interpretation, critique, and "the ordering of all phenomena." None of these factors, Efron notes, explain why Jews were modestly represented in science prior to the late nineteenth century, or why most eminent Jewish scientists eschewed Talmudic study and rejected traditional Judaism for modern thought.

For Efron, the central question is not why Jews were disproportionately preeminent in twentieth-century science but rather why there was a sudden upsurge in Jewish enthusiasm for science in the late nineteenth and early twentieth century. Efron's answer is that Jews flocked to science because science provided a means for nationally and culturally alienated Jews to contribute to and find a place in the modern world. Aware that such a simple thesis runs the risk of imposing an unjustified metanarrative on the historical record, Efron spends the bulk of the book showing how science provided Jews with an opportunity to find a place in their world under widely differing circumstances—liberal capitalist America, the Soviet Union, and Zionist Palestine, the three great "destinations" pursued by Jews in the twentieth century.

After introducing the importance of science for contemporary American Jews by recounting his experience visiting Kentucky's Creation Museum with a vanload of rabbinical students and providing a brief introduction to the problem of Jews' "ridiculously disproportionate" contributions to twentieth-century science, Efron spends each of the book's three main chapters describing their experience in each "destination."

Chapter one tells how American Jews held "high the torch of civilization" in twentieth-century America. The meritocracy of science opened a path for Jewish immigrants to contribute to American progress and served as the exemplar of American liberal democracy, the latter in being a sphere where Jews could participate without fear of religious discrimination and an opportunity for Jews to make America more hospitable for Jews by resisting fundamentalist attempts to impose their beliefs onto an ideally nonsectarian American public life. In short, America provided Jews with opportunities both to participate in American society and to reshape it to be even more hospitable for Jews. Chapter two discusses the prominence of Jews in Soviet science due to a combination of anti-Jewish discrimination under the tsars, the appeal and opportunities introduced by the Soviet egalitarian ideal, and the importance of science as a pathway for Jews to contribute to Soviet society. Chapter three discusses the role science and technology played in Zionist enterprise, both as a reflection of the "science equals progress" mindset of the times and later as a way for Jews to use their modernizing of Palestine to justify their resettlement of the land in a sort of Zionist appropriation of colonialism.

So, in the end, has Efron demonstrated his thesis? Not really. Given that Efron spends the vast bulk of the book's 104-page argument focusing on the attitudes of Jewish communities and only rarely addresses the reasons why individual Jews pursued scientific eminence, perhaps he never really intended to demonstrate his thesis in any rigorous sense. Efron seems content to lend his thesis credibility by explaining how science was viewed as important and valuable among twentieth-century Jews—a task in which he succeeds admirably.

PSCF's readers can benefit from Efron's insights, though they may find that applying them to issues of science and Christian faith is far from simple. Aside from the usual difficulties associated with drawing lessons from history, Efron is not writing for Christians or even a general science and religion audience. Rather, he writes primarily for fellow Jews interested in understanding their communities' engagement with science. Moreover, since Efron justifiably considers Judaism as a cultural affiliation rather than as a devoutly held belief, the application of his insights to communities that emphasize personal faith commitments is far from clear. What, for example, are we to think about twentieth-century American Jews' embrace of science and technology, knowing that it also represented an embrace of modernity at the expense of traditional Jewish observances and beliefs? Nevertheless, Efron has given us something valuable—the voice of an experience that, while not our own, is one we can learn from.

It should also be noted that *A Chosen Calling* has merits beyond Efron's argument itself. Science and religion writers who put forward and critique various origins proposals could benefit from imitating Efron's humble, gracious, and fluid style, while scholars will appreciate the extensive endnotes and index.

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NEWTON AND THE NETHERLANDS: How Isaac Newton Was Fashioned in the Dutch Republic by Eric Jorink and Ad Maas, eds. Amsterdam: Leiden University Press, 2013. 256 pages, index. Paperback; $37.00. ISBN: 9789087281373.

A number of recent historical studies have shown that place and locality matter in the reception, discussion, rhetoric, elaboration, and circulation of scien-

tific ideas and concepts. This collection of nine essays written by ten historians of science (all Dutch, but for Rob Iliffe, University of Sussex), provides an important contribution in understanding the response to Newton's work in the Dutch Republic. The Dutch were some of the first on the continent to adopt, adapt, and propagate Newton's natural philosophy. In this particular case, this book aims to locate eighteenth-century Dutch encounters with Newton. But, certainly, not in a way that simply parrots the "master," once described as "the miracle of our time" by Herman Boerhaave (1668–1738). A chapter section heading expresses it succinctly: "not all roads lead from London" (p. 172).

Two underlying patterns, descriptive of the Dutch assimilation of Newton, are identified in the introduction by Eric Jorink and Ad Maas: (1) Newtonianism was "not a stable, coherent system, originating in Britain and waiting to be implemented on the Continent, but a philosophical construction, adapted to local problems and circumstances"; and (2) the dissemination of Newton was a process in which "natural philosophy, religion and cultural factors, propaganda and practical concerns, and personal benefits, fear and precedence interrelated in a fascinating manner" (p. 8). The other nine chapters provide historical details in support of these theses.

The major historiographical issue which serves as a thread throughout these chapters asks: What does it mean to employ the term Newtonian? Is the concept Newtonianism empirically, that is scientifically, accurate or is it a term best used only when providing historical narrative? (All of these questions parallel issues in the discussion surrounding the term Darwinism and its use in more contemporary times.) In chapter 6, "Low Country Opticks: The optical pursuits of Lambert ten Kate and Daniel Fahrenheit in early Dutch 'Newtonianism,'" Fokko Jan Dijksterhuis argues that 'Newtonianism' is an extremely vague term. Upon examination, it is not just a physical theory, say, in this case, a specific optical theory. In his view, Newtonianism also functions as "a theological/philosophical concept that should be carefully distinguished from astronomical, physical, or chemical theories (p. 174). This point is echoed by Henri Krop in chapter 9, "Newtonianism at the Dutch Universities during the Enlightenment." We need, he argues, to carefully distinguish the "philosophical Newtonianism supported by the universities from a more popular Newtonianism of a markedly religious nature, which has the societies of enlightened burghers as its institutional background" (p. 228). In addition, the employment of a term like Newtonianism tends to neglect or downplay the contributions of others (for example, Robert Boyle, Leibniz, or Wolff), and it often assumes that there is nothing but one-way intellectual traffic. It does indeed seem to be increasingly difficult to identify the essential core of Newtonianism.

Other chapters describe how Dutch experimental physicists such as Willem Jacob 's Gravesande, Petrus van Musschenbroek, and Daniel Fahrenheit appropriated Newton and gave it a local interpretation. Rina Knoeff has contributed a chapter (3), "How Newtonian Was Herman Boerhaave?" about Herman Boerhaave, an influential Leiden University medical and chemistry professor, reflecting his initial use of Newtonian mechanical imagery in physiology. However, he later became increasingly disenchanted with its explanatory potential in chemistry and medicine.

Two of the chapters, 1 and 7, highlight situations which resonate in contemporary discussions. Chapter 1,"The Miracle of our Time: How Isaac Newton Was Fashioned in the Netherlands," by Eric Jorink and Huib Zuidervaart, provides a review of the historical context in an attempt to understand the ready acceptance of Newton's work in the Dutch scene. They attribute this welcoming environment to (1) an existing tradition of empirical research founded in Leiden in the early seventeenth century into which Newton fitted, and (2) a scientific culture characterized by an intense "circulation of knowledge." Dutch intellectuals and Protestant refugees from the Spanish Netherlands, Scandinavians, and Germans escaping the Thirty Years War, as well as Sephardic Jews and later French Huguenots were involved in these discussions. The Netherlands, at the time, was the publishing heart of Europe. This diversity of thought was not overly encumbered by a long-standing scholastic tradition, which was not cemented in the recently established universities (Leiden, 1575; Utrecht, 1636). This encouraged universities to be more innovative and open to new curricular and intellectual approaches, and attracted many foreign students and professors. There was also a stunning array of non-university groups (for example, Amsterdam mathematical enthusiasts and Mennonite enthusiasts) which routinely discussed the latest scientific findings. In addition, Dutch society displayed a stunning pluriformity of denominations and sects. This also stimulated discussion. The role of the Reformed church and its adherence to the Belgic Confession (1561), Article II, viewing nature as God's creation in which God reveals himself, was also crucial in stimulating scientific investigation and discussion. Many people interested in natural theology and physico-theology saw an ally in Newton, since

he seemed to pose no religious threat and could be employed to respond to the rationalism of Descartes as well as Spinoza's attack on the authority and trustworthiness of scripture.

These last concerns are echoed in the contribution by Rienk Vermij, "Defining the Supernatural: The Dutch Newtonians, the Bible and the Laws of Nature" (chapter 7). Vermij argues that the Dutch fascination with Newton (in his various guises) was occasioned by a complex social and intellectual context (1) to find an answer to the confessional strife of the seventeenth century, (2) to respond to and find an alternative to Cartesian philosophy, and (3) to deliver a decisive blow to Spinoza. It was a search for "social and religious peace" in which some form of harmonization would hold. But "in the end the issue that mattered most was the authority of the Bible. Purely philosophical problems were secondary" (p. 186). Was there a way of understanding the relation between God and nature which gave reassuring answers to both scientific and religious demands?

A complex "cocktail of ideas" and practices are adduced by Vermij: (1) invoking universal gravitation (nonmechanical forces) meant mechanical principles could not explain everything (a direct appeal to Newton's 2nd edition of the *Principia* and particularly Roger Cotes's preface to this edition); (2) an argument from design and the rise of physico-theology; (3) a long tradition of experimental philosophy which challenged Cartesian speculation and Spinoza's thorough geometrical way of reasoning; and (4) an element of theological voluntarism. Newtonian natural philosophy seemed to offer a way to maintain an active divine presence which encouraged a search for "a definition of laws of nature which left room for divine miracles" (p. 191).To deny the reality of miracles implied a denial of the biblical narrative and an undermining of all religion. But in the search for this definition, they, as well as many moderns, face a paradox: the supernatural was defined, delimited, circumscribed by what people deemed to be natural, explainable, nonmiraculous, and scientific.

This book is one for readers with a keen historical interest. Reading it carefully, along with the extensive research that supports the theses advanced, will make one more aware of how theories function in complex social, intellectual, and ecclesiastical contexts. Historical echoes of this eighteenth-century struggle are all around us today in our deliberations about evolution, miracles, and natural law.

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ORIGINS

EXPLORING FAITH AND REASON: The Reconciliation of Christianity and Biological Evolution by Bruce Glass. Houston, TX: DBG Publishing, 2012. 296 pages. Paperback; $13.25. ISBN: 0578110474.

I had high hopes when I began Bruce Glass's book, *Exploring Faith and Reason: The Reconciliation of Christianity and Biological Evolution*. Part 1, entitled "Christianity and Evolution," lives up to the title. Here, Glass skillfully defends a belief in a personal God and the divinity of Jesus in light of the evidence for evolution. Parts 2 and 3, "The Theory of Evolution" and "The Evidence of Evolution," comprise over half the book and give a broad overview of the overwhelming evidence supporting evolutionary theory. Although Glass claims to have written a book for people of all views, the majority of the book speaks to Christians who are unfamiliar with evolutionary theory and the evidence supporting it. These sections are probably less interesting to *PSCF* readers, as most will be well versed in this science already. Part 4 goes through the history of "intelligent design" theory and creationism in the United States, and the misuse of Darwinism to defend racist delusions. While these chapters are interesting to those who want to have a fairly comprehensive overview of the important role of Darwinism in our society, they contribute little to the book title's goal of showing that faith and evolution are altogether compatible.

Part 1 discusses how God's providence and transcendent nature are fully compatible with biological evolution. Glass first notes that "Christianity declares that the physical universe is separate and apart from God" (p. 50). God created the universe and is therefore above, not part of creation. Glass quotes Thomas Aquinas who described God as the "first cause" because God created the physical universe from nothing, and that anything within that creation can happen as a result of "secondary causes." This perspective allows for an independently changing natural world with space for biological evolution, evil, and the "free will" to accept or reject God's grace by confessing Jesus as Savior. Glass notes,

> Christianity teaches us that the natural world, therefore, is the foundation or the platform from which we must rise and exercise our free will in accepting and obeying the call of Eternal Truth … He is active in our own lives when we invite him into them. But we know that God is not in direct control of everything that happens in the world … because such a notion would implicate him as an