ABSTRACTS
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INTRODUCTION: Challenging the innovation paradigm: The prevailing pro-innovation bias

Pernilla Gripenberg, Karl-Erik Sveiby and Beata Segercrantz

Innovation research is based on the assumption that innovation is good, regardless of its consequences. The chapter introduces the book, with the aim to challenge contemporary, pro-innovation biased innovation research, by problematizing its underlying assumptions and promoting a more nuanced way of considering also unintended and undesirable consequences of innovation. The book focuses on three themes: to explore a variety of national and supra-national discourses on innovation; to illustrate the systemic nature of innovation and its possible acceleration through cases and; to explore unintended consequences of innovation in particular contexts.

CH 2: On the limits of what can be said of 'innovation': Interplay and contrasts between academic and policy discourses

Martin Fougère and Nancy Harding

Iinnovation has come to be universally understood as something that is both desirable and measurable. Close textual analysis is focused on two influential perspectives on innovation which emerged in the 1960s, Rogers' sociological studies on the diffusion of innovations and the managerial policy articulations of the Charpie Report and the Oslo Manuals. The findings suggest that the sociological texts have contributed to establish innovation as a key element in the self-definition of the 'advanced' Western world, and that the managerial texts have further emphasized Western notions of science and rationality while removing humans from the picture.

CH 3: An old word for a new world, or, The de-contestation of a political and contested concept

Benoit Godin

In the last sixty years, innovation has become the emblem of the modern society, a panacea for resolving many problems and a catchword. However, for over 2,500 years, innovation was essentially negative. The innovator was a heretic, a revolutionary, a cheater. How did a concept that had been pejorative for so long come to be a term of honour and a central category of Western thought? Using archival material, this chapter documents how and why innovation is a political, and essentially a contested, concept. It got de-contested in the twentieth century, by those who had previously made it into a contested concept, governments supported by social scientists as consultants.

CH 4: Unintended and undesirable consequences of innovation – A Neglected Research Field

Karl-Erik Sveiby, Pernilla Gripenberg and Beata Segercrantz

Unintended and undesirable consequences of innovation for society are an (almost) completely neglected area in innovation research. This chapter reports results from two article reviews of peer-reviewed journals in the EBSCO database and from a reading of the six main innovation handbooks in 'innovation studies'. Between 0.1% and 0.4 % of journal articles discuss such consequences and not even one chapter of the 181 chapters in the handbooks is devoted to them. Economic perspectives and innovation's beneficial effects dominate. Scholars studying the less beneficial effects of innovation publish in other scientific discourses and with other theoretical frameworks. We argue that the current separation of discourses is potentially dangerous for society as a whole. A theoretical framework for studying undesirable consequences of innovation is developed and applied.

CH 5: Accelerating the innovation race: Do we need reflexive brakes?

Mervi Hasu, Karl-Heinz Leitner, Urmas Varblane and Nikodemus Solitander

In this chapter we analyze the factors that contribute to the ever-accelerating innovation process and provide some tools for critical reflexivity on the consequences of this 'innovation race' for the economy, society and nature. We then examine how innovation discourse and practice could address the question of 'slowing down' innovation. We propose a reflexivity framework for assessing the systemic consequences of acceleration. We conclude that the innovation society needs 'reflexive brakes'; broader levels of participation and new codes of conduct for research and innovation on the cultural, socio-technical and organizational level. Finally, we discuss the recommendations of reflexive braking for policy-makers, business managers, customers/citizens, and researchers.

CH 6: Innovation and the global financial crisis – Systemic consequences of incompetence

Karl-Erik Sveiby

The chapter applies the concept of incompetence by Polanyi (1962) and the concept of unintended consequences by Merton (1936) to explore the development of a radical financial innovation, *securitization.* It changed the context for actors in the financial industry to such a degree that even the highest regarded experts repeatedly made prediction errors. Data are 2,307 securities and 1,772 patent applications, newspaper articles and 6 editions of one financial handbooks. The conclusion is that financial innovation has become a lot riskier than is commonly appreciated in economic theory and practice. The chapter suggests approaches to deal with the risk.

CH 7: Weak signals: Opting out of the innovation race

Karl-Heinz Leitner

The future of organizing the innovation process has been investigated in a foresight project. Based on a collection of practice examples which indicate a change in the way innovation is organized in economy and society, a number of innovation visions is formulated. While many new innovation patterns point to an acceleration of innovation, there is also some evidence that organizations or individuals choose strategies to escape from the innovation race. The demand for vintage products, the aim to achieve a more sustainable development, and the greater involvement of customers and citizens may lead to a slowing down of the innovation process.

CH 8: A review of innovation models and a revised framework

Martin Lindell

The majority of the models describe innovations in a very positive manner. However, separate studies indicate that innovations may destroy jobs for employees and result in stress, job insecurity and waste problems. Why have not all researchers included these factors in the innovations models? A possible explanation is that the time horizon in the models is limited to the development phase. Furthermore, the existing models focus on research and development managers and top management rather than on all stakeholders. This article concludes with an outline of a revised innovation framework that takes into account the deficiencies of earlier models.

CH 9: From autonomous craftsmen to compliant resources – Implications for undesirable consequences of innovation

Beata Segercrantz

This chapter examines software innovation and what implications restructurings that increase formalized ways of organizing innovation have for ICT experts. The study draws on interviews conducted with ICT experts in Finnish small and middle size ICT firms. The focus is on the interplay between formalization of ways of organizing innovation and ICT experts' transforming possibilities to negotiate agency (e.g. exercise control over their work). Findings suggest that when organizing becomes more formalized, ICT experts become positioned increasingly as 'compliant resources' rather than as 'autonomous craftsmen'. This limits their possibilities to negotiate agency and consider unintended and undesirable consequences of innovation.

CH 10: Organizational innovations: An exploratory study of negative effects

Almudena Cañibano, Oihana Basilio and Paloma Sánchez

The purpose of this chapter is to explore how the implementation of two types of organizational innovations:flexibility enhancing HRM practices and ICT tools can have unintended and undesirable consequences on employees. By means of an exploratory case studyof the Spanish division of a major international consultancy firm, we have found that these innovations can intensify work and reduce employee well-being, and that these effects are tempered by the perceived organizational support and autonomy gained and by the voluntary or involuntary nature of the intensification of work.

CH 11: ICT as exporter of CO_2 emissions

Mitsutaka Matsumoto and Kotaro Kawajiri

In this chapter, the impact of ICT innovation on CO_2 emissions is considered as an example for discussing the indirect and unintended effects of innovation. In existing studies, the direct effects of ICT on CO_2 emissions have been addressed. This chapter highlights the indirect effects of ICT on CO_2 emissions. It focuses on the socioeconomic structural change caused at least partially by ICT and examines the impact of resulting socioeconomic changes on CO_2 emissions through several types of statistical data and data analyses. The implications of the analyses for understanding innovation's impact are discussed.

CH 12: Challenging the innovation paradigm:
Conclusions, practical implications and future research

Karl-Erik Sveiby, Pernilla Gripenberg and Beata Segercrantz

This book brings attention to the commercial waste, policy ineffectiveness and human suffering caused by the way corporations have executed and policy makers have regulated innovation. Many of the economical, ecological and social challenges today are caused by direct effects and unintended undesirable consequences of previous innovations. We can increase the future net benefits innovation by learning from previous mistakes inherent in existing innovations. We need reflective innovation – notreckless, mindful innovation – notmindless. Scholars have a crucial responsibility to transcend the current innovation paradigm. By highlighting the issues involved and suggesting methods and areas for further study this book demonstrates the relevance in doing so.