

## EXPLAINING MANAGEMENT PHENOMENA

One key objective of management research is to explain business phenomena. Yet understanding the nature of explanation is essentially a topic in philosophy. This is the first book that bridges the gap between a technical, philosophical treatment of the topic and the more practical needs of management scholars, as well as others across the social sciences. It explores how management phenomena can be explained from a philosophical perspective and renders sophisticated philosophical arguments understandable by readers without specialized training. Covering virtually all the major aspects of the nature of explanation, this work will enhance empirical and theoretical research, as well as approaches combining the two. With many examples from management literature and business news, this study helps scholars in those fields to improve their research outcomes.

ERIC W. K. TSANG is the Dallas World Salute Distinguished Professor at the University of Texas at Dallas and a fellow of the Academy of International Business. He is a leading management scholar in applying philosophy to tackle methodological problems. In 2017, he published *The Philosophy of Management Research*.

# EXPLAINING MANAGEMENT PHENOMENA

*A Philosophical Treatise*

ERIC W. K. TSANG



CAMBRIDGE  
UNIVERSITY PRESS

Cambridge University Press & Assessment  
978-1-009-32313-0 — Explaining Management Phenomena  
Eric W. K. Tsang  
Frontmatter  
[More Information](#)



**CAMBRIDGE**  
UNIVERSITY PRESS

Shaftesbury Road, Cambridge CB2 8EA, United Kingdom  
One Liberty Plaza, 20th Floor, New York, NY 10006, USA  
477 Williamstown Road, Port Melbourne, VIC 3207, Australia  
314-321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India  
103 Penang Road, #05-06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment,  
a department of the University of Cambridge.

We share the University's mission to contribute to society through the pursuit of  
education, learning and research at the highest international levels of excellence.

[www.cambridge.org](http://www.cambridge.org)  
Information on this title: [www.cambridge.org/9781009323130](http://www.cambridge.org/9781009323130)

DOI: 10.1017/9781009323109

© Eric W. K. Tsang 2023

This publication is in copyright. Subject to statutory exception and to the provisions  
of relevant collective licensing agreements, no reproduction of any part may take  
place without the written permission of Cambridge University Press & Assessment.

First published 2023

*A catalogue record for this publication is available from the British Library.*

ISBN 978-1-009-32313-0 Hardback

Cambridge University Press & Assessment has no responsibility for the persistence  
or accuracy of URLs for external or third-party internet websites referred to in this  
publication and does not guarantee that any content on such websites is, or will  
remain, accurate or appropriate.

Contents

<i>List of Figures and Tables</i>	<i>page</i> vii
<i>Preface</i>	ix
<i>List of Articles</i>	xiii
1 The Nature of Explanation	I
The Epistemic versus Ontic Conception of Explanation	2
The Influence of Ontology	4
Understanding	8
Tautology	12
Explanatory Completeness	17
Explanatory Generality	22
Explanatory Interestingness	26
An Overview of the Book	29
2 Causation	32
Regularity Theory of Causation	33
A Counterfactual Analysis of Causation	41
Probabilistic Causation	45
Causal Graph Modeling	47
Vector Space Modeling	53
Agent versus Event Causation	60
Mechanisms	61
3 Modes of Explanation	75
Aristotle’s Doctrine of the Four Causes	75
Covering Law Model	77
Mechanismic Explanation	88
Intentional Explanation	97
Teleological or Functional Explanation	102
Historical Explanation	111
Process Organization Studies	119

4	Microfoundations	126
	Methodological Individualism	127
	Ontological Individualism	131
	Coleman's Macro-Micro Relations	134
	Emergent Entities and Properties	141
5	Theory versus Non-theory-Based Explanation	146
	Atheoretical Explanation	147
	Luck as an Explanation	149
	Theory-Ladenness of Observation	152
	Incommensurability of Paradigms or Theories	156
	Substantive Theory and Metatheory	162
6	Multi-theoretical Explanation	167
	Relatively Few Multi-theoretical Studies	168
	Functions of a Multi-theoretical Approach	170
	Some Suggestions	177
7	Research Methods	185
	Structural versus Reduced Models	186
	Post Hoc Hypothesizing	190
	Replication	193
	A Multi-method Approach	198
8	Explanation as Science (or Art?)	203
	Inference to the Best Explanation	203
	Some Suggested Heuristics	208
	The Craft of Explanation	211
	<i>Appendix: Chinese Philosophy and Scientific Research</i>	213
	Science in Ancient and Medieval China	214
	The Role of Philosophy	216
	Concluding Remarks	218
	<i>Notes</i>	220
	<i>References</i>	226
	<i>Index</i>	253

*Figures and Tables*

**Figures**

2.1	Back-door causal paths	<i>page</i> 48
2.2	Three strategies for causal effect estimation	50
2.3	Missing information on causally relevant events	51
2.4	Process tracing tests of evidential strength	72
4.1	Coleman’s macro-micro relations	135
4.2	Coleman’s macro-micro relations illustrated by revolutions	137
4.3	Coleman’s macro-micro relations illustrated by hiring new faculty members	139

**Tables**

2.1	Comparison between causal graph modeling and vector space modeling	<i>page</i> 58
3.1	Comparison between the covering law model and mechanismic explanation	94
3.2	Comparison between functional explanation and historical explanation	119

## *Preface*

In the summer of 2018, I attended a management conference in Wuhan, China, where I had a casual conversation with an ethnic Chinese scholar whom I had known for some years. He was an enthusiast of the theory of yin (陰) and yang (陽) rooted in Chinese philosophy and he tried to persuade me that this theory could explain virtually all phenomena, whether natural or social. I expressed some serious reservations about his claim because if a theory is said to be able to explain everything, it probably explains nothing. However, so as not to jeopardize our friendship, I refrained from challenging his argument. The way he described how yin–yang theory explained a certain phenomenon also indicated that he had a problematic conception of explanation. What does it really mean anyway when one claims that a theory has explained a phenomenon?

Fast forward to 2021. The whole world had been in “lockdown” for close to a year because of the Covid-19 pandemic that had originated in Wuhan (coincidentally the same city where the management conference mentioned above was held). Since I was born and grew up in Hong Kong and many of my friends and relatives lived there, I paid particular attention to news about infection and vaccination in the city. Not long after the vaccination program started there in early 2021, several people died within a few days of receiving the first dose of the vaccine. However, each time this happened, the Hong Kong government announced — after an investigation by a team of medical experts — that it had found no direct relationship between vaccination and the death of the unfortunate person; that is, it could not be scientifically established that the vaccination had caused death and so vaccination was ruled out as an explanation of the death. I wondered how the team of experts determined whether a causal relationship existed or not. Was it that only if a person died within, say, thirty minutes of receiving a vaccine that vaccination would be considered to be the cause of death? How should the post-vaccination death of people be explained?

The above two incidents reminded me of the theories of explanation and causation that I read in philosophy, in particular the philosophy of science, decades ago. Given the critical role played by explanation in not only science but also our daily lives, it is natural that explanation has long been a key topic of philosophical discourse. In fact, the literature has

grown voluminously, especially so after the publication in 1942 of Carl Hempel's landmark paper "The Function of General Laws in History," which presents the deductive-nomological model of scientific explanation.

The act of explaining is something most people seem to have an intuitive grasp of. Yet many may be caught off guard by a question like "When we say that this is an explanation for an event or a phenomenon, what exactly do we mean?" Although I wrote a chapter on explanation in my previous book *The Philosophy of Management Research*, a single chapter does not do justice to this complex and important subject matter. My search of the extant literature failed to identify even one book that bridged the gap between a technical, philosophical treatment of the subject and the more practical needs of management as well as other social science scholars. This omission in the literature gave rise to my idea to write this book.

The main objective of this book is to deepen management scholars' understanding of various issues associated with explanation. Such understanding in turn will improve the quality of their research both conceptually and empirically. This objective has determined the book's practice orientation and selection of materials. For instance, I skipped Philip Kitcher's unification theory of explanation, which is so technical that few management researchers would likely find it useful. Similarly, my presentation of Aristotle's doctrine of the four causes in Chapter 3 is relatively brief despite the doctrine's significant position in philosophy and its complicated nature; it is less relevant to management research than the other modes of explanation discussed in that chapter. I drew examples mostly from management literature and business news but also used examples from natural science and daily life if I judged that these examples would illustrate more clearly my arguments. Needless to say, I repeated some of the common examples used by philosophers, such as the barometer, the birth-control pill and the flagpole counterexamples to illustrate the problems of the covering law model of explanation. Given that one of the basic objectives of scientific research is to explain phenomena, scholars in social science disciplines other than management will also find this book useful. In addition to providing knowledge about explanation, I also hope that readers will appreciate and benefit from the philosophical arguments presented in the book. These arguments, in my opinion, are generally more rigorous and sophisticated than those that usually appear in management literature.

I tried to strike a balance between breadth and depth of coverage within given space constraints. The coverage is broad enough that management



*Preface*

xi

scholars should be able to find in this book a great deal of what they need to know about explanation for the benefit of their own research, whether qualitative or quantitative. Owing to the broad coverage of topics, depth is sometimes sacrificed; each of the highly technical issues included in this book could have easily taken up the space of a journal article or even an entire book. My treatment is presented necessarily in a simplified manner. Readers may refer to the cited references if they wish to go into details. To help readers in this respect, I have included in this book most of the classic references for each topic discussed.

Although this book has a stronger philosophical flavor than most academic management texts, as indicated by the phrase “A Philosophical Treatise” in its title, I sometimes sacrificed the rigor of argument typically found in philosophy by avoiding pedantic and technical philosophical issues. While some background knowledge of philosophy would surely be helpful to readers, my writing is pitched at a level such that in-depth knowledge of philosophy is not required to understand most of the discussion. Philosophical concepts and arguments — especially complicated ones — are as far as possible introduced with clarity and elaboration. That said, I hope readers will be willing to exert more effort to understand this book than they would employ when reading an average management text and that they are prepared to consult philosophical texts where necessary to understand particularly technical points. I also won’t explain commonly used terms like ontology, epistemology, metaphysics, positivism, realism, induction and deduction, the meanings of which can be easily found via the Internet.

The process of writing this book was, for my part, a learning journey. I started to delve into the literature about three years ago and soon noticed that the number of references had snowballed quickly to an unmanageable scale. I therefore had to be more selective in my review. Moreover, my routine (and sometimes unexpected) research, teaching and administrative duties as well as family issues interrupted my progress from time to time. This book was really a side-project, partly because none of my doctoral students at that time were working on anything remotely related to the topic of the book. Since most of the examples appearing in the literature were from the natural sciences, I faced occasionally the challenge of finding appropriate management examples to illustrate my arguments. A consolation, however, was that I not only got to know more about the subject of explanation but was also able to sort out conceptual issues that had previously puzzled me. On the whole, the process of researching and writing this book was an enjoyable, albeit strenuous, intellectual experience.

I wish to pay special thanks to Professors Florian Ellsaesser and Jochen Runde, my coauthors on a journal paper, extracts of which were incorporated into Chapter 2. I learned a great deal from working with them. Miss Valerie Appleby and Mr. Toby Ginsberg of Cambridge University Press gave me generous assistance without which the publication of this book would be delayed. Last but not least, I thank my younger son, Boris, who let me use his photo as the cover of the book.

## *Articles*

### **Articles partially incorporated into this book**

- Ellsaesser, F., Tsang, E. W. K. and Runde, J. 2014. Models of causal inference: Imperfect but applicable is better than perfect but inapplicable. *Strategic Management Journal*, 35: 1541–1551.
- Tsang, E. W. K. 2021. Multi-theoretical approaches to studying international business strategy. In K. Mellahi, K. Meyer, R. Narula, I. Surdu and A. Verbeke (Eds.), *The Oxford handbook of international business strategy*: 153–172. Oxford: Oxford University Press.