



Ingenious Pursuits: Building the Scientific Revolution

Lisa Jardine

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In this fascinating look at the European scientific advances of the seventeenth and early eighteenth centuries, historian Lisa Jardine demonstrates that the pursuit of knowledge occurs not in isolation, but rather in the lively interplay and frequently cutthroat competition between creative minds.

The great thinkers of that extraordinary age, including Isaac Newton, Johannes Kepler, and Christopher Wren, are shown in the context in which they lived and worked. We learn of the correspondences they kept with their equally passionate colleagues and come to understand the unique collaborative climate that fostered virtuoso discoveries in the areas of medicine, astronomy, mathematics, biology, chemistry, botany, geography, and engineering. **Ingenious Pursuits** brilliantly chronicles the true intellectual revolution that continues to shape our very understanding of ourselves, and of the world around us.

Ingenious Pursuits: Building the Scientific Revolution Details

Date : Published December 5th 2000 by Anchor (first published 1999)

ISBN : 9780385720014

Author : Lisa Jardine

Format : Paperback 464 pages

Genre : History, Science, Nonfiction, History Of Science, Biography



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From Reader Review Ingenious Pursuits: Building the Scientific Revolution for online ebook

Jake says

Jardine does an excellent job of describing the men and ideas of the scientific revolution. The book is comprehensively illustrated (so I would recommend a print copy rather than e-reader); nearly every two-page spread contains a figure of some sort, whether a scientist's hand-drawn notes, a page from a period book, or a photograph of a surviving instrument like Leeuwenhoek's microscope. She includes a number of quotes drawn from letters and publications at the time, and deciphering spelling from the period can be an amusing game. The book's organization sometimes feels haphazard, and some historically monumental events such as the publication of Newton's Principia seem glossed over.

Jardine does a great job of bringing forward important characters who have faded in history, as folks like Haley and Oldenberg worked tirelessly to perform less glamorous duties to keep the big names in the Royal Society churning out the brilliant insights we now associate with the scientific revolution. As always with the history of science, many of the ideas which missed the mark now look rather funny with the hindsight of hundreds of years of further research.

On the whole this is an excellent overview of the scientific revolution and highly recommended to anyone interested in the history of science.

Jrobertus says

This is a fascinating look at the cluster of genius that gave rise to modern science. It focuses on English, with a few Dutch and other European scientists of the 17th century. In addition to stars like Newton, Boyle, and Kepler there are others like Hooke, Wren, Harvey etc etc. The period was alive with mapping the world, building clocks, collecting species, and investigating all manner of natural law. Although the writing is a bit ponderous, this astonishing story tells itself.

Malini Sridharan says

This book was as much about the interactions between scientists as the actual scientific breakthroughs of the 17th century. I gained a lot of insight into some of the scientists most of us know only through one "discovery," like Hooke or Boyle. The text did not get as much into the nitty gritty of scientific disputes, alchemy, and exploitative tactics as I would have liked. It definitely would have been enlivened by a little more gossip.

Rob Melich says

Interesting topic with great pictures, but very hard to read due to odd editing and narrative flow. Would recommend to a few friends but most would be bored.

Frederick Bingham says

I read this book for a colleague's history class. It discusses the scientific revolution in 17th century England. The book is a series of anecdotes strung together of people like Hooke, Wren, Newton, Leibnitz, Huygens, Sloane, etc. These are all early participants in the scientific revolution.¹ Many of the anecdotes are amusing but show that science is a messy and complicated human activity and that scientific discovery comes out of the times that people live in and their social structure.

Stuart Hodge says

in attempting to build a comprehensive history, Jardine does well to confine each chapter to a single topic, rather than attempt to complete the book chronologically. still, the cast-of-thousands can be hard to navigate, and some maps or relationship trees or a comprehensive timeline in the appendices would have helped. still, very interesting.

Graham says

A really enjoyable read that puts some context behind a few "great" scientific inventions and discoveries, often painting them as by-products of trying to understand somethings we think of now as commonplace or obvious. The personal stories weave together cohesively and the little bit of science is interesting. I personally was a little frustrated at the brevity of the descriptions of the inventions and experiments. Often I was left wanting a little more information to help me recall what I once knew in science class, and close the loop. Ultimately the book covers just a few people and returns to the same core stories and relationships. I would certainly read a series where the narrative continues to track the history of invention and science. The book is laced with several excerpts from letters and papers written at the time, which became tiresome to read, and they are already well described in the text. After a few I simply scanned or skipped them altogether.

Dale says

I read this some years ago now and enjoyed it as a good wide ranging discussion of the scientific revolution - with an emphasis on the mainstream big names - Wren, the Royal Society etc etc. This mainstream historical view of the scientific revolution, particularly the emphasis on the aristocratic men's leadership of the process has been challenged and broadened by reading "The Jewel House" by Deborah Harkness, where she applied a sociological framework to examining the scientific revolution. She focused attention on the role of the big city, London in her example and the ordinary people who by working together, sharing knowledge, skills and experiences facilitated the explosion of knowledge that the big men of power then took control of. In the context of early modern Europe - the reformation and political revolution occurring at the time, the powerful men's need to take control of the scientific revolution is laid bare for what it was to some extent.

Stephen says

This interesting book examines the interconnection between the various scientific advances of the 17th century and manages to make such luminaries as Robert Hooke, Christopher Wren, and Gian Domenico Cassini into real men rather than the passionless scientific demigods they are sometimes portrayed as having been. For the most part I found this book to be quite engaging though my interest waned a little while reading the book's last few chapters. Overall, however, *Ingenious Pursuits* was a worthy read.

Beth says

I read this book in 2004 and have found myself picking it up recently. In simplest terms, it explores how inventions (such as the microscope) impacted the culture, individuals and the larger society. Seeing is believing, after all.

Megan says

Covers such a broad scope that her examples may not have gotten as detailed as they would have liked, but it did provide some jumping points for further study.

Arvind Balasundaram says

This book, authored by Lisa Jardine (daughter of Jacob Bronowski of *Ascent of Man* fame), is a read about the scientific endeavor along the lines of Richard Holmes' classic, *The Age of Wonder* (also reviewed by me in Goodreads). With copious illustrations and quotes from original works, the author introduces the reader to several personalities (some well-known, others not) and their pursuits in the name of science. In the process, she is very persuasive in making the argument that all science ultimately grows out of the preoccupations and pressures of everyday life, and the value of scientific discovery is in the access they provide to the common person. Throughout this easy-to-read work, we meet the likes of Robert Hooke, Robert Boyle, Christian Huygens, and Sir Christopher Wren, whose legacies in the name of science and architecture are well-established. However, it is in the highlighting the efforts of the not so well-known characters that Jardine marvellously succeeds - John Flamsteed, who was the First astronomer Royal, earning a hefty pay to produce the maps of the stars, which he vehemently refused to publish; Elias Ashmole, who in addition to cataloguing coins and medals, also acquired John Tradescant's collection of botanical specimens, which he bequeathed to what eventually became the Ashmolean Museum in his honor; Gottfried Kirsch, German astronomer and his wife, Maria Winkelmann, who was also one of the first victims of gender discrimination in the scientific vocation. The author picks passages from the original texts that are very insightful of the mindset during the moment of the intellectual pursuit, whether it be in the narration of the transfusion experiments being conducted in criminals or in the unpredictable after-effects of ingesting possible experimental cures (some later shown to have fatal effects) - "I wanted to experiment upon myself," writes Frenchman Jacques Grevin experimenting with the now well-known poisonous antimony, "as being a thing as easy to take as a powdered grain of wheat. So I mixed a mere three grains with a little conserve of roses, as a result of which, in less than an hour, there followed such a strange vomiting that although I am of my nature not an easy vomiter, each time it took hold of me, I felt as if I were going to die. It took me thus eight times, and as many

times it worked on me at the other end...".

This book moves fast, is entertaining, and is well-written. A complete description of the cast of characters appears after the epilogue, and the book leaves you wondering about how much these early scientists paved the way for many of the things we now take for granted...

Steve says

I came to this book via Richard Holmes' excellent "Age of Wonder". Holmes pointed out in his book that he was focusing on the "second generation" of science - the Romantic Generation, and steered the reader to Jardine's book to understand the "first generation" of science.

Consequently, I picked up Jardine's book as a complement to Holmes' and have thoroughly enjoyed it. Adding to my enjoyment was how it spurred memories of reading Neal Stephenson's Baroque Cycle - a series full of questionable history, but great fiction.

Jardine takes on a formidable task in presenting an account of the early days of the Scientific Revolution and I believe she would agree that no one book can possibly comprehend such a huge event. Hence, while her account is inevitably incomplete - it focuses primarily, but not exclusively - on developments in Britain, it serves as an excellent grounding in the types of *processes* that characterize the distinctive nature of science as opposed to the natural philosophy that preceded it.

(To more fully understand this difference, I would steer the reader towards Shapin and Schaffer's classic "Leviathan and the Air-Pump", which discusses the debate between Thomas Hobbes - who promoted the older natural philosophy - and Robert Boyle - who promoted the new science. In short, whereas Hobbes supported the role of reason alone in apprehending the world, Boyle supported the development of collaboration [the "republic of letters"], the use of scientific technology to probe natural phenomena, and the role of demonstration and consensus in defending "scientific truth".)

By the same token, Jardine is also interested in refuting - at least in pre-20th century terms - the "Two Cultures" thesis (from the famous 1959 Rede Lecture by C.P. Snow). Snow alleged that science and art had come to form two distinct cultures that had no overlap or communication. Richard Holmes in "Age of Wonder" demolished this assertion when it came to science as practiced by Humphry Davy, Joseph Banks, and others around the turn of the eighteenth to nineteenth centuries. Jardine undermines this thesis with respect to the seventeenth and early eighteenth centuries (and Holmes admits that he was inspired by Jardine's work). Jardine demonstrates how science was just as much an art as it was about the gathering of facts and the finding of truth.

She also works to undermine the twentieth-century notion of scientists as "omniscient sage[s]" (page 355). Sociologists of science have since Kuhn have cast doubt on the practical (versus cultural) validity of this "godlike" notion of the scientist in the immediate past (see for instance "Disrupting Science" by Kelly Moore). Jardine shows how this notion does not hold up for the generation that formed the Royal Society either.

In short, this book serves as an excellent overview of early science - particularly British and French - in the late seventeenth and early eighteenth centuries and is of value for interested lay and professional audiences including both historians and sociologists of science.

If I have any issue with this book it is that the book does lose focus in the later third. In particular the penultimate chapter - "Committed to Paper" - ends on a whimper and does not contain a satisfactory analytical conclusion. By contrast, the last chapter - "Epilogue" - makes an excellent start on comparing the early Royal Society with the double helix discovery of Watson and Crick. While I felt the "Epilogue" to be incomplete, I am not sure if the chapter itself should be lengthened. What I do think is that the book needed one more chapter just before the Epilogue summarizing what Jardine had accomplished in the book so far. Then she could have launched into the epilogue as it is and perhaps with an analysis even more on point.

I am not going to lambast Jardine overmuch here, namely because I know how hard it is to write a long work (although I have not yet written a book myself) and because I have read plenty of otherwise excellent histories that have lost focus near the end. This is an editorial problem, not an authorial problem.

I highly recommend this book to lay audiences interested in science as well as professionals. I think sociologists of science and technology (STS) in particular would gain great benefit from reading this book, which confirms many aspects of the STS literature but from a different origin.

Shane says

A big timeline of European scientific discoveries centered around the Royal Society in England. The book is jam-packed with specific details (like names, dates, relationships), continuously referencing other events and circumstances, and challenging to read (due to sub clauses and references to other events). See previous sentence for an example.

The central argument is revealed in the Epilogue... that scientific discovery is messy and full of interpersonal conflict and human failing. The book itself is a giant series of anecdotes around this argument. I think the argument is, of course, accurate.

If you think science is a linear progress of discovery and invention by disinterested geniuses... this book will dissuade you of that notion.

Gareth says

I did enjoy this book - I'd probably give it a 3.5, if the rating system allowed. It is meticulously researched, and throws interesting light on the development of science in the 17th and 18th centuries. It shows that science is not some abstract pursuit, divorced from real concerns, but tied up with military ambitions, commerce, colonialism. The first authors of guides to aspects of the natural world - fishes, plants, insects - were as concerned with turning a profit from selling specimens and drugs as they were in furthering knowledge. Also, the first pioneer scientists are an eccentric bunch. Isaac Newton and Robert Boyle shared an interest in alchemy. Robert Hooke, the Royal Society's foremost inventor and experimenter, was a talented artist, who supplied the engravings for his own *Micrographia*, one of the first collections of everyday objects (fleas, plant seeds) as seen through the microscope. He was also a keen self-medicator, dosing himself with everything from opium to mercury and lead (a practice also maintained by many of his contemporaries). We also learn interesting facts: St Paul's Cathedral was originally designed with a view to providing means to conduct scientific experiments; scientific collaboration continued between scientists of different nationalities, even when their countries were at war. Lisa Jardine writes well, and succeeds in

giving fresh life to this early stage of the scientific revolution, and the book is a worthy read for anyone interested in the history of science. However, I do feel that it lacks commentary, to an extent. Whilst tracing the complicated web of influences upon the development of science, she rarely stands back and draws any explicit lessons or observations - which is fine, in a sense. Some may applaud this lack of editorialising. Personally, however, I think this survey would have benefited from more of this type of commentary. Without this, the book tends to degenerate at times into a mass of data - a sea of names, projects, publications, incidents, dates. And the history of science, like science itself, is more than just data collection.
