, he realized that some of the bodies used in the dissection lab were from unidentified, or unclaimed bodies. These individuals did not know their body would be used in this way, nor did they intentionally donate their bodies for the anatomy lab. To Jones this seemed an unethical use of these individuals' bodies since there was no consent given. His discussion on this

topic includes the role of Christians to protect the vulnerable, the dispossessed, those without a voice. His objection to the use of unclaimed bodies for the anatomy lab was not initially greeted with enthusiasm, as it reduced the number of bodies available for dissection (the primary method of teaching anatomy at that time). Over time, however, adjustments in attitudes and cadaver procurement were made. For the author, such discussions are not merely academic topics; they influence his life and the way in which he interacts with others.

In chapters 3 and 4, he reflects on his personal experience with the Covid-19 pandemic. He talks about how to see God's presence in such a tragedy, and he explores the role of God's lament for people when disaster strikes. For Jones, exploring nature through the scientific method is one way "to be guided by Christ's overriding commandment to love God with all our being—heart, soul, mind, and strength—and to love our neighbor as ourselves" (Mark 12:29–30), and the pandemic provided opportunities to do both.

Jones sees medical science as one way to explore God's creation, to seek God's glory, and to help heal a broken world. He observes that our responses to pandemics, and to the risks and benefits of vaccines, are complex. He does not preach or advocate a specific position, yet he does talk about the necessity for science to educate our faith, and for our faith to guide our use of science. If love for neighbor supports only the use of donated bodies in the anatomy lab, then it may also include protecting from a pandemic those who are vulnerable, such as those with health problems, especially who are immunocompromised. Thus, God's provision of spiritual gifts could include the ability to heal others through the development of a vaccine that can help to heal those in need. He also gives a historical perspective on the use of vaccines and the fears, concerns, and objections of many to receiving them. From a historical perspective, it could be said that nothing we experienced in the Covid-19 pandemic was really new.

The use of technology in the development of biomedical tools to address disease continues in chapters 5, 6, and 7 as he discusses cystic fibrosis and the use of embryonic stem cells. Jones has a family connection to cystic fibrosis, so for him this is not an academic discussion from a distance. Knowing that this is personal gives added value to his discussion of new treatments that have greatly extended the lifespan of those affected. The spiritual and ethical bases of respect for life and when life begins, are also discussed, and the answers aren't always clear. One observation he makes is that if embryos and fetuses are considered untouchable (meaning that nothing may be permitted to be done that potentially risks their livelihood), then neither are we able to learn more to medically help them. Here Jones is not advocating the use of embryonic or fetal tissue in research—he is simply acknowledging that we may not be able to help if we are not able to study.

In chapter 8, Jones discusses the science and ethics of gender issues. He gives a sensitive overview of the science

behind sexual identity and sexual attraction and summarizes which traits seem to be genetically based, or inherent, and which traits are currently evidenced as being socially influenced. His overview is honest, that science may not be unbiased in its assessment or agenda, and it is part of our role to think carefully about the information we hear. Although not a theologian, he gives a gentle discussion of several interpretations of biblical themes including traditionalist and revisionist interpretations. The role of church community is also described, with both positive and negative examples.

In closing, Jones again revisits the spiritual and scientific themes that have guided his life. His focus is not on a specific theological interpretation, or any specific philosophy. In fact, he created a bioethics center at his university to further bioethical discussions with participation by those with broad backgrounds and perspectives. In many of his chapters, he presents multiple perspectives to emphasize that these are not simple topics with simple answers, yet within this complexity his goal is to help people develop a “compass” and “a set of guardrails” (p. 165) as they navigate ethical topics and decisions.

Jones ends the book with a discussion of those who are sidelined or marginalized by expressing their views, especially when they are not considered mainstream. If we cannot speak with each other on topics in which we disagree, it is easy to push people out of conversations, push them to the margins. He talks about how people with contradictory views are pushed out of jobs or positions, whether in churches, corporations, businesses, or governments. It is important to continue discussions, to learn to listen to each other, even when we disagree. He closes with his two favorite verses again (cited above—Luke 18:17 and 1 Cor. 13:2), which nurture in us the humility to remember that we know only a little, and remind us of the limitations of our knowledge.

This book is a thoughtful read, and helpful for the reader who wants to think more clearly about, and better articulate, one’s stances on bioethical issues. It does not give easy answers, because there aren’t any, for, in many cases, there are competing ethical challenges. Indeed, the reader may leave the book with more questions than answers. Yet, it is hopeful—that we can grow in our faith while listening to and supporting others in the midst of such complex issues.

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**AS GODS: A Moral History of the Genetic Age** by Matthew Cobb. New York: Basic Books, 2022. 442 pages. Hardcover; \$35.00. ISBN: 9781541602854.

It can sometimes be difficult to tell where science fiction ends and science begins when discussing developments in genetic engineering. Consider genetic manipulation of human embryos leading to heritable genetic changes in children, gene-drive-based disruption of whole ecosystems,

and the creation of positive mutations in dangerous human pathogens. These are all experiments that have already been conducted. The children are born. The gene drives have been released. More virulent strains of deadly pathogens have been created.

In the introduction to *As Gods*, Matthew Cobb explains:

My motivation in writing this book has been to explore my own fears about these three areas. Each of them worries me in different ways, but I recognize that many of my concerns are similar to those expressed by people faced with previous applications of genetic engineering, most of which turned out to be either exaggerated, or at least to be controllable by careful regulation and strict safety procedures. (p. 3)

*As Gods* recounts the major developments in the history of molecular biology, including the discovery of molecular tools (restriction enzymes, reverse transcriptase, etc.), the first recombination of bacterial and viral DNA, and the Asilomar Conference held to discuss the safety of recombinant DNA technologies.

Much of the first eleven chapters of the book covers the history of genetic engineering from the 1960s through the Covid pandemic. Attention is given in these chapters to the patenting and privatization of genetic products, the development of genetically modified foods, and attempts at gene therapy. In the second half of the book, Cobb dedicates space to the three concerns introduced at the start of this review. He offers two chapters (12 and 13) to the “botched experiment that mutated three healthy embryos” (p. 2) conducted by Dr. He Jiankui and one chapter each to the topics of “Ecocide” (chap. 14) via gene drives and “Weapons” (chap. 15) that result from mutating pathogens.

Throughout the book, Cobb recounts this history with a combination of keen historical investigation, personal narrative, and social commentary. Cobb has written other books of history (*Eleven Days in August* and *The Resistance: The French Fight Against the Nazis*) and other books on the history of science (*The Idea of the Brain: A History* and *The Egg and Sperm Race: The Seventeenth-Century Scientists Who Unravalled the Secrets of Sex, Life and Growth*). He is a skilled storyteller who has rigorously pursued the primary sources in order craft a narrative with characters, tension, and resolution.

But Cobb was himself present for some of these meetings and conferences. Entering the discipline in the late 1970s, he has been part of the community making these moral decisions and conducting the experiments. His own biological research involves a genetic investigation of the sense of smell in fruit flies. When he describes historical events to which he was not a personal witness, he often supplements the printed record with interviews of firsthand participants.

Throughout the book, Cobb continuously contextualizes the history he narrates within the broader culture that was shaping it. For example, in chapter 5, Cobb describes how popular culture directly affected the practice of science.