

# EDITORIAL

## “RETRO-PROGRESSING”

*As one browses through the history section of a library, one of the volumes that is likely to catch one’s attention is *The Discoverers* by Daniel Boorstin.<sup>1</sup> It is an impressive, 700-page volume. Published in 1983, it chronicles in a semi-popular style selected aspects of man’s discoveries. Two chapters entitled “The Prison of Christian Dogma” and “A Flat Earth Returns” deal with the outlandish concept of an earth that is flat instead of spherical.*

*Boorstin has impressive academic credentials from Harvard and Yale, and has held prestigious positions such as the Librarian of Congress, Director of the National Museum of History and Technology, and Senior Historian of the Smithsonian Institution. In *The Discoverers* he reflects the popular view that the ancient Greeks, including Aristotle and Plato, believed Earth to be a sphere; however, after the rise of Christianity a period of “scholarly amnesia” set in which lasted from around 300 to 1300 A.D. During this time, according to Boorstin, “Christian faith and dogma replaced the useful [spherical] image of the world that had been so slowly, so painfully, and so scrupulously drawn by ancient geographers.” The “spherical” view was replaced by the concept of a flat earth, which Boorstin characterizes as “pious caricatures.”<sup>2</sup> Boorstin bolsters his case by mentioning a couple of minor writers — Lactantius and Cosmas — who believed in a flat earth and lived during this “dark age.” He also implicates the powerful authority of St. Augustine of Hippo (354-430), who “heartily agreed” that antipodes “could not exist.”<sup>3</sup> Antipodes represented lands on the opposite side of a spherical earth where trees and men, if present, would be upside down, with their feet above their heads; hence, the “antipodes” (opposite-feet) designation.*

*The picture given by Boorstin represents conventional wisdom for the past century and is found in many texts and encyclopedias.<sup>4</sup> It has been especially popularized in the context of the story of Christopher Columbus, who is depicted as the hero who dared to defy Church dogma about a flat earth. This courageous adventurer went on to discover America, and he accomplished this feat without even falling off the edge of the flat earth. Many students in the*

*United States and other countries have been taught this version, which serves as an example of how empirical investigations have triumphed over arbitrary Church dogma.*

*The idea of the Christian Church's belief in a flat earth during medieval times has turned out to be flatly fallacious. Jeffrey Burton Russell, professor of history at the University of California at Santa Barbara, has recently published a book entitled: *Inventing the Flat Earth: Columbus and Modern Historians*.<sup>5</sup> This thoroughly documented study indicates that the supposed link between the early Christian Church and the flat-earth concept is a recent historical invention. The early Greek perception of a spherical earth, somewhat similar to the sun and moon, was never lost. Virtually all the leading medieval scholars believed in a spherical earth. These included well-known writers and Church authorities such as the Venerable Bede (673-735); John Scottus Eriugena, the leading philosopher of the 9th century; Roger Bacon (c. 1220-1292); St. Thomas Aquinas (1225-1274), and Dante Alighieri (1265-1321).*

*Furthermore, the rotation of the earthly sphere was discussed by Jean Buridan and Nicole Oresme, the leading 12th century scientists. Russell points out that even St Augustine, who is cited by Boorstin as a supporter of the flat-earth idea, seems to have believed in a spherical earth. In his cautious style Augustine suggests that even if there is land on the opposite side of the earth, it is not inhabited.*

*Furthermore, the sphericity of the earth was not a problem for Columbus as he sought sponsorship from Ferdinand and Isabella of Spain for his daring voyage which landed him in the New World in 1492. Although there were serious questions about the distances he would be traveling, all of the different estimates were based on the assumption of a spherical world. It is probable that some at that time believed in a flat earth — as is the case for some individuals today —, but this was not at all the prevailing concept. According to Russell, during the first fifteen centuries of the Christian era, only five writers disavowed the sphericity of the earth, while a “nearly unanimous scholarly opinion pronounced the earth spherical.”<sup>6</sup> There was no heretical “dark age” of theological opinion about a flat earth which Columbus had to oppose.*

*How and why did this modern-day heresy about medieval times develop? There are some suggestions. In 1828, the popular essayist/*

novelist Washington Irving published a dramatic account of a confrontation between Church dignitaries and Columbus about the sphericity of the earth. Irving seemingly allowed his imagination to have free reign. His account, which is now considered a fabrication, had some influence on accounts chronicled later in the 19th century. Within the academic community, a more important influence was that of the Vice-Chancellor of Cambridge University, William Whewell, who in 1837 published his *History of the Inductive Sciences*. Here he refers to the flat-earth views of Lactantius and Cosmas as representing the medieval perspective. Subsequently, without rechecking the facts, other scholars have repeated his thesis.

The 19th century was a time of great intellectual unrest. The Enlightenment movement of the 18th century had laid the foundation for the institutionalization of science, and there was great ferment about the authority of science and that of the religious establishments. This was a prime opportunity to suggest how wrong the Church had been in defending the flat-earth concept. In the latter part of the century, two very widely distributed books succeeded in doing this. The books were: *History of the Conflict Between Religion and Science* by John William Draper (1811-1882),<sup>7</sup> and *A History of the Warfare of Science with Theology in Christendom* by Andrew Dickson White (1832-1918).<sup>8</sup> At that same time the ongoing controversy over evolution and the poignant question of the origin of man did much to enhance interest in these books.

Draper, who abandoned the religious faith of his family, stressed how the Church — especially the Roman Catholic Church — was the enemy of science. He emphasized the antagonism between religion and science, considering it to be “the most important of all living issues.”<sup>9</sup> He depicted theologians rejecting the idea of a spherical earth and attacking Columbus as he attempted to gain support for his famous voyage. White also rebelled against his religious upbringing. As the first president of Cornell University, the first explicitly secular university in the United States, he faced strong religious opposition. White reinforced Draper’s thesis that religion, and especially theology, smothered truth. White, apparently being aware that many Church authorities believed that the earth was a sphere, was slightly more moderate in his comments, but supported the imaginary conflict by claiming that those authorities

*who believed in a spherical earth were not accepted by the majority. Draper and White were promoting the superiority of science, and in doing this they created “a body of false knowledge by consulting one another instead of the evidence.”<sup>10</sup> Curiously, both writers were accusing the Church of propagating error while they were indulging in the same practice to make their point. Fortunately, in the past few years, several textbooks and other references have corrected the myths about Christopher Columbus and the purported medieval Christian belief in a flat earth.*

*It is disappointing to see that an imagined flat-earth story can define “truth “ in such a strong way. Such falsehoods cause us to “retro-progress.” This is especially disappointing when done under the specific claim that we are progressing forward. When our intellectual pursuits create prejudicial falsehoods, it is time for careful reevaluation. The “flat-earth” concept has become a cliché for depicting the ignorance of the past, when actually the use of this cliché underlines our own ignorance about the past! We all make mistakes — many of them honest mistakes — and we should be tolerant while helping each other in the correcting process. However, when something as deprecating and prejudicial as the flat-earth fallacy becomes so widely accepted, it warns us about how delusional our so-called “scholarly” pursuits can be. How many undetected erroneous concepts are lurking around in our textbooks and on the shelves of our libraries — to say nothing about the World Wide Web?!*

*Be vigilant.*

*Ariel A. Roth*

## **ENDNOTES**

1. Boorstin DJ. 1983. The discoverers. NY: Random House.
2. Ibid., p 100.
3. Ibid., p 107.
4. For further discussion of these interesting developments see: Gould SJ. 1994. The persistently flat Earth. *Natural History* 103(3):12,14-19.
5. Russell JB. 1991. *Inventing the flat Earth: Columbus and modern historians*. NY: Praeger Publishers.
6. Ibid., p 26.

7. Draper JW. 1875. History of the conflict between religion and science. 5th ed. NY: D. Appleton & Co.
8. White AD. 1896, 1960. A history of the warfare of science with theology in Christendom. 2 vols. NY: Dover Publications.
9. Draper, p vii.
10. Russell, p 44.