Abstract: If you ask people what they know about the Copernican revolution, you are likely to hear that for over a millennium people believed that the planets and stars orbited the Earth in perfect circles. They held on to the resulting Ptolemaic astronomical model even as it became more and more cumbersome and inaccurate because of their sense of pride, that made them want to see themselves at the center of the universe, and because of the strong aesthetic preference of Greek philosophers for the circle as the perfect shape.

The Copernican heliocentric model eventually won out because it was more accurate, despite the strong opposition of the Catholic Church and its persecution of Copernican supporters like Galileo. How much of this story is true? Not much, it turns out.

One of the curious things about science is that while scientists are quite scrupulous about getting their science right, they tend to take a somewhat casual attitude towards the history of their discipline. As a result, over time one finds the great scientific events becoming embellished and rewritten so that although they make good stories, they bear little resemblance to actual history.

Using the Copernican revolution as a case study, and supplementing it with other myths, we will try to understand why it is that such myths acquire so much power over our imaginations that they readily displace the true sequence of events.

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