## What are we reading?

Ash Amin and Patrick Cohendet, *Architectures of Knowledge: Firms, Capabilities and Communities*, Oxford, Oxford University Press, 2004, ISBN 978-0-19925-333-3, 200 pp.

Perhaps no idea has gained currency in strategic management, organizational science, and economic geography with more enthusiasm than the argument that knowledge and learning play a central role in the competitiveness of firms, industries, and clusters. The provenance of this argument is lengthy and gradual, dating back to the writings of economists like Alfred Marshall over one hundred years ago and more recently to the work of Friedrich Hayek.

Tacit knowledge, in particular, has come to occupy a prominent place in firms' innovative activities and adaptive capacity. The received wisdom is that tacit knowledge is place bound. To the extent that such knowledge is based on personal experience and is idiosyncratic to interpersonal relationships, it is difficult to interpret by outsiders and to communicate over long distances. This explains why so much economic activity is not distributed evenly in geographic space. Entrepreneurial activity, for example, occurs mostly in geographically concentrated clusters not merely because of the efficiency benefits of co-location, relative to the competitive pressures of location in densely populated areas. New firms are founded more frequently in clusters also because co-location helps entrepreneurs to accumulate uncodifiable knowledge, social connections, and social legitimacy. Spatially proximate firms are said to be more innovative, and regions with business clusters are posited to have more developmental options. The idea that knowledge spillover is more likely to happen in geographically concentrated settings has found expression in concepts such as collective learning, epistemic community, innovation system, and industrial district.

While these arguments have assumed almost axiomatic status in economic geography, business strategy, and developmental economics, Amin and Cohendet demonstrate the advantages of taking a more

fine-grained approach to the question of knowledge dynamics. Their book is a welcome addition to the growing literature on the production, circulation, and use of knowledge. They show that not all useful knowledge is produced among actors located in close proximity. Nor is knowledge "possessed" by organizations in the sense that it exists and persists within organizations in form of memory, capabilities, and routines. Instead, knowledge is more or less widely distributed, spanning the boundaries of organizations, industries, and regions. Much knowledge is also generated in everyday organizational practice and individual discourse. At times, this requires close social interaction among actors who are familiar with each other. At other times, knowledge circulates seemingly at random, as people improvise and make the most of the knowledge they have.

Amin and Cohendet begin their book with an overview of the massive literature on the economics of knowledge. In this review, they challenge the axiomatic distinction between codified, explicit and tacit, implicit knowledge. They also question the idea that knowledge resides within the firm as a set of competences and routines to be "possessed" rather than reflexively produced, reproduced, and transformed. Their review is valuable because it brings to the fore – and challenges – a number of paradigmatic statements made in the literatures on knowledge. For example, a firm's or region's competitive advantage is not a simple question of either minimizing transaction costs or increasing variation, but rather it is the result of the dynamic interplay of both motivations, in addition to the influence of a variety of typically contextdependent other factors, including locally specific institutional arrangements and structural network configurations. Amin and Cohendet speak of the "noise of context, grey balances between centred and distributed activities, unique histories and diverse corporate cultures" (p. 137).

In the core section of the book, the authors force attention to the concept of "community" as a criti-

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cal site of knowledge formation. Learning communities, which are variously referred to as "epistemic communities", "communities of practice", or "learning regions", are composed of individuals who feel bound by a common set of knowledge and by a commitment to work towards the achievement of joint goals. Starting from the premise that every individual has at least a slightly different set of personal knowledge and that at least some of that knowledge may not easily be articulated and shared, theoretical approaches that help understand knowledge *variances* are key to an understanding of the architecture of knowledge. Communities offer the kinds of social, cultural, and institutional supports that facilitate the integration and exploitation of the personal knowledge of different individuals.

As Amin and Cohendet make clear, our understanding of these communities is usefully informed by a variety of theories and theoretical perspectives, ranging from cognitive psychology and social anthropology to pragmatist philosophy and the sociology of science. These theories include specific approaches commonly used in organization science, strategic management, and entrepreneurship, such as the resourcebased view, the knowledge-based view, and evolutionary economics. While the authors do not propose a new and overarching theoretical framework to explore questions concerning the architecture of knowledge, their book is effective in integrating a number of seemingly disparate literatures related to knowledge and learning at various levels of analysis, including the firm, the cluster, and the region. Their book may be read as a platform from which these literatures and perspectives can be reinterpreted.

Perhaps their most central argument revolves around the concept of "relational proximity". The authors present relational proximity as a theoretical idea and a practical opportunity to link "sites that might appear distant and unconnected on a linear plane" (p. 93). The significance of this concept lies in the possibilities it presents for de-coupling territory from learning. By theorizing about proximity based on relationships rather than place, it is no longer necessary to assume that learning requires direct social interaction, that local connections are stronger or more beneficial than more distant ties, and that "community" involves only spatially contiguous groups. Relational proximity opens up spaces for an "ecology of knowledge" that is not as constraining as arguments from conventional approaches to knowledge production and circulation. "Being there' is no longer a constraint of geographical proximity" (p. 96). The result of thinking and practicing in broader, ecological terms is a blending of local and global circuits of interaction, communication, and sharing.

However, while the authors' discussion of relational proximity is strong on description, it is somewhat light on analysis. Being close relationally means, for example, that people talk to each other, think about each other, meet in airports and trade shows (serendipitously or by design), attend seminars, exchange e-mails, and so forth. There are a variety of forms of "being there", and spatial proximity may or may not be required. Unfortunately, loosening the theoretical reign on space does not in itself provide answers to some of the key questions concerning the architecture of knowledge, such as: How exactly is relational knowledge constructed? What are the mechanisms by which the boundaries of knowledge communities are usefully maintained or transcended? Under what conditions is relational proximity stronger or weaker, and what are the implications of shifting the balance between strong and weak for learning, knowledge transfer, and the like? Is there an optimal mix of strong and weak ties? Recognition of things like "intricate webs of communication pathways", "diverse discourse spaces", and "experiential commonality" may have a liberating quality for some observers and practitioners. For others, they may imply added confusion, by opening already difficult questions to a wide range of alternative interpretations. For some, Amin and Cohendet's discussion may provide a welcome antidote to the functionalism one finds in much of the literature on knowledge. For others, their analysis may appear in several places as theoretically too indeterminate to move the debates on knowledge decisively further.

On balance, I agree with the authors that much is to be gained from taking a critical position on much writing in business and economics concerning "best practice" and "templates for action" with respect to learning and innovation. This book assembles a wide range of arguments from a variety of literatures and perspectives to remind practitioners that knowing involves much more than knowing the right person at the right time and in the right place.

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