

**Managing Knowledge Integration across Boundaries, by
Fredrick Tell, Christian Berggren, Stefano Brusoni, and
Andrew Van de Ven (eds) Oxford University Press, 2017.**

NGUYEN, Hang TT <<http://orcid.org/0000-0002-1843-5104>>

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Citation:

NGUYEN, Hang TT (2018). Managing Knowledge Integration across Boundaries, by
Fredrick Tell, Christian Berggren, Stefano Brusoni, and Andrew Van de Ven (eds)
Oxford University Press, 2017. Industrial Relations Journal, 48 (5-6), 518-520.
[Article]

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Managing Knowledge Integration across Boundaries

Fredrick Tell, Christian Berggren, Stefano Brusoni, and Andrew Van de Ven (eds)

Oxford University Press, 2017, 305 pp., £55. ISBN 9780198785972

This is a well-compiled book on knowledge integration, one that posits an understanding of advanced and specialised knowledge across boundaries rather than general knowledge. The central ideas of the book are presented in two distinct parts. Part I (from Chapters 2 to 5) discusses the conceptual underpinnings of the two themes: knowledge integration and boundaries. Part II (Chapters 6 to 15) presents findings from empirical studies on knowledge integration across boundaries, such as those between organisations, firms in countries at different levels of development, industry and academia, professional communities, and individuals and groups within an organisation. This book is one of the products generated by the Knowledge Integration and Innovation Transnational Enterprises (KITE) research programme.

The book begins with an introduction to the book written by the editors (Chapter 1). Chapter 2 then provides an overview and typology of knowledge boundaries and the various means recommended to manage knowledge integration across boundaries. By delineating different types of knowledge boundary, Tell addresses the nature of knowledge in terms of its ‘complexity, uncertainty, fallibility, and incompleteness’ (p. 38). The highlight of Chapter 3 lies in its attempt to address ‘glitches’, defined by Hoopes and Postrel (1999) as a class of potential alignment failures, utilising three rules: the black box principle, the study information rule, and the powerboat-sailboat rule. Chapter 4 presents fascinating analyses and comparisons between absorptive capacity (through the concept of knowledge accumulation) and knowledge integration. In addition to the current mechanisms, routines and rules, Berggren, Sydow, and Tell have extended the knowledge integration research agenda by including agents and

activities in the integration of qualitatively novel and different types of knowledge. Chapter 5 focuses on the boundary spanning challenge of bridging the individual--organisation divide and the relationship this has to the generation of organisational knowledge. The outstanding feature of this conceptual chapter is when Lindkvist and Bengtsson remodel and extend Nonaka's original SECI model by identifying two additional modes; objectification and elicitation. This extension means the original SECI becomes an informed dual route model that incorporates the importance of individual-to-organisation into the knowledge integration process. Chapter 6 discusses open innovation, identified as one of the hottest topics in recent time (Huizingh, 2011). Based on the results of empirical research, the authors show how knowledge flowing across boundaries can be bridged using a combination of complementary knowledge integration practices. Chapter 7 investigates how technological and strategic factors affect the implementation of outsourcing in a client-supplier relationship, and the ways in which these factors influence knowledge specialisation and integration. Castellucci and Carnabuci, in Chapter 8, found that different types of uncertainty have different implications for the organisation's propensity to adjust its boundaries to include or exclude sources of uncertainty. In Chapter 9, Karabag and Berggren analyse two comparative case studies to explore how sticky knowledge is transferred across geographical and organisational boundaries. They also propose a more complex pattern of boundary-crossing schemes influenced by exogenous constraints and contingencies. Chapter 10 argues that social boundaries may not be sufficient to bridge diverse parties in boundary organisations. Managers are therefore advised to create an interpretive scheme that appeals equally to all stakeholders with dissimilar methods used to motivate and replicate collaboration in these organisations. Chapter 11 presents an interesting exploration of the communicative practice embodied within objects known as design drawings. Kravcenko and Swan argue that it is necessary to investigate the political dynamics and communicative practices embedded in boundary objects with

reference to the wider systems of practice in which the objects are embedded. Chapter 12 contributes to the literature on knowledge integration and boundaries by proposing that knowledge integration differs between university-firm and firm-firm collaboration. Moreover, such collaborations are shaped by human capital. Chapter 13 explores how boundaries and knowledge integration work in smaller-scale projects within organisations and highlights the individual as a key contributor to the knowledge integration process, arguing that individual project competence is the key element in knowledge processes in a diverse range of projects. Chapter 14, which examines the organisational transactive memory system, observes that when organisations experience a major changeover, reliability is accentuated rather than the shared nature of organisational directories. Chapter 15, the final chapter, focuses on knowledge at the boundary, or knowledge at the intersection of diverse activities, within or across levels in a firm or across firms, and concludes that knowledge integration is a complicated process. This chapter provides an overall evaluation of knowledge integration where Van de Ven and Zahra present two propositions: First, that 'there is a curvilinear relationship between the complexity of spanning knowledge boundaries and innovation novelty' and, second, that 'boundary objects moderate this relationship.' (p. 241)

Combining all the elements together, the book has answered the Editor's key research question at the very beginning which asked 'How can relevant actors and researchers understand and manage the integration of specialized, distributed, and incomplete knowledge across boundaries?' (p.4)

The empirical studies covered in the book were conducted mainly in Europe with a single study carried out in the US, and in diverse sectors as such as manufacturing (Chapter 6), IT (Chapter 7), construction (Chapters 8 and 11), electrical goods (Chapter 9), automobile (Chapter 9), high-tech (Chapters 13 and 14), not-for-profit (Chapter 10), and biotechnology (Chapter 12). Compensating for the limited diversity in terms of geographical location is the

fact that the book presents a background to knowledge integration in countries at different levels of development ranging from developed to emerging economies.

This book is yet another valuable addition to the field of knowledge management, knowledge integration, and innovation. In terms of its price, this book represents good value for those who are seeking an up-to-date and comprehensive review of knowledge integration. The extensive research and contributions of many authors provide readers with a thorough conceptual overview and all-encompassing analyses of knowledge integration in different industries. This book could contribute further by including further empirical studies from geographical locations in Asia, America, Africa, or Australia which would provide the readership with more 'boundaries', such as cultural boundaries within or across firms. Furthermore, with the world now entering the Industry 4.0 era (Moeuf, et al., 2017), dramatic changes in organisational structures may occur as firms become less hierarchical and have fewer boundaries with the support of the internet and supporting technologies. Consequently, new and unanticipated boundaries might appear. This would call for more insights and research into how institutions with newer structures manage their knowledge integration processes to continue to deliver high-quality performance.

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