

TOWARDS AN EPISTEMOLOGICAL MERGER OF DESIGN THINKING, STRATEGY AND INNOVATION

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ABSTRACT

In this paper we explore and integrate ideas from three disciplines that influence design management: strategy as the organizational framework, innovation as the marketplace imperative, and design thinking as a way of approaching practical problems and problem solving. The discourse of *strategy* expanded in the 1980s and 1990s and continues to be a powerful force. Around the millennium, the discourse of *innovation* gained new prestige; it was linked to strategy and became the hallmark of companies in the forefront of the global economy. *Design thinking* has joined these executive discourses as a methodology that enables innovation. In this paper we first examine the three discourses and their epistemological underpinning and relation to each other. Thereafter we note that there seems to be an epistemological shift within both innovation and strategy – and that this shift is towards the central and enduring beliefs of design thinking. Finally we reflect on the implications for design management.

Keywords: Design thinking, innovation, strategy, epistemology

1 INTRODUCTION

The three discourses of strategy, innovation and design thinking have a paradoxical relationship. From one perspective, the three discourses are quite separate, with very different origins and purposes. Strategy is an executive discourse that focuses on long-term goals, resource allocation, and decision making. Innovation is a technological discourse that aims to be knowledgeable about bringing inventions to the market. Design thinking is an emerging discourse coming from architecture, design, and art that strives to understand the character of designers' sense making. It is lately infiltrating the management discourse. On the other hand, there are similarities among all three discourses. They are all used in large and small companies when referring to growth-intended strategic work. Also, they are used by top management for organizational change and thereby as competitive "tools" for growth.

In this paper we explore how to make sense of the separate discourses, the characteristics and relationships between them, and how they might contribute to an integrated discourse. How do they relate to each other – are they complimentary or are they competing discourses? In particular, how does design thinking stand in relation to the others? What consequences does this have for the design management discourse?

2 THE DISCOURSE OF STRATEGY

Strategic discourses generally acknowledge their roots in the discourse of military orders in the ancient world. The word comes from the Greek *strategia*, meaning "generalship", suggesting goals and directions that were set outside of the sight of the enemy. While this discourse of strategy existed long before it was an academic field, phrases in the management discourse such as "battle of competition", "winning", and "rivalry", are signs of its origins, including Clausewitz's (2001) definition of strategy as "the art of using a battle to win a war" while tactics are "using the troops to win a battle". Warfare metaphors still inform prescriptions for how to use the company's resources in order to "win the competitive battle".

During the 1950s and 1960s, when management struggled for a place in the academy, strategy came to signify creating a specific *position in the market*. The foundation of strategic management is frequently traced to Chandler' (1962) comparative analysis that identified patterns in the growth of diversified companies during the 1920s and 30s (Whittington, 2008). Chandler, as a business historian, worked with messy empirical data; in contrast, Anshoff (1965), with a background in applied mathematics, created analytical tools to help companies create their own position through attention to the five elements of (1) arenas, (2) vehicles, (3) differentiators, (4) staging, and (5) economic logic. Michael Porter further

developed Ansoff's analytics within the managerial discourse and authored many books and articles over a twenty year period, including a series in the *Harvard Business Review* (1979, 1987, 1990, 1996, 2008). Through these, and many others on strategy and competitiveness for the firm, economic development, and society, Porter continues to be recognized as a, if not the leading authority on business strategy (www.isc.hbs.edu). His work sedimented the strategic management discourse as normative, static, and a way for the chief executive to formulate a plan before it was implemented by the organizational hierarchy.

During the 1990s other influential strategy streams developed, included those emanating from a resource-based economic perspective (see Barney, Wright and Ketchen, 2001). For managers, Prahalad and Hamel's (1990) concept of *core competencies* as collective learning in the organization provided an impetus for working across organizational boundaries and creating alliances while focusing on internal development. While still prescriptive, this theme pointed towards a more collaborative discourse. A more *process oriented view* of strategy was introduced by Mintzberg (1987, 1994), who first critiqued the dominant view of equating strategic planning with strategic thinking, and later defined strategy as patterns of action, with differences between have turned the strategic discourse towards actor-network theory and its possibilities for mobilizing social networks of relationships in the process of creating strategic differentiation (cf., Hung, 2002)

With the new millennium and "flattening" of the global landscape (Friedman 2005) part of the strategic discourse reexamined the structuralist view of firms forced to compete within a landscape dominated by economic forces greater than themselves. Instead embraced, some took a reconstructivist worldview in which market boundaries and industries can be reconstructed by actions and beliefs of industry players, as so-called *Blue Ocean Strategies* (Kim and Mauborgne, 2004). Rather than competing within the existing industry or trying to steal customers from rivals in the "red ocean", a company can create an uncontested market space that makes competition irrelevant; this is a "blue ocean." The discourse is concerned with the *strategic moves*, as managerial actions and decisions, rather than naming competitors or rivals.

3 THE DISCOURSE OF INNOVATION

The word innovation comes from Latin *innovare*, meaning "making something new." Innovation is an area consisting of many different discourses, with even the discussion around "what is an innovation?" taking on the character of a discourse of its own. The concept is used on multiple levels; the micro/individual level, organizational level, and macro/national level.

Within the academy, the origin of the discourse on the economic character of innovations is attributed to Schumpeter (1934) who maintained that innovation and entrepreneurship drive economic development forward. An innovation, he said, is any invention (including a theoretical idea) in use, and thereby also an invention that has reached the market. Schumpeter also made the distinction between incremental and radical or disruptive innovations, thus initiating the discourse further developed by Christensen (1997). Christensen observed that some firms had success with products or services that were not as good as those already used in established markets, but had simplicity or low cost that appealed to a new set of customers. Assink (2006) provided a conceptual model of the interrelationships and interdependence of factors inhibiting disruptive innovations.

Following World War II, another innovation discourse originated in the technical universities, and is still growing. This discourse aims to codify the sources, goals, measures, and diffusion of product and service innovations (Abernathy and Utterback, 1978); over time the technical discourse has become less theoretical and more normative, aiming at understanding the process of making an invention into an innovation, or how to take a new technological idea into the market with commercial success. As this technical discourse grew, critique against it developed; for example, Mensch (1979) proposed that the "wave" model of Schumpeter and others be replaced with a metamorphosis model of long-term instability, while Verganti (2006) claimed that there are no epistemological borders for innovations, they are whatever is regarded as new to the market, whether physical or not.

A special discourse is that of *open innovation* (Cheesbrough, 2003, von Hippel, 2001), with roots in computer science, sports products, and R&D practices. This discourse shuns the logic of an internally-oriented, centralized approach to product development, and instead brings external ideas into play with those of internal developers. Here user innovation communities create user-designed modifications, and in turn share these with other users. Von Hippel also introduced the concept of "lead users" and regarded them as co-producers in the innovation process, thereby merging with approaches that are traditionally related to design methods.

4 THE DISCOURSE OF DESIGN THINKING

A third discourse, applying the concept of design thinking, is closely related to innovation and has recently become widespread in both design and management circles. Design thinking occurs at the merger of business and design, and has recently become somewhat of a fad in the executive and management realm. Within the academic discourse of design and architecture, however, the concept of design thinking has been around for more than thirty years with forerunners Schön (1983) in education and Lawson (2006/1980) in architecture, who both in their respective ways describe and reflect upon *how designers think*. Lawson, for example, claimed the design process includes formulating, moving, representing, evaluating, and reflecting. Cross (2001) joined the discussion with his reflections around “designerly ways of knowing.” He called upon design scholars to recognize that design practice does indeed have its own strong and appropriate intellectual culture, and therefore we should avoid swamping design research with different cultures imported from either the sciences or the arts. The implication was clear, the design discourse must strive to remain the purview of the design community alone.

Another stream formed around the concept of *wicked problems*, drawing on Rittel’s initial description of social planning problems as indeterminate (Churchman, 1967; Rittel and Webber, 1972) and subsequent developed by Buchanan (1992). Buchanan created a new conversation around wicked problems in design, arguing that designers deal with problems that are ill defined, so that the creative re-definition of the problem is part of the professional skill. Later, Edeholt (2004) added that designers focus on the reconstruction and the solution of problems rather than analysis of the problems as such – in contrast to the outlook of social and natural scientists. Recently, even some strategy problems have been labeled as wicked problems, for example, if the problem involves many stakeholders with conflicting priorities, if it changes even as solutions are attempted, and if there’s no way to evaluate if the remedies will work (Camillus, 2008).

The academic discussion of design thinking has been in play for nearly three decades, resulting in about 1,000 scholarly works on the topic (Google scholar, 11/08). However, during the last few years the discourse has turned into a multidisciplinary discussion focusing on how business uses design thinking, and this stream has spilled over into the popular business press (e.g., Dvorak, 2008). This turn is strongly associated with IDEO design company (www.ideo.com) and Stanford D-school

(www.stanford.edu/group/dschool/), a cooperation between IDEO and Stanford. Here, design thinking is conceptualized as a specific way of thinking and using design methods by non-designers. And this, it is argued, is what the companies need more of. The D-school and its representatives have been apostles for the concept and for the use of design thinking in companies. This thesis is conveyed in the following quote from Tim Brown, former CEO of IDEO:

Most of us are trained in what I would call analytical thinking. Analytical thinking is...good for analysis and cutting things apart and slicing and dicing the world. It's also good for extrapolation or prediction from the past into the future.... (It) isn't very good for is trying to envision a new future and figure out how to change it. So we try to encourage companies to use what we call design thinking. In design thinking, basically you're very generative, you're goal-driven. You're trying to create a future. Design thinking is rooted in optimism, and the goal to get something done and to bring it to the marketplace. (Brown, 2005)

5 THE INTERSECTION OF THE DISCOURSES OF STRATEGY, INNOVATION, AND DESIGN THINKING

As seen from the literature review above, the three discourses have quite different origins. *Strategy* came from the military and economics and has become its own strong discourse within management.

Innovation originated in economics and entrepreneurship, but has become a discourse of its own within technology. *Design thinking* emerged from architecture and design and, while it strives to maintain a stream of its own, has recently come into the mainstream management discourse.

Despite apparent differences, these discourses are all engaging with each other within the management realm as part of the company’s general development and as growth enablers. Until recently, strategy, as the oldest discourse, dominated the conversation, using Porter’s prescriptions for competitive positioning. Innovation, formerly confined to the operational level, joined in, because as Kanter (2006) notes, “each managerial generation embarks on the same enthusiastic quest for the new thing.” When design (and design thinking) edged into the discourse, wanting to help strategy in competitive positioning, it added to

the existing strategic platform – at that time dominated by Porter. (c.f., Borja de Mozota 1998, 2006; Bruce and Bessant, 2002; Olsson, Cooper, and Slater, 1998). Design consultants claimed they could participate in strategic planning as “strategy visualizers” or “core competency prospectors” (Seidel, 2000). Articles directed at senior managers suggested, “while by mapping your innovation strategy, “you can chart a path that will produce successful innovations time after time” (Anthony, Eyring and Gibson, 2006), or, even more forcefully, “thinking like a designer can transform the way you develop products, services, processes- and even strategy” (Brown, 2008)

However, there are also different ways in which the three discourses can become epistemologically compatible. In the beginning – with Chandler -- strategy was an interpretative and clearly descriptive discourse. It was only later that it developed into a more rationalistic and normative field, and the epistemology became more clearly positivistic. With the development of the concept of “blue oceans” and more process oriented views, the epistemology underlying strategy has transformed into a more humanistic discourse, capable of embracing ambiguities and paradoxes, thereby being much more compatible with the design thinking discourse with its humanistic perspective than earlier strategy discourses. Blue Ocean strategy, like design thinking, is an open-ended way of thinking rather than earlier strategic models that has a more fixed character in their epistemology.

6 IMPLICATIONS FOR DESIGN MANAGEMENT

The ideas presented above have important implications for design management research. The discourses of strategy, innovation, and design thinking each embrace multiple discourse streams, but each has developed over time in ways that currently make them more epistemologically compatible, or at least each has discursive streams within them that are compatible. This means there is a possibility of creating a synergistic dialogue. In such a synergistic dialogue the conversational partners will stand on a humanistic ground and be desirous of harnessing the resources of design thinking, strategy, and innovation for purposes of “adding value” for all the actors connected with developing and using the product or service. Consequently, design management, in order to influence companies on a strategic level, no longer needs to adjust to a normative/positivist discourse. Instead it can contribute on a more equal level, provided the epistemological ground is more compatible.

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