



## EDITORIAL

# Information design

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Design thinking is a conceptual frame being advanced as a paradigm for successful organizational management. It has the hallmarks of a potential management trend that could become emulated and fashionable among ambitious managers (Abrahamson & Fairchild, 1999; Baskerville & Myers, 2009). There are leading books that provide alternative, but consistent perspectives on design thinking (Brown, 2009; Martin, 2009). There is a strong presence in the scholarly literature.

Brown (2008) defines design thinking as ‘a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity’ (p. 86). Design thinking is centered on creativity and innovation in the face of highly complex problems. The paradigm values the disorderly thinking of the artist as one means to attack the wicked problems that defy more analytical and deductive reasoning. It offers values for the ‘art’ in good management without completely departing from science and logic.

Like many other successful and leading ideas, design thinking incorporates many familiar and well-studied concepts. Its potential is improved by its familiarity, a collection of venerated ideas repackaged in a novel and useful way. For example, the holism of systems thinking is in here, although anchored to the Senge (1990) variety better known among managers than the more comprehensive varieties better known in information systems (IS) (e.g., Churchman, 1971; Checkland, 1981). Organizational learning has also been drawn into design thinking in several ways. In the face of complex and highly multivariate problems, design thinking provides an avenue to learn about the problem situation by designing alternative solutions and considering the resulting alternative outcomes.

Design thinking delivers mental productions that align nicely with Kant’s notion of generative versus analytical reasoning (Kant, 1908). The most valuable reasoning processes are abductive, much the same as in action research. The main criterion by which its mental products should be measured are validity rather than reliability (Martin, 2010). This observation is traditional with the association of qualitative research and validity rather than quantitative research and reliability (Gummesson, 1988). Design thinking is also associated with exploration learning strategies rather than exploitation learning strategies (Martin, 2010). These strategies are also well studied (March, 1991). Combined, the features of the reasoning processes in design thinking, represent a future-looking orientation that assumes the solution to wicked problems will not lie in past experience.

For managers of IS, design thinking may seem much less novel than it will to other managers. Because design has always been a critical process for IS, the importance of creativity and innovation in the search for problem solutions will hardly surprise us. Nevertheless, an ascendancy of design thinking as an overall management paradigm may have important implications for IS managers.

On the one hand, the innovation and exploration modes of design thinking may affect the organizational presence of IS. There are at least

four reasons why IS may become a more critical resource. First, because of their experience with design and innovation, IS managers may be better prepared to take overall leadership roles in design thinking efforts to tackle the organization's wicked problems. Second, for similar reasons, there may be increased demand for the organization's IS personnel to contribute to problem-solving teams with better potential to deliver design thinking orientations. Third, design thinking may help develop an organizational willingness to experiment and prototype in the face of wicked problems. Such experimentation may increase the overall demand for rapid IS development activities. Finally, design thinking may improve the organization's understanding about its dependence on a cadre of talented design thinkers, that particular kind of person who can creatively choose the elements within a complex problem setting that lead to a workable solution. This understanding can help IS managers make their case for recruiting good designers. Overall, the strategic role of IS could enter a new era in which the information component of organizational innovation is re-situated in the face of the organization's wicked problems. If design thinking leads to such changes in the organizational role of IS, it may finally dispel some of the misconceptions that followed in the wake of Carr's reconceptualization of IS as a utility (Carr, 2003).

On the other hand, the design thinking frame may also lead to revisions in the way IS managers go about their own function. Consider, if we were to accept the tenet that design thinking is a more elaborate or more expansive child of systems thinking. This vision might position a revision of our discipline, 'information design', as a child and possible heir to 'IS'. In other words, design thinking could lead our profession to become more primarily concerned about the design of the organization's information and less primarily concerned about the design of its systems. This outcome would be perhaps less revolutionary for IS than management in general. Our field has always involved the design of information. We have to do this before we can design the IS that delivers the information. But our very name, 'IS' signifies that for us, the importance is placed on the system that delivers the information; the vehicle, rather than the system's contents, the information itself.

From a design thinking point of view, information design could represent an important shift in emphasis for the discipline if it frees, more-or-less, design of this information 'stuff' from the design of the IS that delivers the 'stuff'. This is partly because the design of IS has a process and storage orientation that immediately invokes questions of efficiencies and economies. These efficiencies and economies are characteristic of exploitation learning modes. Separating *pure* information design from IS design relegates questions of efficiencies and economies to the systems designer while preserving the business problem-solving ideal for the design-thinking information designer. The reason for separating these

aspects is to promote, within information design, more ideal exploration learning strategies advocated by design thinking.

IS has already provided the basic principles for a discipline of information design, enabled for example, by researchers in semiotics (e.g., Stamper, 1973), and ontologies (e.g., Wand *et al.*, 1999). However, the view of design within much of this work often has the heuristic and analytic viewpoint of systems design, and often lacks the creative and explorative character of design thinking. Similarly, there are basic principles for exploration in IS design, such as prototyping (e.g., Fallman, 2003) and agile methods (e.g., Abrahamsson *et al.*, 2009). But such approaches usually explore information design only within the context of a feasible system of delivery. An independent discipline of information design could be free in its formative stages from the shackles of exploitative learning that limit the explorative methods used within IS.

Such unbridled information design thinking would be better enabled to consider the organization's wicked problems that have intractable information aspects. With its focus on creativity and innovation, the reasoning process could explore exactly how information itself should be creatively designed to alleviate the problem setting. Such an approach to information design might even be paradigmatically different from the design of IS or information resources because these latter elements tend to have more confining shackles to exploitative learning modes.

Distinguishing 'information design' as a different activity than 'IS design' has important implications for IS from a design thinking perspective. Information design is likely to be more abstract and more focused on the 'wicked' business problem rather than the 'wicked' information delivery system problem. Information design would defer the exploitative issues of designing any delivery system until after the validity of the information design has itself been proven by experience.

As with other aspects of design thinking, information design is not necessarily new. Perhaps all that the design thinking notion adds is an information design activity in which the delivery systems problems are marginalized while the business problem is centralized. Further, we are familiar with the importance of getting well-designed information into use without waiting for efficient delivery mechanisms. The first-to-market drivers of e-commerce and cloud services have similar philosophies albeit different motives. Putting well-designed information into use, even without efficient delivery mechanisms, allows organizations to learn first what information to deliver, and afterwards decide exactly how to best deliver the information.

Design thinking is not yet an IS trend, but it is certainly a potent trend for organizational management. If it catches the imagination of managers and becomes widespread, interesting research directions will open for IS researchers. The advance of new work in information

design provides one promising avenue. Another would be a changing strategic role for the organizational IS function. While it is not clear exactly how these ideas will unfold in relation to IS practice, there are indeed exciting new horizons that may open for IS scholars.

### In this issue of *EJIS* ...

This issue includes a special section on the Kleinian Approach to IS Research with a separate introduction by the special issue editors, Rudy Hirschheim, Kalle Lyytinen, and Michael D. Myers. But before this special section, we have two fine articles from our regular publication stream.

When is the best time to use critical research approaches? In 'Focus Groups and Critical Social IS Research: How the Choice of Method Can Promote Emancipation of Respondents and Researchers', Bernd Stahl of De Montford University, Monica Tremblay of Florida International University, and Cynthia LeRouge of Saint Louis University investigate the use of focus groups in promoting emancipation in critical social IS research. While critical social research has gained prominence in IS, and is deemed by many authorities to be a valid research approach, the authors argue that there is a lack of agreement as to what constitutes a good fit between research methods and critical social research. Motivated by this important issue, the authors compare nine data collection methods based on the integral agenda pertaining to emancipation in critical social research. This comparison leads the authors to suggest that focus groups provide the most emancipatory faculties for critical social research when designed and executed in light of a critical approach. A further investigation of two research studies that use focus groups lends a support for this argument; in particular, the findings suggest that the use of focus groups helps

achieve two critical social research faculties: Habermas' concept of ideal speech and Foucault's concept of regimes of truth. The authors conclude this stimulating essay by offering a set of guiding questions for critical social IS research.

In 'An Historically-Grounded Critical Analysis of Research Articles in MIS', François-Xavier de Vaujany of Université Paris-Dauphine, Isabelle Walsh of Strasbourg University, and Nathalie Mitev of London School of Economics critically examine the practice of scientific writing to enhance our understanding of the current design of research articles in the field of IS. A review of the history of universities, learned societies, and scientific articles is offered along with an historical analysis of two leading IS journals (*EJIS* and *MIS Quarterly*). Through an analysis of 437 article abstracts in *EJIS* and *MIS Quarterly*, the authors identify three main argumentative strategies of scientific writing used in the two journals: deepening of knowledge, solving an enigma, and addressing a practical managerial issue. In relation to historical imprints of management and business studies, the authors suggest that the current practice of scientific writing in the field of IS is heavily enigma focused while lacking in managerially grounded rhetoric and reflexivity. The authors relate this discrepancy to a quest for academic legitimacy, and offer some suggestions, such as 'the addition of an innovative writing' and 'development of an exchange research platform' that may be enriched in scientific writing in the field of IS.

Thanks to Jong Seok Lee for his help with the summaries of the articles above. Together with the special issue editors, *EJIS* associate Editors Mikko Siponen of Oulu University and Bernd Carsten Stahl of De Montford University, join Editors Ray, Frantz, and myself in presenting this issue of *EJIS*. We trust you will find it stimulating, useful, and insightful.

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