Innovation Management

Innovation is both the creative and the destructive force at the center of economic development. It is perhaps the best explanation of current human prosperity, yet core to some of our most pressing societal problems. But how does innovation come about? How does it get managed in organizations? Moving from the most foundational ideas to the most cutting-edge debates in the field, this book serves as an invaluable companion to the field of innovation management. Each chapter summarizes, discusses, and critiques key academic texts, relating them to specific themes and connecting them to broader discussions in the field. Through this unique format, readers will gain insights into the important ideas and debates about innovation, how to manage it, and what it means for business and society. This book also brings interdisciplinary perspectives from economics, sociology, psychology, history, and management into the conversation about how to think about innovation scientifically.

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Foundations and Futures

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To
Mia, Aya, and Magnus

Today, the luckier economies of the world have achieved levels of per capita prosperity at least twenty times those of 1870, and at least twenty-five times those of 1770 – and there is every reason to believe prosperity will continue to grow at an exponential rate in the centuries to come. Today, the typical citizens of those economies can wield powers – of mobility, of communication, of creation, of destruction – that approach those attributed to sorcerers and gods in ages past.

J. Bradford DeLong

The space of the technologically possible is much greater than that of the economically profitable and socially acceptable.

Carlota Perez

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Preface

I always disliked textbooks, both as a student and as a teacher. In that sense, it is more than a little paradoxical to be writing one. What I always disliked was the sense they gave of being overly comprehensive and somehow final, like this was the "end of history" of a topic. Their main purpose, it seemed to me, was often to present a seemingly unending list of more or less stylized facts, reducing the complex arguments of a research paper to a single sentence in the process.

I would later be told that "research is a conversation," which made me think back to textbooks as particularly *bad* at capturing that sense of both disagreement and dynamism. Later, I would also read about how technology either substitutes or complements labor and, with some categorical slippage, again think back to textbooks as exemplary of (often poor) substitutes for reading of source ideas. And yet, for all these problems, students would often ask for textbooks because they understandably found it to be a bit of dive into the intellectual deep end to grapple directly with research papers, especially early in their studies. This is understandable. Research papers are written by academics for academics, and so they take things for granted about their reader that it is blatantly unfair to take for granted about students even at advanced levels, and even more unfair to take for granted about students just beginning to engage with a topic area. Of course, this does not imply that we should consider papers somehow beyond the reach of students. On the contrary, one of the major points of an academic education is to learn the craft of research and engaging directly with the writings that practitioners of that craft use to communicate to each other is part of learning the craft. You become a management scientist by working with and like management scientists, not by reading management science decaf.

And thus, the question that emerged was how to go about putting such a book together, how to build a textbook of sorts that complemented rather than substituted direct engagement with challenging material. What you have in front of you is the first answer to that question. More precisely, it is a beta version of an answer and one that will continually

evolve as students help me think more and better about progressively better answers to the question.

The primary purpose of this book is to provide a systematic introduction to innovation management theory, but to do so in a way that brings readers *closer* to the source ideas. It is intended to support students in readings of original texts. It is a hybrid between the conventional textbook and a curated and annotated volume of selected readings. It is, in a sense, an elaborate version of what could be called a "reader" in innovation management theory. It is meant to be used alongside those original texts to make them more accessible and to sort the textual and ideational wheat from the chafe. Despite academic authors' best efforts, there is often a lot of chafe in academic writing (my own certainly included) owing to genre conventions, jargon, signposting, and many other things. Knowing that is part of understanding the craft, but facing it head-on makes it hard to understand what is, in fact, good research craft and what is, in Abbott's (1981) terms, professional regression.

The secondary purpose is to convey a particular image of innovation theory as a body of knowledge with many interconnections. Some of those are explicit, and when you read you will see references back and forth between the ideas in the various chapters. There was a time when the provisional title of this book was *Footnotes to Schumpeter* because everything did sort of connect back to and feel in some way like a footnote to something that Schumpeter had written about (the sage and business-minded advice of the publisher was to abandon that title). Other interconnections can be created through theoretical analysis. We can, so to speak, use texts to make each other better and more interesting. While interconnected, ideas are not all in agreement and I do not intend (as textbooks often do) to create a sense of finality. Hopefully, what will emerge will be a sense of where in the literature there are connections, continuities, disjuncture, agreements, and unfinished discussions. Rather than including the latest and greatest empirical results and their attendant weighing-in on discussions, I have chosen to emphasize theoretical ideas that prepare students to read and make sense of such empirical discussions in more advanced classes. Of course, there are some of those latest-and-greatest, but mostly toward the end of the book, where it also – by design – begins to become much more speculative and tentative. We start on solid ground. At the end, we jump between ice floes.

It is worth stating the somewhat obvious at the outset. As has to be the case, this book contains both a select set of ideas and a select reading of those ideas. They are my selections, and they reflect both my understanding of innovation research as a whole and my theoretical priors. In selecting between possible ideas to include, I have *largely* tried to choose

ideas that represent a consensus view of what are canonical concepts, the foundational pillars of innovation management theory that most professional innovation scholars would consider "mainstream" and, we would like to believe, relatively enduring. I have, however, also tried to introduce some less mainstream and slightly more provocative ways to think about issues and have tried to paint a somewhat broader and less disciplinarily committed picture than you might find in most innovation management textbooks. To that end, we will be touching quite a lot of disciplinary ground. We will be moving from the economics of innovation through economic history over science and technology studies, organization, and management studies (of both the sociological and economic variety), strategy, and psychology. We will also be reading things that deliberately fall somewhat outside of the mainstream or that are not central to it. That does not make for a particularly straightforward story, and that is fine. If something is a straightforward story, chances are it is not true.

This balance between the mainstream and critical perspectives provides, I hope, a somewhat more interesting and more conversational access point to the ideas of the book, because it gets us away from the common problem in textbooks of presenting things as indisputable. While I will continually try to connect the foundational ideas to each other, I will also try to problematize them and dispute them, to use them as sounding boards for reflection or as a repertoire of potential interpretations that might or might not be relevant in understanding particular contexts – theories' implications for practice, I believe, depends on the practice and when dealing with innovation and technology, what we are dealing with is both uncertain and contingent. While some of the texts you will read are interested in the predictors of "performance," you will not really see me present them as "recipes" for that performance, but more as hypotheses that under certain conditions certain practices can contribute to driving certain outcomes that inevitably have certain more or less predictable side effects. That level of predictive power seems to me to be the best that management science can do, and I am not sure that will change, or that the point of progress in the science of management is to change that.

You are welcome to disagree with that point and many of the ones I present in this book. I do try to be as explicit as possible about when I am stating generally held views – views that reasonable people in the field of management science tend to find reasonable – and my own, less generally held views or speculations. The point is that disagreements with the ideas I express in this book are an excellent starting point for learning something.