

And the Sun Stood Still: Dramatizing Copernicus

Dava Sobel

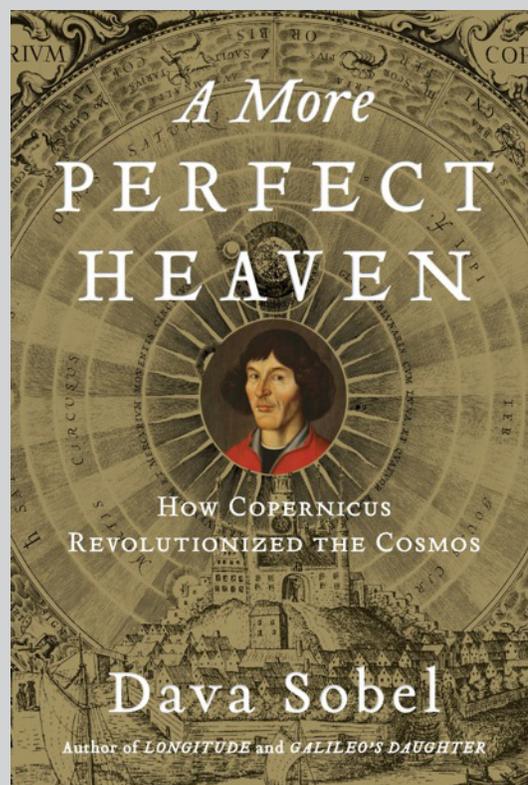
Editor's Introduction

Science writer (and former *New York Times* reporter) Dava Sobel won the ASP's Klumpke-Roberts Award for astronomy popularization in 2008. One of her greatest skills is making historical figures from astronomy come alive — something she did most effectively in her award-winning *Galileo's Daughter*. Now she has turned her attention to the meeting between the older Copernicus and the younger Rheticus, and has been at work on a play about this meeting. We asked her to trace the beginnings of her interest and the development of the drama for our readers.

I have to admit, it wasn't *Mercury* magazine I was reading in February 1973 when the idea came to me. It was *Sky & Telescope*. The cover showed the iconic image of Nicolaus Copernicus with his long brown hair and red jerkin, in commemoration of the five-hundredth anniversary of his birth. The story inside, by science historian Edward Rosen, described how Copernicus had toiled alone and in silence for decades — until a twenty-five-year-old German mathematician named Rheticus arrived at his door and talked him into publishing his crazy idea of an Earth in motion around the Sun.

"Wow," I remember saying to myself. "That must have been some conversation."

The fraught meeting between Copernicus and his unexpected visitor suggested the outline of a play. I considered writing that play myself, but gave it up for want of playwriting experience.



Thirty years later, when I returned to the prospect in earnest, I still had no playwriting experience.

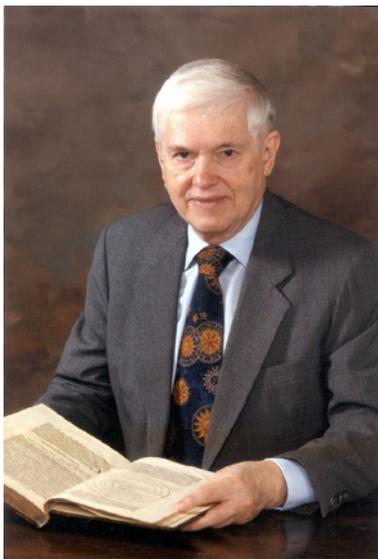
My interest in the Copernicus story had revived and intensified in 2003, while reading Owen Gingerich's manuscript for *The Book Nobody Read*. This scholarly adventure tale described Gingerich's three-decade quest to examine all the extant sixteenth-century copies of Copernicus's book, *On the Revolutions of the Heavenly Spheres*. Gingerich discovered in those

volumes the ownership marks of every prominent contemporary of Copernicus, plus troves of commentary they had written in the margins. Contrary to Arthur Koestler's claim in *The Sleepwalkers* that only a few stalwarts bothered to read Copernicus's dense treatise, Gingerich found evidence of its wide reach.

Gingerich also sketched the known facts of Copernicus's life, but rued the thinness of detail in the biographical record. Only seventeen letters by Copernicus survived, compared to the thousand from Galileo and the great, gratifying volubility of Kepler. Here, I thought, was more validation for a play about the architect of the heliocentric cosmos. A play invited the invention of incident and dialogue.

I began amassing materials and reading about Copernicus. I also read the book *by* Copernicus, as well as plays by known playwrights ("Copenhagen" had been to Broadway by this time) and guides to playwriting. I bought season subscriptions to four theaters, plus random tickets to other recommended productions, so that I was attending a play almost every week as part of my research.

The monologues I'd envisioned for Copernicus, in which he elaborated the details of his theory to an attentive acolyte, fell apart as I came to understand that characters on stage cannot simply converse or expound interesting ideas. Characters *want* things.



Owen Gingerich of Harvard (Portrait from the Isthmus Society)

They struggle against the obstacles thwarting their desires. As soon as they resolve their conflicts, the drama dissipates and the curtain had better come down.

What kind of conflict had Rheticus presented for Copernicus? The young visitor was a Lutheran, after all, traveling on leave from Martin Luther's own university at



Tom Mazur next to the statue of Copernicus outside the castle where Copernicus lived when he served as Administrator, in what is now Olsztyn, Poland. (Courtesy of Dava Sobel)

Wittenberg, at the peak of the Protestant Reformation. Copernicus, a Catholic, served as a cathedral canon in a Polish diocese where the bishop had banished all the Lutherans. How did the two of them finagle a two-year collaboration right under the bishop's nose?

In fact, as I learned from my reading, the bishop's palace lay fifty miles from the Cathedral complex where Copernicus lived and worked. But nothing escaped the notice of the bishop's spies, who reported Copernicus's alleged assignations with the woman formerly employed as his housekeeper. (Three of the seventeen letters reference the female housekeeper, whose presence so inflamed the bishop that he forced Copernicus to fire her.) The true life story thus contained an abundance of conflict. Not only did the young visitor push the old cleric to do what he'd avoided for a lifetime, but Copernicus must have needed to hide his itinerant heretic from discovery and banishment or worse. Moreover, as indicated by documented legal action later taken against Rheticus, he was homosexual — in an age when sodomy counted as a capital offense, punishable by burning.

I felt it imperative to see the scene of the meeting in the far north of Poland on the Baltic coast, which Copernicus memorably described in his book as "this remote corner of the Earth where I live."

In the spring of 2005, en route by cruise ship to the mid-Pacific for the April 8 total solar eclipse, I sat one

night at dinner with a young Polish mining engineer, Tomasz Mazur. I told him I planned to visit his country in a few weeks, in line with a project concerning Copernicus. We hadn't known each other five minutes before Tom insisted I give him the dates of my travel, so he could get the time off work and accompany me as translator and guide. I knew the generosity of amateur astronomers from past encounters, but still this offer amazed me. I had no idea how much I would need Tom's help in the small town of Frombork, where Copernicus's cathedral still stood, and hardly anyone spoke English.

Despite the successful absorption of local color in Poland, the willing assistance of historians, dramaturges and astronomers at home and abroad, and the intrinsic fascination Copernicus's story held for me, I had a terrible time writing my play. Having spent my entire adult life as a reporter, I hesitated — I recoiled — from making up things. I was afraid to put words in the mouths of real people. I couldn't decide whether Copernicus had been intimate with his housekeeper, or just falsely accused by idle tongues. Given all the smoke from the bishop, it seemed safe to assume a passion had flared, but was it a brief lapse or a long-lasting affair?

"You'd better bite the bullet and make him love her," a wise director counseled after reading an early draft. "Otherwise, there's nothing at stake."

It was easier with Rheticus — more letters, more published works, more messiness. As a teenager, he had witnessed the beheading of his father. At Wittenberg he joined a circle of carousing poets that drew Luther's anger. On extended leave from his teaching duties, he traveled and cultivated friendships with several well known astrologers, at least one of whom informed him of Copernicus's activities. Rheticus made no secret of his commitment to astrology, whereas Copernicus never expressed an opinion on the subject, so far as anyone knows. I took the horoscopes of Rheticus and Copernicus — charts cast during their lifetimes — to an astrologer for interpretation. She said things looked bad for Rheticus: He would not have expected to live long. Perhaps that sense of impending doom had launched his dangerous, five-hundred-mile journey to find the author of an alternate universe.

At the end of 2008 I neared the end of draft number six

of my play. The title, "And the Sun Stood Still," had survived all the re-writes, while themes, characters, and motivations had come and gone. I was about to begin a new approach using only Copernicus and Rheticus.

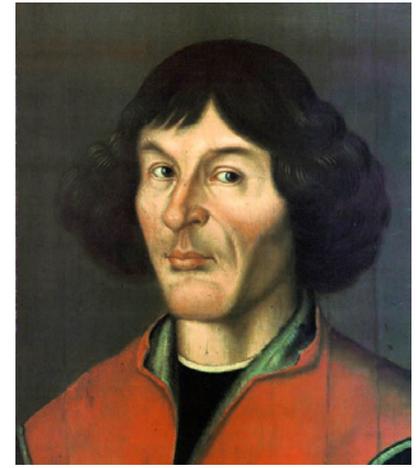
Even if it failed (three characters are considered the minimum, while more than six are frowned upon) I felt the exercise would solidify the two protagonists.

I explained this thinking to my publisher, George Gibson of Walker/Bloomsbury, when we met for a year-end afternoon tea. I also told him that I envisioned the play as an ideal vehicle for a university theater department, since it would lend itself to interdisciplinary programs. The subject matter touched on ancient and modern history and literature, foreign language, astronomy, mathematics, and religious studies. I said I was collecting information on all these topics to present in a packet for interested professor/directors. George had a better idea.

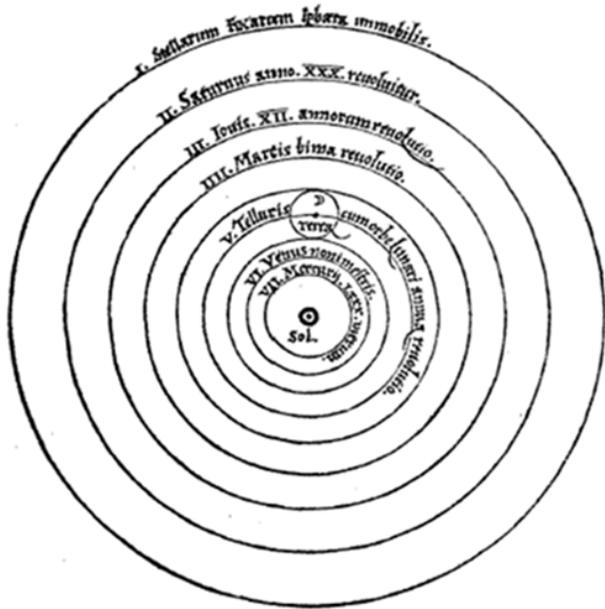
"Why don't you use that information to write a book around the play?" he asked. "You could trace the history of astronomy up to the time of the meeting, which you cover in the play, and then pick up the story line again afterwards, to show what the meeting accomplished — how the world reacted to *On the Revolutions*."

Up to that moment, George had agreed to publish my play out of loyalty, almost as a favor. His company was not in the business of publishing plays, any more than I was in the habit of writing them. A nonfiction narrative focused on Copernicus seemed a better match for both of us. The play would provide my rationale for re-examining the life of Copernicus.

The process of writing the book that George suggested worked an unexpected effect. It relieved me of my angst. Now that I was telling Copernicus's true story to the best of my ability, with footnotes, I felt free to manipulate him in the script for dramatic effect. The



Copernicus Portrait in the Town Hall of Torun



Copernicus' System of the World from *De revolutionibus orbium coelestium* (*On the Revolution of the Heavenly Spheres*).

Resources for Further Exploration

Sobel, Dava *A More Perfect Heaven: How Copernicus Revolutionized the Cosmos*. 2011, Walker and Company.

Copernicus Entry in the Stanford Encyclopedia of Philosophy:

<http://plato.stanford.edu/entries/copernicus/>

Brief Biography of Rheticus at MacTutor:

<http://www-groups.dcs.st-and.ac.uk/~history/Biographies/Rheticus.html>

“Theater Deepens the Vision of Physics” (an editorial by Virginia Corless in *APS News*):

<http://www.aps.org/publications/apsnews/201002/backpage.cfm> ♦

next draft of the play took a big leap forward.

A not-quite-final version of “And the Sun Stood Still” appears in the recently published *A More Perfect Heaven: How Copernicus Revolutionized the Cosmos*.

It won't be a final draft until a director and six actors have tried to breathe life into it — a process that will push me through numerous revisions, I'm sure. I hope to have that opportunity. I can hardly wait to see what scene design and stage lighting will make of the “world machine” that my imagined Copernicus built in his tower for the benefit of a woman he loved.

About the Author

Dava Sobel is the co-author, with former ASP President, Frank Drake, of *Is Anyone Out There? The Scientific Search for Extraterrestrial Intelligence*. Her later books include *Longitude*, *Galileo's Daughter*, and *The Planets*, which contains original color images by space artist



Lynette Cook. She is also a NASA Solar System Ambassador. Her next project will focus on the 19th- and early 20th-century women who worked at the Harvard College Observatory as human computers.

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