

---

# Changing Order Replication And Induction In Scientific Practice

---

The Hartwell Approach to Climate Policy  
Scientific Perspectivism  
The Historiography of Economics  
Science, Sexuality, and the Body-Instrument Link  
The Methodology of Experimental Economics  
Experimental Leukemia and Mammary Cancer  
Gravity's Shadow  
Reproducibility and Replicability in Science  
Scientific Narration and Civic Communication  
Creating New Kinds of Collaboration  
Classification and Its Consequences  
The Social Construction of Technological Systems, anniversary edition  
Toward the Reconstruction of Sociological Knowledge  
Uncontrolled  
Genesis and Development of a Scientific Fact  
Rethinking Expertise  
Beyond the Hoax  
The Golem  
No Easy Answers  
Controversial Science  
A Guide to Designing, Conducting, and Analysing Studies  
Scientific Research in Education  
Models of Innovation  
Resources for Nursing Research  
Experimental Thinking  
Biology, Physics, and Change in Science  
Ideology and Scientific Practice from the Great War to the Cold War  
Science on Stage  
Replication and Induction in Scientific Practice  
Science, Philosophy and Culture  
New Directions in the Sociology and History of Technology  
Science and the Pursuit of Knowledge  
The Surprising Payoff of Trial-and-Error for Business, Politics, and Society  
Pursuing the Unity of Science  
Air Traffic Control, System Effects, and Risk  
The Roots of Special Relativity  
The History of an Idea  
British and American Economic Essays

---

## LILIANNA ENGLISH

---

[The Hartwell Approach to Climate Policy](#) Cambridge University Press

Publisher description

[Scientific Perspectivism](#) Stanford University Press

The experimental approach in economics is a driving force behind some of the most exciting developments in the field. The 'experimental revolution' was based on a series of bold philosophical premises which have remained until now mostly unexplored. This book provides the first comprehensive analysis and critical discussion of the methodology of experimental economics, written by a philosopher of science with expertise in the field. It outlines the fundamental principles of experimental inference in order to investigate their power, scope and limitations. The author demonstrates that experimental economists have a lot to gain by discussing openly the philosophical principles that guide their work, and that philosophers of science have a lot to learn from their ingenious techniques devised by experimenters in order to tackle difficult scientific problems.

**The Historiography of Economics** Routledge

Benoît Godin is a Professor at the Institut national de la recherche scientifique, Montreal. Models abound in science, technology, and society (STS) studies and in science, technology, and innovation (STI) studies. They are continually being invented, with one author developing many versions of the same model over time. At the same time, models are regularly criticized. Such is the case with the most influential model in STS-STI: the linear model of innovation. In this book, Benoît Godin examines the emergence and diffusion of the three most important conceptual models of innovation from the early twentieth century to the late 1980s: stage models, linear models, and holistic models. Godin first traces the history of the models of innovation constructed during this period, considering why these particular models came into being and what use was made of them. He then rethinks and debunks the historical narratives of models developed by theorists of innovation. Godin documents a greater diversity of thinkers and schools than in the conventional account, tracing a genealogy of models beginning with anthropologists, industrialists, and practitioners in the first half of the twentieth century to their later formalization in STS-STI. Godin suggests that a model is a conceptualization, which could be narrative, or a set of conceptualizations, or a paradigmatic perspective, often in pictorial form and reduced discursively to a simplified representation of reality. Why are so many things called models? Godin claims that model has a rhetorical function. First, a model is a symbol of "scientificity." Second, a model travels easily among scholars and policy makers. Calling a conceptualization or narrative or perspective a model facilitates its propagation.

**Science, Sexuality, and the Body-Instrument Link** Routledge

This book represents emerging alternative perspectives to the "constructivist" orthodoxy that currently dominates the field of science and technology studies. Various contributions from

distinguished Americans and Europeans in the field, provide arguments and evidence that it is not enough simply to say that science is "socially situated." Controversial Science focuses on important political, ethical, and broadly normative considerations that have yet to be given their due, but which point to a more realistic and critical perspective on science policy.

*The Methodology of Experimental Economics* Cambridge University Press

Novel collection of essays addressing contemporary trends in political science from a broad spectrum of interdisciplinary scholars.

*Experimental Leukemia and Mammary Cancer* University of Chicago Press

A revealing and surprising look at how classification systems can shape both worldviews and social interactions. What do a seventeenth-century mortality table (whose causes of death include "fainted in a bath," "frighted," and "itch"); the identification of South Africans during apartheid as European, Asian, colored, or black; and the separation of machine- from hand-washables have in common? All are examples of classification—the scaffolding of information infrastructures. In *Sorting Things Out*, Geoffrey C. Bowker and Susan Leigh Star explore the role of categories and standards in shaping the modern world. In a clear and lively style, they investigate a variety of classification systems, including the International Classification of Diseases, the Nursing Interventions Classification, race classification under apartheid in South Africa, and the classification of viruses and of tuberculosis. The authors emphasize the role of invisibility in the process by which classification orders human interaction. They examine how categories are made and kept invisible, and how people can change this invisibility when necessary. They also explore systems of classification as part of the built information environment. Much as an urban historian would review highway permits and zoning decisions to tell a city's story, the authors review archives of classification design to understand how decisions have been made. *Sorting Things Out* has a moral agenda, for each standard and category valorizes some point of view and silences another. Standards and classifications produce advantage or suffering. Jobs are made and lost; some regions benefit at the expense of others. How these choices are made and how we think about that process are at the moral and political core of this work. The book is an important empirical source for understanding the building of information infrastructures.

*Gravity's Shadow* Yale University Press

Researchers, historians, and philosophers of science have debated the nature of scientific research in education for more than 100 years. Recent enthusiasm for "evidence-based" policy and practice in education—now codified in the federal law that authorizes the bulk of elementary and secondary education programs—have brought a new sense of urgency to understanding the ways in which the basic tenets of science manifest in the study of teaching, learning, and schooling. *Scientific Research in Education* describes the similarities and differences between scientific inquiry in education and scientific inquiry in other fields and disciplines and provides a number of examples to illustrate these ideas. Its main argument is that all scientific endeavors share a common set of principles, and that each field—including education research—develops a specialization that accounts for the particulars of what is being studied. The book also provides suggestions for how the

federal government can best support high-quality scientific research in education.

*Reproducibility and Replicability in Science* MIT Press

How do we know which social and economic policies work, which should be continued, and which should be changed? Jim Manzi argues that throughout history, various methods have been attempted -- except for controlled experimentation. Experiments provide the feedback loop that allows us, in certain limited ways, to identify error in our beliefs as a first step to correcting them. Over the course of the first half of the twentieth century, scientists invented a methodology for executing controlled experiments to evaluate certain kinds of proposed social interventions. This technique goes by many names in different contexts (randomized control trials, randomized field experiments, clinical trials, etc.). Over the past ten to twenty years this has been increasingly deployed in a wide variety of contexts, but it remains the red-haired step child of modern social science. This is starting to change, and this change should be encouraged and accelerated, even though the staggering complexity of human society creates severe limits to what social science could be realistically expected to achieve. Randomized trials have shown, for example, that work requirements for welfare recipients have succeeded like nothing else in encouraging employment, that charter school vouchers have been successful in increasing educational attainment for underprivileged children, and that community policing has worked to reduce crime, but also that programs like Head Start and Job Corps, which might be politically attractive, fail to attain their intended objectives. Business leaders can also use experiments to test decisions in a controlled, low-risk environment before investing precious resources in large-scale changes -- the philosophy behind Manzi's own successful software company. In a powerful and masterfully-argued book, Manzi shows us how the methods of science can be applied to social and economic policy in order to ensure progress and prosperity.

*Scientific Narration and Civic Communication* Basic Books

Offers an accurate picture of science through the examination of nontechnical case studies which illustrate the various roles that experiment plays in science. Examines both successful and unsuccessful experiments to show how scientists use experimental evidence and critical discussion to expand our knowledge of the natural world.

*Creating New Kinds of Collaboration* University of Chicago Press

The essays are tied together by their explorations of connections (primarily among technology, society, and knowledge) and by their general focus on modern "high" technology. They also share an emphasis on the complexity of technological formation and fixation and on the role of belief (especially self-validating belief) in technological change.

*Classification and Its Consequences* Routledge

'The 4th edition of this extensive text is an outstanding resource prepared by nurses (and a librarian) for nurses. In a structured and helpful style it presents thousands of items from the literature - published papers, reports, books and electronic resources - as a clear, accessible, and most of all useful collection. The efforts to signpost and lead the reader to the sought-for information are effective and well-conceived, and the "How to use this book" section is remarkably simple...the book should be found in every nursing and health library, every research institute and centre, and close to many career researchers' desks' - RCN Research This latest edition of Resources for Nursing

Research provides a comprehensive bibliography of sources on nursing research, and includes references for books, journal papers and Internet resources. Designed to act as a 'signpost' to available literature in the area, this Fourth Edition covers the disciplines of nursing, health care and the social sciences. Entries are concise, informative and accessible, and are arranged under three main sections: · 'Sources of Literature' covers the process of literature searching, including using libraries and other tools for accessing literature · 'Methods of Inquiry' includes an introduction to research, how to conceptualize and design nursing and health research, measurement and data collection, and the interpretation and presentation of data · 'The Background to Research in Nursing' encompasses the development of nursing research; the profession's responsibilities; the role of government; funding; research roles and careers; and education for research. Fully revised and updated, the Fourth Edition includes just under 3000 entries, of which 90% are new. It has extensive coverage of US, UK literature and other international resources. This new edition will be an essential guide for all those with an interest in nursing research, including students, teachers, librarians, practitioners and researchers.

*The Social Construction of Technological Systems, anniversary edition* Routledge

Behind today's headlines stands an unobtrusive army of science advisors—panels of scientific, medical, and engineering experts evaluate the safety of the food we eat, the drugs we take, and the cars we drive. This book studies, theoretically and empirically, the social process through which the credibility of expert advice is produced, challenged, and sustained.

**Toward the Reconstruction of Sociological Knowledge** MIT Press

An anniversary edition of an influential book that introduced a groundbreaking approach to the study of science, technology, and society. This pioneering book, first published in 1987, launched the new field of social studies of technology. It introduced a method of inquiry—social construction of technology, or SCOT—that became a key part of the wider discipline of science and technology studies. The book helped the MIT Press shape its STS list and inspired the Inside Technology series. The thirteen essays in the book tell stories about such varied technologies as thirteenth-century galleys, eighteenth-century cooking stoves, and twentieth-century missile systems. Taken together, they affirm the fruitfulness of an approach to the study of technology that gives equal weight to technical, social, economic, and political questions, and they demonstrate the illuminating effects of the integration of empirics and theory. The approaches in this volume—collectively called SCOT (after the volume's title) have since broadened their scope, and twenty-five years after the publication of this book, it is difficult to think of a technology that has not been studied from a SCOT perspective and impossible to think of a technology that cannot be studied that way.

*Uncontrolled* University of Chicago Press

Providing an overview of key issues in theory and practice, Replication Research in Education is designed to identify and discuss the benefits and challenges facing replication studies in education. Both clear and practical, this groundbreaking volume covers how to introduce, develop, conduct, report, and discuss these studies, and the issues they raise for policy and practice. Bridging theory and practice, this book considers what replication research should look like, how it should be conducted, and how to judge when it has been successful. It enables researchers to plan and conduct studies successfully, from their earliest stages through to completion. This key text: brings

together in a single volume, existing issues, claims and counterclaims, discourses, and practices of replication; introduces, covers, and extends this field of research, indicating its possibilities and limits; expands and adds to existing discussions and practices; will enable researchers to design, conduct, evaluate, and critique studies. The comprehensive and exhaustive coverage of issues and practices within Replication Research in Education make it a 'must read' for all novice and experienced educational researchers who are considering, conducting, and reviewing replication studies in education.

*Genesis and Development of a Scientific Fact* University of Chicago Press

Changing Order Replication and Induction in Scientific Practice University of Chicago Press

*Rethinking Expertise* SAGE

What does it mean to be an expert? In *Rethinking Expertise*, Harry Collins and Robert Evans offer a radical new perspective on the role of expertise in the practice of science and the public evaluation of technology. Collins and Evans present a Periodic Table of Expertises based on the idea of tacit knowledge—knowledge that we have but cannot explain. They then look at how some expertises are used to judge others, how laypeople judge between experts, and how credentials are used to evaluate them. Throughout, Collins and Evans ask an important question: how can the public make use of science and technology before there is consensus in the scientific community? This book has wide implications for public policy and for those who seek to understand science and benefit from it. "Starts to lay the groundwork for solving a critical problem—how to restore the force of technical scientific information in public controversies, without importing disguised political agendas."—*Nature* "A rich and detailed 'periodic table' of expertise . . . full of case studies, anecdotes and intriguing experiments."—*Times Higher Education Supplement* (UK)

*Beyond the Hoax* University of Chicago Press

Charles Brenton Huggins won the Nobel prize in 1966 for his extensive work in cancer research. He has spent fifty years at the laboratory bench exploring the nature of this disease in an attempt to understand and control it. In this volume, based almost exclusively on experiments conducted over the past twenty years at the University of Chicago, is both the record of Huggins's own research and, in Huggins's words, "a do-it-yourself guide for cancer research workers." Written simply and clearly so that the experiments can be easily reproduced, the book presents Huggins's experiments in the

induction of breast cancer and leukemia in rodents. It also describes the methods he discovered to prevent cancer and to cure many of the cancers he has been able to induce. Although most of the material concerns breast cancer and leukemia, research on other kinds of tumors is also described.

*The Golem* Cambridge University Press

*Science and the Quest for Reality* is an interdisciplinary anthology that situates contemporary science within its complex philosophical, historical, and sociological contexts. The anthology is divided between, firstly, characterizing science as an intellectual activity and, secondly, defining its social role. The philosophical and historical vicissitudes of science's truth claims has raised profound questions concerning the role of science in society beyond its technological innovations. The deeper philosophical issues thus complement the critical inquiry concerning the broader social and ethical influence of contemporary science. In the tradition of the 'Main Trends of the Modern World' series, this volume includes both classical and contemporary works on the subject.

*No Easy Answers* Routledge

One of the pathways by which the scientific community confirms the validity of a new scientific discovery is by repeating the research that produced it. When a scientific effort fails to independently confirm the computations or results of a previous study, some fear that it may be a symptom of a lack of rigor in science, while others argue that such an observed inconsistency can be an important precursor to new discovery. Concerns about reproducibility and replicability have been expressed in both scientific and popular media. As these concerns came to light, Congress requested that the National Academies of Sciences, Engineering, and Medicine conduct a study to assess the extent of issues related to reproducibility and replicability and to offer recommendations for improving rigor and transparency in scientific research. *Reproducibility and Replicability in Science* defines reproducibility and replicability and examines the factors that may lead to non-reproducibility and non-replicability in research. Unlike the typical expectation of reproducibility between two computations, expectations about replicability are more nuanced, and in some cases a lack of replicability can aid the process of scientific discovery. This report provides recommendations to researchers, academic institutions, journals, and funders on steps they can take to improve reproducibility and replicability in science.

*Controversial Science* Cambridge University Press

Examines the history of science in light of recent theories of sexuality and the body.