



## Global Origins of Modern Science

### Modern Bilimin Küresel Kökenleri

James Poskett. *Horizons: Global Origins of Modern Science* (Mariner Books Digital Edition, March 2022), 565 s., ISBN: 978-0-358-26570-2

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Have you ever wondered what the world would be like if global trade networks had never existed? Would the West have ever questioned their knowledge of the natural world unless the Americas had been discovered? Starting with the discoveries of the New World and then taking key moments in global history, James Poskett's book titled *Horizons: The*



*Global Origins of Modern Science*<sup>1</sup> attempts to show how modern science has been made through global encounters. *Horizons* joins the flourishing body of knowledge in motion by giving scientific credit to as many cultures as possible. As a result, Poskett challenges the Eurocentric history of science narratives and argues the story that four or five isolated, disinterested, brilliant minds made modern science to be nothing but a myth. Furthermore, Poskett claims that a global history of science is now needed more than ever, as the world we live in today should form a future between the twin forces of globalization and nationalism (p. 440). In the epilogue titled “The Future of Science”, James Poskett argues that we are in a New Cold War characterized by a scientific rivalry over artificial intelligence and space exploration and that we need to remind ourselves how the legacies of the scientific past and their unequal power relations had resulted in the contexts of slavery, empire, and war.

*Horizons*' layout follows a chronological framing of four parts, each of containing two chapters. In the first part titled “The Scientific Revolution c.1450-1700,” Poskett begins with the chapter “New Worlds,” which covers the developments in the life sciences that resulted from the novelties Europeans had encountered in the New World, and moves on to the second chapter titled “Heaven and Earth,” which is about the advanced astronomical knowledge that existed in the Muslim, Chinese, and Indian worlds around the 16<sup>th</sup>-17<sup>th</sup> centuries. The second part is titled “Empire and Enlightenment c.1650-1800: and starts with the bold chapter named “Newton’s Slaves.” In so doing, the book questions the myth that portrays Newton, Boyle, and Locke as isolated, disinterested, great minds who pushed the edge of the envelope during the Scientific Revolution. The book then moves on to show how the trade networks had contributed to Enlightenment thought in the chapter “Economy of Nature”. Poskett traces the scientific exchanges that occurred in India, China, and Japan as he tries to show how the development of natural history was nothing unique to Europe but rather something from which Europeans had benefited.

The overarching argument of the book is that science as a human activity has concerned transmission, exchange, and circulation knowledge among various cultures. Underlying all these circulations, Poskett presents trade networks, pilgrimages, missionaries, and even piracy. For instance, Poskett exhaustively tells us the story of Carl Peter Thunberg, who went to Japan as the head surgeon of the Dutch trading post, and how his collection of specimens had helped the first Linnaean natural history book of Japanese plants. On the other hand, Poskett does not refrain from enjoying weak sources to make them fit his narrative. Poskett presents a thrilling story about the Ottoman astronomist Taqi al-Din Muhammed ibn Ma'ruf (1526-1585). During Taqi al-Din's voyage in the Mediterranean, the story goes, “...Suddenly, a galley pulled up alongside the ship that Taqi al-Din was sailing on. Fighting quickly broke

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1 As it is indicated above, the review is based on the digital edition of the book which does not follow a standard pagination. Therefore, the numbers cited may vary in different formats.

out, as the pirates launched themselves onto the deck... As a learned man, the pirates knew, he would be worth a lot of money. A few months later, Taqi al-Din was sold as a slave to a Renaissance scholar in Rome” (pp. 84–85). Unfortunately, any reader who wants to know more about Taqi al-Din will be disappointed at being unable to find a solid account of this. Poskett’s story is based on Avner Ben-Zaken’s assumption that Taqi al-Din’s exposure to Italian sources and culture may have been a result of falling captive to pirates,<sup>2</sup> because in the margin of one of his manuscripts, Taqi al-Din had made a note referring to his use of Ambrogio da Calepino’s (1435-1511) multilanguage dictionary,<sup>3</sup> and the meager primary source suggesting this uncorroborated connection belongs to Salomon Schweigger’s (1551-1622) uncredited journal.

In the third part titled “Capitalism and Conflict c.1790-1914,” Poskett traces the global origins of the biological sciences. In the first chapter named “Struggle for Existence,” Poskett claims that the concept of evolution had not been entirely new when Charles Darwin compiled his *On the Origins of the Species*, for China and Japan had had similar ideas for ages that were deeply present in their existing religious beliefs. In the next chapter titled “Industrial Experiments,” Poskett delves into the physical sciences to demonstrate how the development of these sciences had gone hand in hand with the progressive agendas of governments and factories. The last part is titled “Ideology and Aftermath c.1914-2000” and is devoted to the dog-eat-dog scientific rivalry. In the first chapter called “Faster Than Light,” Poskett focuses on Albert Einstein. He again undresses the isolated scientist figure by arguing that Einstein had traveled the globe from Buenos Aires to Shanghai and worked with many scientists from many countries around the world due to his belief in the value of international collaboration. In the next chapter titled “Genetic States,” Poskett brings the book’s focus to the Cold War, showing how genetics had been a requisite for the process of nation-building at that time. From the Mexican Agricultural Program funded by the Rockefeller Foundation to Mao’s “scientific farming” and the Israeli search for relation in genetics, race, and nationalism, Poskett gives us sound examples of the development of modern genetics in the second half of the 20th century that were closely tied to state agendas.

Poskett underlines in the introduction, “This is not simply a story of the triumph of globalization. After all, cultural exchange came in lots of different forms, many of which were deeply exploitative” (p. 14). In this sense, *Horizons* fulfills its promise to reveal how globalism has brought about exploitation. In general, the book is a valuable attempt to form an alternative path to the notoriously obsolete Eurocentric history of science. His bibliography,

2 “Avner Ben-Zaken, *Cross-Cultural Scientific Exchanges in the Eastern Mediterranean, 1560–1660* (Baltimore: Johns Hopkins University Press, 2010), 25-26.

3 George Saliba, “The World of Islam and Renaissance Science and Technology,” in *The Arts of Fire: Islamic Influences on Glass and Ceramics of the Italian Renaissance*, ed. Catherine Hess (Los Angeles: J. Paul Getty Museum, 2004), 70-71.

on the other hand, is colorless if not completely narrow, for it contains mostly printed sources in English, with most of his images and illustrations having been taken from Wikipedia and Alamy.

While Poskett's *Horizons* gives the reader an exciting retelling of the history of science, the book reminds us of two important issues about writing history. First, how can one reach a wider audience? Should we really just fill some of the gaps with thrilling narration in order to appeal to the public at the expense of being misleading? Secondly, how can one write a coherent global history? How much are we influenced by today's political and global understanding of the world? And does one have to master various languages and spend overt time researching the subject matter, or is taking a reasonable glance at the secondary literature that made it into the Anglo-Saxon world and compiling a book mainly based on these enough?