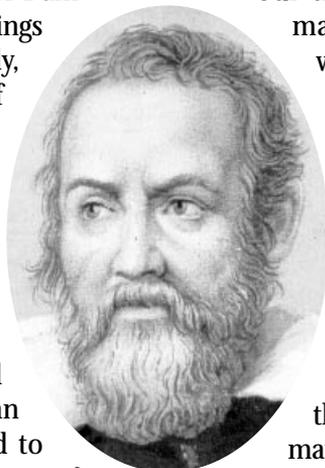


Chapter 14 Viewpoint Activity

Modern science got its start in the Scientific Revolution of the 1500s and 1600s (text-book pages 364–365). One idea that caused great controversy was Copernicus’s model of a sun-centered universe. Here two scientists, Galileo and Kepler, correspond about the dangers of discussing this theory in public. ♦ *As you read, think about the importance of public opinion. Then, on a separate sheet of paper, answer the questions that follow.*

Does the Earth Move?

Galileo Galilei to Kepler (Aug. 4, 1597): So far I have read only the introduction of your work, but I have to some extent gathered your plan from it, and I congratulate myself on the exceptional good fortune of having such a man as a comrade in the pursuit of truth. . . . So I add only, and I promise, that I shall read your book at leisure; for I am certain that I shall find the noblest things in it. And this I shall do the more gladly, because I accepted the view of Copernicus many years ago, and from this standpoint I have discovered from their origins many natural phenomena, which doubtless cannot be explained on the basis of the more commonly accepted hypothesis [that the earth was the center of the universe]. I have written many direct and indirect arguments for the Copernican view, but until now I have not dared to publish them, alarmed by the fate of Copernicus himself, our master. He has won for himself undying fame in the eyes of a few, but he has been mocked and hooted at by an infinite multitude. . . . I would dare to come forward publicly with my ideas if there were more people of your way of thinking.



Johannes Kepler to Galileo (Oct. 13, 1597): You advise us, by your personal example, and in discreetly veiled fashion, to retreat before the general ignorance and not to expose ourselves or heedlessly to oppose the violent attacks of the mob of scholars. . . . But after a tremendous task has been begun in our time, first by Copernicus and then by many very learned mathematicians, and when the assertion that the earth moves can no longer be considered something new, would it not be much better to pull the wagon to its goal by our joint efforts. . . and gradually. . . shout down the common herd, which really does not weigh the arguments very carefully?

. . . Be of good cheer, Galileo, and come out publicly. If I judge correctly, there are only a few of the distinguished mathematicians of Europe who would part company with us, so great is the power of truth. If Italy seems less a favorable place for your publication, and if you look for difficulties there, perhaps Germany will allow us this freedom. . . . Let me know privately at least, if you do not want to do so publicly, what you have discovered in support of Copernicus.

Source: *The Portable Renaissance Reader*, ed. James Bruce Ross and Mary Martin McLaughlin (Viking Press, 1953).

ILLUSTRATION/PHOTO CREDIT: BETTMANN.

Questions to Discuss

1. Why is Galileo reluctant to publish his ideas about Copernicus’s theory? How does Kepler try to persuade him to change his mind?
2. What does Kepler suggest as an alternative to publishing in Italy?
3. **Making Comparisons** Do you think that scientists today are as worried about the reactions from the public and officials as Galileo and Kepler were? Give reasons or examples to support your opinion.