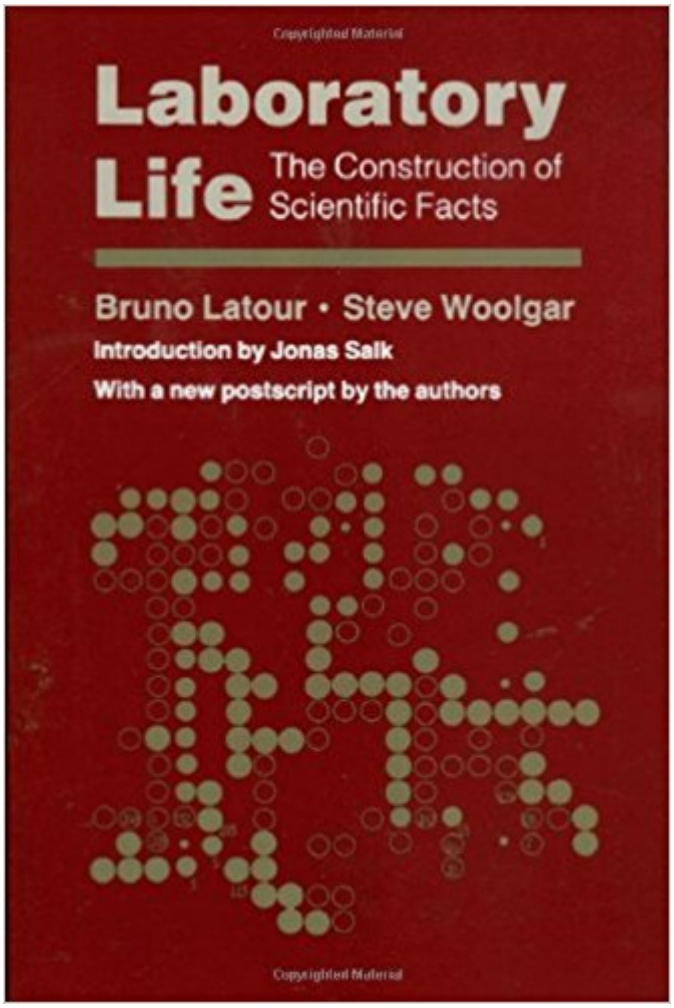
Laboratory Life: The Construction Of Scientific Facts, 2nd Edition



Synopsis

This highly original work presents laboratory science in a deliberately skeptical way: as an anthropological approach to the culture of the scientist. Drawing on recent work in literary criticism, the authors study how the social world of the laboratory produces papers and other "texts,"' and how the scientific vision of reality becomes that set of statements considered, for the time being, too expensive to change. The book is based on field work done by Bruno Latour in Roger Guillemin's laboratory at the Salk Institute and provides an important link between the sociology of modern sciences and laboratory studies in the history of science.

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Customer Reviews

"The pioneering 'laboratory study' in the sociology of scientific knowledge. . . . The first and, deservedly, the most influential book-length account of day-to-day work in a single laboratory setting."--ISIS"Laboratory Life succeeds and will continue to succeed, and to win friends and allies, because it contains good, persuasive ideas, such as the analyses of modalities and of splitting. These ideas have been generated by excellent social scientists. All the rest is so much window undressing."--H. M. Collins, Isis"Eight years after Laboratory Life first came out, it is still one of my favourite books on the social studies of science. . . . [F]or those in the business of reflecting on the nature of science who have not yet read Laboratory Life, here is a good opportunity to catch up and do so."--Ditta Bartels, Metascience

As described

It seems to me that the previous reviewer is either a wooly-head theoretician or that the previous reviewer hasn’t actually done any research in a laboratory. Because in this book, there are many sparkling insights into the way that science is practised.It takes a while for Latour to get going as he is quite verbose in the early section, where he discusses his "anthropological" approach to science studies. However, after that, he makes a couple of points that as far as I know, he was the first philosopher of science to make.First, Latour demonstrates the intimate relationship between the publication of scientific papers, scientific prestige, laboratory finances and actual experiments. He makes the seemingly obvious, though not so when the book came out, that the possibility of experiments in a lab requires the influx of an amazing out of money. The acquisition of this research money takes up a large proportion of the time of the head honcho scientist in a laboratory .Second, Latour shows that entities in science are always defined by a network of properties that are experimentally determined. Scientific entities are hardly ever seen as objects with a few simple analytical properties. In fact, the more properties the better. And it doesn’t matter if the mesh of properties is convoluted and seemingly contradictory. For each property concerned, there must be a vast array of material techniques to measure, control and manipulate that property. A new entity in science is accepted as real only when there are enough inter-locking properties to guarantee its existence. No method, by itself, is ever convincing.Latour points out that once an object is deemed to be real, scientists often invert the logic and argue that the reason why the combined set of experiments worked in the first place was that the object was in fact real. Whether this inversion of logic stands up to philosophical scrutiny - I do not know - but I have seen many practising scientists make this jump in logic. I’ve even used it myself. It is here that the "realist" and "anti-realist" debate rages. However, I think Latour reports it just as he sees it.Third, Latour carries out an analysis of scientific texts, which I have yet to see anywhere else. Scientific statments take on 5 modalities - from speculative hypothesis to proven statements to unspoken assumption. Latour gives a account of how the modalities of each statement are modified by how every other scientist in the field cites the statement in future scientific papers. They can ignore it, attack it as a useless hypothesis, bolster it by citing it as a supporting statement, adulate it by assuming that is a proven statement, and finally they just assume it’s true. This scrutiny occurs continuously both inside the lab and in conferences.However, the difference between this process in the sciences as opposed to the humanities, is that these statements are often associated with machines that act in the material world. Proving a statement means that a material effect is generated.Using this method, Latour can

analyse the fortunes of the scientists in a lab. And analysing the citations of scientific papers results in a reasonably good definition of scientific credibility. As a grad student in a biophysics lab, I've seen this happen - albeit on an intuitive level.Although Latour has since gone onto to more and more abstract studies, the beauty of Laboratory Life is that it is firmly grounded in the actual practises of an existing laboratory, the Guillemen Lab at the Salks Institute.

I give this book a high rating because of its influence in the field. It is the first case study of laboratory science ever published, and is often quoted in anthropology, sociology, and philosophy of science. The book's conclusion is social constructivist in nature, to a very extreme degree. Scientific facts are not discovered, they are constructed through social processes. The actual study was done by Latour, a French philosopher, and the method was to assume strangeness. That is, Latour pretended he didn't know anything about what the scientists were doing and tried to make up (construct) an account. The usual problems with relativism plague Latour and Woolgar's brand of social constructivism, most notably issues with reflexivity. If scientific accounts are constructed and do not have to do with the phenomena, why should we think that Laboratory Life tells us anything about the phenomena of laboratory science? Their answer is that we shouldn't. The only question in evaluating texts is, "are you convinced?" If not, fine. Come up with a better (more persuasive) account. People who think that science, philosophy, and academe in general should have something to do with the real world will be horribly frustrated by this conclusion. But everyone should be frustrated by the fact that the conclusion just doesn't follow from the data Latour gathered. It seems to come entirely from prior convictions of the authors. I recommend reading the book, however, because of its popularity and because it is a fantastic exemplar of a bad relativist and constructivist argument. Get the revised edition, which has a postscript and extra references. For a chuckle, look up some of the reviews (cited in the 2nd ed. references) from scientific journals. They are mostly cheerful recognitions of the book's subject matter (laboratory science) without any reference to--or argument with--the strong anti-realist claims. It makes you wonder if these people acctually read the book.

This is the best and most subtle exposition I have read of the claim that science is socially constructed. The observer spent two years in a neuro-endocrinology lab, beginning as a naive observer and ending with a thorough understanding of subject matter and culture of the lab. The beginning section, in which the observer does an anthropology of the lab is extremely interesting--what does such an ignorant but observant person see? The much later discussion of

how the scientific community negotiates whether a given result is a fact or an artifact contains important insights. As a trained scientist, I found this book refreshing and informative.

As a graduate student, I have gradually acknowledged the hidden rules of practicing sciences that, unfortunately, has never disclosed themselves during the regular programs. This book demistifies science and its practioners in the field using scientific methodology. This book becomes my favorite text at the expanse of T. Kuhn.

A classic in the field and a groundbreaking study in the philosophy of science. Latour and Woolgar's "anthropological" journey into the laboratory was the tipping point for an entire new subfield among anthropologists. A must read for any social scientist interested in social studies of science.

Latour's book "Science in Action" is more trendy... but I suggest you read this earlier book instead. It's clear and makes its points in a compelling fashion.

Unless you're an all out scientist - and I'm not - this is one of the most tedious and excruciatingly navel-gazing books in existence.

Scientific Glassblowing: A Practical Training Method Carpentry & Building Construction Student Edition (CARPENTRY & BLDG CONSTRUCTION) DEWALT Construction Professional Reference Master Edition: Residential and Light Commercial Construction (DEWALT Series) Basic Construction Materials (8th Edition) (Pearson Construction Technology) Stem Cells, Second Edition: Scientific Facts and Fiction Davis's Comprehensive Handbook of Laboratory and Diagnostic Tests With Nursing Implications (Davis's Comprehensive Handbook of Laboratory & Diagnostic Tests With Nursing Implications) Davis's Comprehensive Handbook of Laboratory and Diagnostic Tests With Nursing Implications (Davis's Comprehensive Handbook of Laboratory & Diagnostic Tests W/ Nursing Implications)