

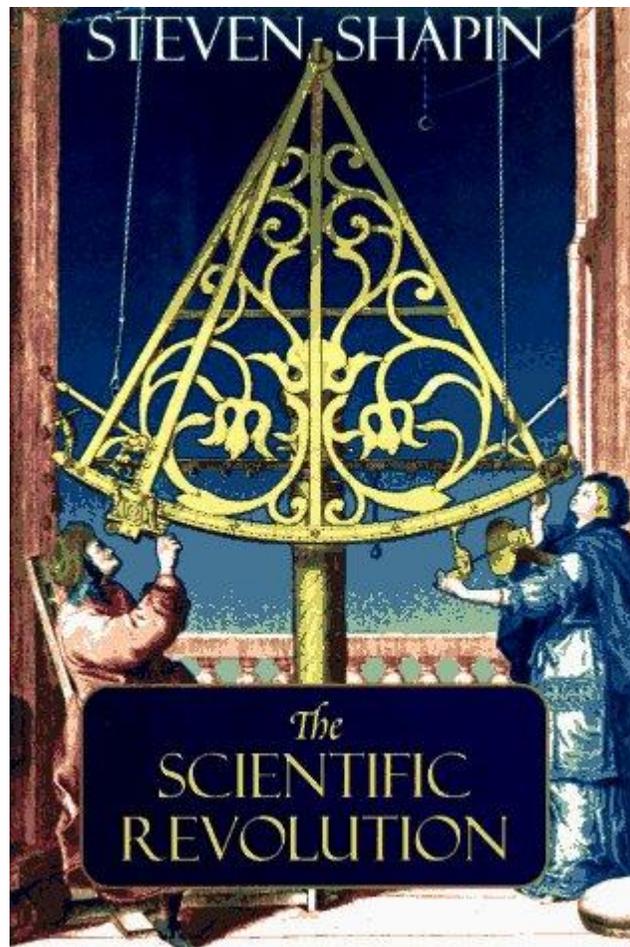
**The Scientific Revolution**

**Steven Shapin**

Book Review

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Steven Shapin starts his book by the words, “There was no such thing as the Scientific Revolution and this is a book about it”<sup>1</sup>. Throughout the introductory chapter he gives his arguments as for why he believes that there was no such thing as the Scientific Revolution in itself. His first point against it is the use of the coined term ‘Scientific Revolution’. He points out that the people during the 17<sup>th</sup> century have not been recorded to use such a term to describe what they were doing. Those were writers like those of Alexandre Koyre, Herbert Butterfield and Rupert Hall who vehemently glorified the progress made during the 17<sup>th</sup> century time<sup>2</sup>. About the term, Shapin comments that, “... they [17<sup>th</sup> century people] used no such term to refer to what they were doing”<sup>3</sup>.

Another argument that Shapin puts forward is that there is no one point or a particular time period in the history that can be given the status like that one of a Scientific ‘Revolution’. Progress in natural philosophy and sciences has been made over decades and what we have today is an accumulation of knowledge since the start of human intellectual pursuits. Also the term ‘scientific’ is itself is problematic. It is not absolutely clear what we refer to when we say science. In the 17<sup>th</sup> century it was a “diverse array of cultural practices” that was being focused at learning about and controlling nature. Shapin exclaims that, “Many historians are now no longer satisfied that there was any singular discrete event, localized in time and space, that can be pointed to as ‘the’ Scientific Revolution”<sup>4</sup>.

Thirdly, Shapin comes up with a very pertinent point that the ‘Scientific Revolution’ is a very present-day notion of the past events. We describe the time period of the 17<sup>th</sup> century as

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<sup>1</sup> Shapin, *The Scientific Revolution*, p. 1

<sup>2</sup> Shapin, *The Scientific Revolution*, p. 1

<sup>3</sup> Shapin, *The Scientific Revolution*, p. 2

<sup>4</sup> Shapin, *The Scientific Revolution*, p. 3

such because it is an “expression of ‘our’ interest in our ancestors”<sup>5</sup>. Hence it is a historiographical notion that arises due to the projection of the present onto the past. Shapin argues that people in the 17<sup>th</sup> century did not know that they were revolutionizing the science, something they did not themselves fully grasped the concept of. He states that, “The overwhelming majority of seventeenth-century people did not live in Europe ... and were not aware that a Scientific Revolution was happening”<sup>6</sup>.

However, there were some great names during that time period that had an unprecedented impact on the scientific process and the ways of exploring about nature.

Paracelsus <sup>7</sup> (1493 – 1541)	The Swiss mathematician who sought that people should put aside the ancient texts in medicine and directly study herbs, minerals and stars to treat illnesses.
Galileo Galilei <sup>8</sup> (1564 – 1642)	Italian mathematician and natural philosopher invented telescope and observed dark spots around sun’s surface. He also stated the sun to be the centre of the universe.
Sir Francis Bacon <sup>9</sup> (1561 – 1626)	Published a text called <i>The Great Instauration</i> to depict the possibilities and extent of the scientific knowledge. The page shows a ship sailing across the Pillars of Hercules – Gibraltar that customarily depict limits of human knowledge.

These people can be grouped under the umbrella of the scientific ‘revolutionists’ because their work was unique in its own sense. The contributions they made pioneered new dimensions in scientific inquiry.

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<sup>5</sup> Shapin, *The Scientific Revolution*, p. 6

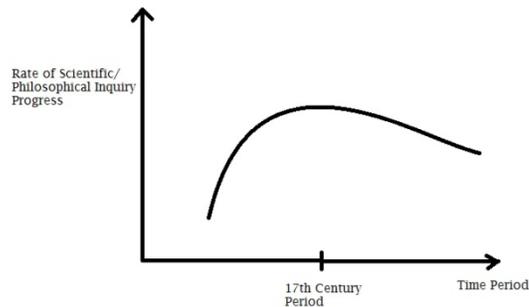
<sup>6</sup> Shapin, *The Scientific Revolution*, p. 8

<sup>7</sup> Shapin, *The Scientific Revolution*, p. 69

<sup>8</sup> Shapin, *The Scientific Revolution*, p. 15

<sup>9</sup> Shapin, *The Scientific Revolution*, p. 20

I would personally state that the period of 17<sup>th</sup> century was a significant one in the long journey of scientific inquiry. The progress made during this time period stands out as compared to the ones immediately before and after it.



As depicted in the graph above, the rate of scientific inquiry slowed down particularly the research made during the 18<sup>th</sup> century and later has been based on the models that were founded during the 17<sup>th</sup> century period. It clear from the fact that, “many seventeenth century practitioners expressed their intensions to bring about radical intellectual change”<sup>10</sup>. This is in fact a distinctive feature that at least if they did not know that they were living in the scientific revolution, those scientists knew that they were adding something substantial to the human store of knowledge. Therefore, according to my standing if the period was not Scientific ‘Revolution’ then it was *something else*. The period was distinctive one and therefore deserves to be recognized with a special name. Many of the leading researchers vigorously claimed that, “they

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<sup>10</sup> Shapin, *The Scientific Revolution*, p. 2

were proposing some very new and very important changes in human knowledge of natural reality”<sup>11</sup>.

The progress in scientific knowledge is a continual process. One advancement is made on the development over the prior one and that is how the body of knowledge develops. During the 17<sup>th</sup> century several new disciplines like the creation of Calculus opened up and progress was made at a higher rate due to the concentration of a multitude of innovators in the brief slot in time. This however cannot be termed as a ‘revolution’ because a revolution brings about permanent changes to the actual paradigm and shifts its overall outlook. It was merely a period of significantly higher scientific inquiry as compared to the one preceding it.

Thirdly, the approach taken to explore and comprehend nature changed a lot. This is evident through the mathematization of the study of motion. Also recent work has shown that the 17<sup>th</sup> century period witnessed “remarkable innovations in modes of identifying, securing, validating, and communicating experience”<sup>12</sup>. These are the many notions with which Shapin has tried to formulate his argument. I do agree with him that Scientific Revolution is certainly not the most pragmatic term to label the time period but by debarring 17<sup>th</sup> century off this title does not take away the role that period has played in the scientific history. If Shapin specifically has to write a book to grapple with the wrong depiction of a particular time period then that era was surely not an ordinary one. If there is controversy regarding its status in scientific historiographical studies then it evidently had what it took to stand out and become the subject of argument.

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<sup>11</sup> Shapin, *The Scientific Revolution*, p. 5

<sup>12</sup> Shapin, *The Scientific Revolution*, p. 12

