

Editorial: Increasing Specialization of Knowledge Leads to Increasing Fragmentation

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As an increasing number of industry reports, annual reports, and market analyses demonstrate, more and more public and private organizations face the challenge of keeping up with rapidly changing and expanding environments, industries, and markets (e.g. CNBC, 2015; KPMG, 2015). Such rapid changes are often caused by new technological innovations (e.g. Internet-of-Things, Big Data and increased connectivity), new policy initiatives (e.g. changed funding structures for specific public institutions), or new disruptive market forces (e.g. Uber, GoMore, or AirBNB). Achieving competitive advantages, market leads, or even just financial stability in such volatile environments often require organizations to streamline, focus their perspectives, trim away excess, and strengthen their core – all of which are meant to signal a redirection of efforts and resources towards fueling fewer and more specifically targeted activities. As more players enter the stage, the pressure for unique and specialized value increases.

What we are faced with, however, is not merely the consequences of the conventional division of labor, but rather the consequences of an altogether different nature: fragmentation. Fragmentation in this sense is what was described by Emile Durkheim as the “anomic division of labor” – i.e. when increasing differentiation leads to isolation and, eventually, alienation. This significant challenge to the division of labor is what knowledge-intensive organizations currently need to cope with. Coping, according to Niklas Luhmann, is an ongoing process which he boils down to the formula-like expression that only complexity can reduce complexity. In other words, if an actor (e.g. an organization) is to navigate in an increasingly complex environment, the actor needs to match the complexity of that environment. Peter Senge goes one step further in his appreciation of the remedy needed – to him knowledge-intensive organizations have to change (or: learn and develop) at a rate that is faster than the rate with which its environment changes in order to maintain its competitive edge. It becomes about creating more specialized and differentiated knowledge than the other actors in your environment.

While agendas focused on creating a competitive advantage by increasing specialization might initially have the format of broad strategic statements issued by top management, they are often operationalized by less senior knowledge workers. This type of worker is conventionally defined as someone who “thinks for a living” and is often exemplified by lawyers, architects, professors,

software engineers, etc. (Alvesson, 2004; Kastberg, 2007). They are all tasked with creating new knowledge relevant to their environment and valuable to their organization. Whether such new knowledge is created by collaborating with external partners, fuelling the entrepreneurial energy of colleagues, engaging customers directly in co-creation, or systematically working through substantial bodies of data, it is ultimately created to empower organizations to develop new, uniquely valuable products or services. A somewhat recent example of this: by creating new insights about the user experiences connected to movie rental, and by matching those insights to technological innovations from the field of digitalization, Netflix was able to launch their highly disruptive platform and quickly secure a market lead. The foundation for this was the creation of new, specialized knowledge as well as the ability to leverage that knowledge in order to create value. Knowledge workers tend to be at the frontline directly facing significant pressure to create ever more specialized knowledge in order to provide their company with the foundation for launching uniquely valuable (and preferably difficult-to-imitate) products or services.

Even definitions of specialized knowledge hint to its critical importance to organizations in rapidly changing environments: “[Specialized] knowledge must be beyond the ordinary and not commonplace within the industry... Specialized knowledge would be a proprietary knowledge that would be difficult to impart to another without significant economic inconvenience... If everyone is specialized, then no one is.” (US Department of State, 2011). As such, the ‘special’ dimension of ‘specialized knowledge’ determines that it cannot be commonplace or ordinary, that it is exclusively related to its local context, and that it is difficult to impart to others. Even when defined less specifically (e.g. specialized knowledge is specialized when highly contingent on the domain in which it was constructed), definitions tend to share this delimitation. To organizations, then, there is a direct connection between the degree of specialization and the value potential of connected products or services. The more specialized knowledge becomes, the risk of imitation decreases and the chance of significant market impact increases (Teece and Abdulrahman, 2011). An example of this: from 2008, Danish elementary schools could brand themselves with specific competence profiles (e.g. a maritime profile, a musical profile, or an international profile) if they chose to specialize their courses and teaching methods in a specific direction. This initiative was meant to transform selected elementary schools to highly specialized organizations meant to drive a focused education with a unique value compared to common elementary schools (UCC, 2015). Even though such schools were too specialized to target all students, their highly specialized profiles meant that they had a significant impact on how Danish elementary schools operated. Specialized knowledge leveraged to create specialized courses and teaching methods resulted in a tangible competitive advantage.

The example of the Danish profile schools along with the definitions of specialized knowledge do, however, hint to a significant challenge that is ever-present when working with specialized knowledge: the challenge of fragmentation. As knowledge becomes increasingly specialized, it becomes less common, and therefore less immediately understandable outside of its domain. Specialized knowledge is highly contingent on the domain within which it was created and sanctioned

as well as on the particular perspective, expertise, and professional background of its knower(s) (Tsoukas and Vladimirou, 2001). In its very nature, it is connected to increased differentiation and fragmentation. Knowledge workers (such as the teachers working in the profile schools mentioned above) therefore often face significant challenges connected to the communication of specialized knowledge to individuals or groups who do not necessarily share their perspective, expertise, or professional background. This often leads to a range of critical issues experienced by most knowledge workers throughout their careers (e.g. failure to describe and share teaching methods connected to a specialized profile, failure to present the value of certain insights to a steering committee, or failure to communicate a specific architectural vision to a group of investors). If organizations are to prevent increased fragmentation from resulting in increased isolation, there is a clear need to explicitly and actively address the way we approach increasingly specialized knowledge.

This second issue of the *Journal of Organizational Knowledge Communication* takes a closer look at some of the consequences of this increased specialization. The call asked: “What happens when specialized knowledge is communicated to actors outside its context of construction, outside its domain-specific or organizational habitat?” (www.jookc.com). It sought to encourage researchers to explore different communicative practices on both levels of organizational and interpersonal communication as well as to critically investigate and reflect on what constitutes truly “successful” communication of specialized knowledge. The result of the call is four excellent papers (three articles and one book review) all positioning themselves within different research disciplines, all written by authors from different research institutions, and yet all focused on the topic of approaching specialized knowledge in organizational contexts. Kody D. Hansen and Heather E. Canary investigate the consequences to knowledge communication practices when a large facility management company undergoes a process of structural change. In their study, they find that the knowledge workers distributed within the company react to the structural change by grouping themselves informally into cultural groups characterized by exclusivity and by creating strong boundaries making communication of knowledge difficult. Sarah K. Gunning explores how certain industries with high employee turnover and a fragmented workforce (such as nonprofit) can design practices of knowledge storing, sharing, and gathering to increase inter-departmental institutional memory. In this way, her study is focused on how organizations can implement structures and routines to foster a greater communication of specialized knowledge within a fragmented workforce. Linda Greve takes her cue from an action research study of the interpersonal knowledge communication practices of specialists in a large food production company. Rather than focusing her analysis on the organizational or institutional level, she begins a thorough investigation and discussion of several problematic epistemological dimensions associated with the concepts of knowledge sharing and knowledge transfer. Judie Cross reviews the new Palgrave Handbook of Critical Thinking in Higher Education and with it introduces several new approaches to the discipline of critical thinking (CT). Her review clearly establishes several connections between the different CT theories within the handbook and theories of knowledge communication.

These contributions present a range of new and highly interesting insights into organizational and interpersonal practices of communicating specialized knowledge. Furthermore, they all contribute to an increasingly nuanced perspective on the challenging connection between specialization and fragmentation with numerous examples illustrating some of the consequences of this connection.

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